Gender study to identify constraints on female participation in skills training and labor market in India

Acknowledgement

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This study was possible through the cooperation of all our respondents from all over the country. We are grateful to the Principals and staff of the ITIs and the NSTIs, the male and female trainees of the ITIs, employees and apprentices of the PSUs and private organizations and the community members who participated in our study through the data collection process.

This study helped to throw light on the myriad of challenges that females face while participating in vocational training programs and labor market. We hope that the study results help in better policy making to make the ecosystem more conducive to female participation by addressing the social, economical and institutional challenges identified through the study.

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Glossary of terms

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Acronyms	Description
ADB	Asian Development Bank
AISHE	All India Survey on. Higher Education.
ATI	Advanced Training Institute
BEL	Bharat Electronics Limited
BHEL	Bharat Heavy Electricals Limited
BPM	Business Process Management
B. Voc	Bachelor of Vocational Education
CII	Confederation of Indian Industry
CITS	Crafts Instructor Training Scheme
CNC	Computerized Numerical Control
COPA	Computer Operator & Programming Assistant
CTS	Craftsmen Training Scheme
DGT	Directorate General of Training
DRDO	Defence Research and Development Organization
DST	Dual System of Training
FGD	Focus Group Discussion
GAP	Gender Action Plan
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
FER	Female Enrolment Ratio
FGD	Focus Group Discussion
FLFP	Female Labor Force Participation
FWP	Female Workforce Participation
FY	Financial Year
HAL	Hindustan Aeronautics Limited
HP	Himachal Pradesh
HR	Human Resources
GSVA	Gross State Value Added
IAMSME	Integrated Association of Micro Small & Medium Enterprises of India
ICTSM	Information Communication Technology System Maintenance
IDDS	Identify Design Deliver Sustain Framework
IEC	Information, Education and Communication

Acronyms	Description
ILO	International Labour Organization
IMC	Institute Management Committee
IMF	International Monetary Fund
IOT	Internet of Things
ITI	Industrial Training Institute
ITOT	Institutes for Training of Trainers
J&K	Jammu & Kashmir
LFPR	Labor Force Participation Rate
M&E	Monitoring & Evaluation
MES	Modular Employability Scheme
MIS	Management Information System
MNRE	Ministry of New and Renewable Energy
MoLE	Ministry of Labour & Employment
MOOC	Massive Open Online Courses
MoM	Minutes of the Meeting
MoU	Memorandum of Understanding
MSDE	Ministry of Skill Development and Entrepreneurship
MSME	Micro, Small and Medium Enterprises
NAC	National Apprentice Certificate
NAPS	National Apprenticeship Promotion Scheme
NCAER	National Council of Applied Economic Research
NCERT	National Council of Educational Research and Training
NCVT	National Council of Vocational Training
NCVT-MIS	National Council of Vocational Training-Management Information System
NGO	Non-Governmental Organization
NMDC	National Mineral Development Corporation
NSDC	National Skill Development Corporation
NSSO	National Sample Survey Organization
NSVA	Net State Value Added
NSDM	National Skill Development Mission
NSQF	National Skill Qualification Framework
NSTI	National Skill Training Institute
NSTI-W	National Skill Training Institute for Women

Acronyms	Description
NVEQF	National Vocational Education Qualification Framework
NTC	National Trade Certificate
NVTI	National Skill Training Institute
OBC	Other Backward Caste
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PRI	Panchayati Raj Institutions
RPL	Recognition of Prior Learning
SC	Schedule Caste
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Authority
SME	Small and medium-sized enterprises
SNA	Social Network Analysis
ST	Schedule Tribe
STEM	Science, Technology, Engineering and Mathematics
STRIVE	Skills Strengthening for Industrial Value Enhancement
TA/DA	Transport allowance/Dearness allowance
TCP	Training Counseling Placement
TCPO	Training Counseling Placement Officer
TESDA	Technical Education and Skills Development Authority (Philippines)
TN	Tamil Nadu
TVET	Technical and Vocational Education Training
U-DISE	Unified District Information on School Education
UN	United Nations
UNDP	United Nations Development Programme
UP	Uttar Pradesh
UT	Union Territory
VET	Vocational Education Training
VTIP	Vocational Training Improvement Program
WIPS	Women in Public Sector
WB	West Bengal
WEF	World Economic Forum
WPO	Worker Population Ratio
WVTP	Women's Vocational Training Programme

Executive summary

Executive summary

Female labor force participation rate (FLFPR) for any country is an indicator of an inclusive developmental paradigm. In India, despite an increase in the school enrolment and attainment of enrolment parity with male counterparts, a large part of the female working age population is still absent from the labor market. As per the International Labour Organization's Global Employment Trends 2013 Report, India ranks 120th out of 131 countries for female labor force participation. FLFP rates in India remain low and have even fallen in recent years.

The Government of India, through its policy framework and programmatic initiatives is striving to create a large industry led workforce for India and make it the Skill Capital of the World. This will be better achieved if both men and women in the country have access to vocational training programs. The Indian government has been proactive in rolling out measures to increase female labor force participation rate such as educational scholarships, reservations/quotas, self-employment/entrepreneurial support, capacity building/skill training programs. However, challenges in effective implementation and skimmed access to the beneficiaries coupled with deep rooted social norms causing gender specific constraints, led to the programs producing limited results and the FLFP rates continue to dwindle low.

The dual challenge faced by the skill training institutes is to improve women's access to existing institutions as well as keeping pace with the emerging and changing requirements of skilled workforce for the industry. India is moving towards adoption of Industry 4.0 – big data, high computing capacity, artificial intelligence, analytics and robotics – are set to redefine the way businesses run their enterprises. As entire industries adjust, most occupations are undergoing a fundamental transformation. While some jobs are threatened by redundancy and others grow rapidly, existing jobs are also going through a change in the skill sets required to do them. This dynamic scenario makes it even more crucial to ensure that gender dimensions are incorporated in the planning process and policies made more agile to accommodate their concerns.

The study

This study was commissioned by the Ministry of Skill Development and Entrepreneurship through the Directorate General of Training, under ambit of the Skills Strengthening for Industrial Value Enhancement (STRIVE) program to understand the key policy imperatives to increase female participation in vocational training programs and to enable their smooth transition to avenues of earning a livelihood and determine the demand and supply constraints in ITIs, apprenticeship and labor market. The objectives of the study are to:

- Determine the demand and supply constraints in ITIs, apprenticeship and the labor market
- Analyze government intervention in setting up of National Skill Training Institutes (NSTI) for encouraging women participation in skills, recommend optimum utilization of infrastructure
- Identify specific constraints faced by young women in accessing skilling opportunities
- Provide insights to identify new demand driven entry points into skilling opportunities and labor market

Research design

The research design made use of mixed methods, both qualitative and quantitative research methods. Use of qualitative tools helped in understanding the perspectives of different stakeholders, especially females – the challenges they faced and enabling factors. Quantitative analysis provided trends in enrolment, dropouts and other related parameters and helped to triangulate the findings from qualitative research.

The study spanned 12 states which were selected after going through an elaborate process of filtering states in each region using parameters for their gender friendliness. These states were: Assam, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. At the next level purposive sampling was used to ensure inclusion of ITIs according to type (government /private); student mix (co-ed/only women); location (rural/urban). Wherever NSTIs for women were available were included in the study. Thus 10 NSTIs were part of the sample. A sample of 367 ITIs was selected for the study out of which 64 were shortlisted for physical visits by the team. It was also decided to visit at least one industry in the district visited by the team after ensuring that MSMEs, large industries and PSUs were covered in each state visited. A total of 67 industries were visited by the research team.

Responses were collected from 1807 respondents which included students, faculty and principals from the ITIs and the NSTIs, representatives from the industry, apprentices, female workers and other respondents. The findings were analyzed to identify barriers related to institution, the individual and policy level.

Key findings

I. Demand of the industry and skilling opportunities for women

Secondary research of the limited gender disaggregated data pertaining to employment shows limited preparedness among women to take advantage of the emerging job opportunities, not to mention the changing requirements of the industry in coming years.

Skill gap study conducted by the NSDC over 2010-2014, indicates that there is an additional net incremental demand of 10.9 core skilled manpower by 2022 in 24 key sectors. Out of these 24 sectors, 77% of demand is concentrated across sectors such as building, construction and real estate, transportation and logistics, beauty and wellness, furniture and furnishing, tourism, hospitality and travel, textile and clothing, retail and handlooms and handicrafts with an incremental demand for manpower of 8.52 crore by 2022. However, when one analyses the female enrolment trends in the ITIs, it is found that only 37% of female enrolments between 2014-18 were in these high demand sectors. Presence of women in mainstream engineering trades is almost negligible. Women are mostly present in non-engineering trades like dress making, COPA, surface ornamentation, etc.

While sectoral changes are apparent with the surge in the demand for automation, even the skill profile across sectors is seeing an evident change. Responses from industry representatives highlight the following skills that are becoming more important to encourage women towards higher employability: creativity, complex information processing and interpretation, entrepreneurship and initiative taking, leadership and managing others, advanced IT skills and programming and basic digital skills.

II. Trends of enrolment of females in ITIs

- The proportion of females in ITIs in the last 5 years has increased considerably, however, females make up only 21% of the student cohort in ITIs and have a dominated presence in the non-engineering trades, about 60% of the trainee cohort in 2018. The apprenticeship cohort from the 367 ITIs had only 11% representation of females and were found to be concentrated across a few trades.
- There are variations in enrolment / participation patterns across ITIs by affiliation, i.e. government or private, by geography i.e. rural or urban and by student mix i.e. coeducational or women only. The data yields that, proportion of females is higher in government ITIs as compared to private ones, 33% and 20% respectively, indicative of an evident preference towards government ITIs. The enrolments trends of females in rural ITIs are seen to be more promising, with female enrolments almost doubling in the last 5 years.
- The administrative data collected from the ITIs showed that in the last 5 years the dropout rates have continued to be a cause of concern. The dropout rates for females was recorded at an average of 23% with variations across the categories of ITIs.

III. Constraints faced by females in accessing skilling opportunities in the ITIs

Institutional challenges

- Physical access to the ITIs because of their remote location and lack of transportation was cited as a barrier by most female students. The problem is compounded by the harassment they face while on their way to the ITIs. During focused group discussions more female students from rural tribal areas felt the need for residential facilities for them, which at present are almost non-existent. By and large, females vociferously expressed the need for availability of transportation for them.
- Lack of basic amenities especially toilets. The toilets were found to be in poor condition in almost all the ITIs visited by the team.
- Difficulty in online enrolment, as repeated visits to a cybercafé is both costly and inconvenient. They often have to depend on their male relatives to get access to the internet.
- Limited options of trades are offered at the ITIs for females especially trades considered non-traditional for them.
- Gender stereotyping in the choice of trades reinforced by the faculty through actions such as assuming that females will not be able to pursue courses that require physical labor, making them observe practical training rather than doing it themselves, etc.
- Lack of counselling, career guidance, post training support for entrepreneurship and soft skill training in ITIs poses a challenge to them during transition to employment post training. Most ITIs visited by the team did not have a dedicated placement officer.
- While the number of job fairs organized by the ITIs has increased, participation of the industry in these fairs was found have decreased in the last five years.

Societal challenges

- A general perception among parents is that the trades offered at the ITIs are more suited for males, therefore, there is reluctance among parents to seek admission for their daughters in these institutes. This perception gets reinforced because they do not get proper information about what the ITIs have to offer. The main source of information about the ITIs remain their friends and relatives. About 77% students mentioned that they learnt about the ITIs through these two sources.
- Parents are willing to seek admission for their daughters in women only ITIs. Women only ITIs are showing a steady increase of enrolment of female students. Their enrolment has doubled in the last five years. However, in these institutes also fewer females opt for trades considered non-traditional for them, which makes the ITIs open doors for men to make it viable. It is seen that enrolment of boys in women's only institutes have increased fourfold since 2015 which indicates that the ITIs struggle to fill up the seats with female candidates for these trades.
- Females also identified marriage as one of the main reasons as to why they drop out of the course, especially when they have to relocate after marriage. In addition, the females often find it hard to balance and cope with the dual burden of training and household responsibilities. There are no creche facilities at any ITIs.

Financial challenges

- The fees at the private ITIs is quite high and found to be unaffordable by students. This becomes a problem for the females, especially for ones from economically weaker sections. The families often prefer to support their male child's education than investing in their daughter's education.
- In addition to the training fee, the costs incurred for travel to the ITIs is an added burden. When the ITIs are located at a distance from the females' home without much public conveyance options, it puts an additional burden on them.

The team identified seven parameters based on which gender friendliness of the ITIs was mapped and graded on a three-point scale. These parameters were location, availability of functional toilets, availability of transportation, female faculty, safety and security, residential facilities and additional efforts made by the ITI to increase enrolment of females. Subsequently impact of each of these parameters was seen on enrolment. Out of these three parameters; location, female faculty and safety measures in the campus, were found to have a strong positive relationship with the growth in enrolment over the years.

IV. Constraints faced by females in labor market as apprentices and employees

Proportion of verified female apprentices out of total number of apprentices varies across states from as low as 3% (Rajasthan) to 24% (Kerala). Females continue to face many barriers to enter the labor market and access decent work, such as, choice of work, working conditions, employment security, low stipend, discrimination and balancing the burdens of work and family responsibilities. Some of these challenges shared by female apprentices and employees were as follows:

- Access to information about apprenticeship program is limited. The ITI graduates working as apprentices had limited support from their institutes in terms of establishing industry ties and securing apprenticeships. Most of the apprentices spoken to said they mainly were dependent on their family, peers and relatives for information related to placement and apprenticeship opportunities. Information asymmetry along with lack of proper counseling at ITI makes it difficult for the females to identify trades and their prospects for apprenticeship and placements. Respondents also shared that there is shortage of apprenticeship opportunities for non- engineering trades.
- The flagship scheme for apprenticeship under Ministry of Skill Development and Entrepreneurship - National Apprentices Promotion Scheme (NAPS) is an entirely portal based system for both the apprentice and the employer. This may have streamlined the process of recruitment of apprenticeship and made it paperless, but it poses a challenge to the females. As in the case of ITI enrolment, the females may have to be dependent on male members of their family for access to internet and a computer system. Besides, there is no channel for help/IT support for NAPS portal that the females can resort to incase of difficulty. On the market side, MSME too reported the process to be cumbersome. Some other companies hiring through NAPS felt it makes the process impersonal.
- The apprentices from ITIs also felt that there is a gap between their existing skill sets as compared to the industry expectation of job, this leading to low productivity at work / poor outcomes. They shared that they were not given tasks to match their skill sets since most employers believed females prefer to take up job roles that are less strenuous. Similar concerns were shared by the female employee also.
- Female apprentices from the ITIs reported that they do not get a comparative advantage than the fresh apprentices because the industry, especially the large ones, do not recognize that the apprentices from ITIs have better skills. This is very demotivating for them.

- The distance of the enterprise from the residence of the female apprentices creates a barrier. There is a cost factor and safety factor when the females must travel long distance to attend apprenticeships. This problem is even more acute for apprentices in the rural areas due to lack of opportunities locally
- The families are skeptical when the females join enterprises as apprentices or employees if they had to travel long distance for them same. Females also face resistance regarding the nature of job role they choose, strenuous and machine related job roles are usually not as readily accepted by their families.
- Females respondents from the labor market felt that the workplaces are not sensitive to gendered needs, in terms of the behavior of their male counterparts, availability of toilets

V. Employers also face challenges while onboarding females

- Employers pointed that very few females apply for manufacturing, factory based or outdoor jobs even after repeated advertisements. They have preference for desk jobs, customer facing jobs, software related jobs, for which apprenticeship opportunities are fewer than manufacturing. The reasons cited by the employers for their inability to hire female employees in larger numbers resonated with what even the ITI functionaries had mentioned, i.e., the candidates being reluctant to travel and hesitation to take up laborious job roles
- Employers find a skill mismatch of the female recruits, wherein they have to invest more time and efforts in training them to have them work on complicated machinery and equipment
- Some employers, especially MSMEs, are reluctant to meet the extra cost incurred on account of putting in place extra security, pick and drop services during night shifts, restricted working hours for women, etc.
- Employers observe that the output of females gets impacted once she gets married and has a child and fear the female employees would relocate after marriage and leave the job. Employers feels this wastes the resources they put into their training and development. Therefore, they may prefer to employ men who may be more willing to put extra hours at work

VI. National Skill Training Institutes (NSTIs)

The NSTIs have a mandate to develop skilled manpower for industry, instructional staff for the Industrial Training Institutes and upgrade the skill of in-service persons from industry. Amongst the NSTIs visited as part of the study had very good infrastructure. The institutes provide a good ambience for learning through well-equipped classrooms, hostel facilities and well-maintained overall infrastructure. The NSTIs were found to have up-to date and more advanced machinery than available at the ITIs. However, when seen from the lens of the mandate given to them, it was found that more students were opting for the CTS courses than the CITS courses, that are required to become an instructor. At the NSTIs also it was found that there is preference for non-engineering trades. Only 7% seats remain vacant for the non-engineering trades as compared to more than 25% seats in engineering trades. None of the NSTIs were found to do any significant work towards upgradation of skills of persons from the industry.

Given the fact that the NSTIs have very good infrastructure and there is a need to enhance gender friendliness at the ITIs, it is suggested that the NSTIs become state resource centers for the ITIs to support them to improve their pedagogy and help bridge the gap in offering high quality training with specific focus on females. Some specific suggestions are as follows:

- Development of need-based modules which can be used by the staff at the ITIs. For example, modules for gender sensitization of staff
- Conduct research on a regular basis to develop intelligence around demands of the industry and need for introducing relevant skills especially for females
- Facilitate interaction with the industry associations, demand aggregation and supporting the ITIs in planning relevant trainings
- Develop capacity of the ITIs to enhance gender friendliness
- Serve as incubation centers to support self-employment/entrepreneurship

Recommendations

In view of the above challenges that have been identified by engaging with various stakeholders, what is desirable now is a policy framework encouraging and enabling female participation that considers the gender-specific constraints that most females face

Area /	Recommendation
Policy Key stakeholder: Ministry of Skill Development and Entrepreneurship	▶ Review of policies and guidelines related to ITIs and apprenticeship from a gender perspective ▶ Incentives to MSMEs to engage female apprentices and employees ▶ Creation of a needs-based fund for the ITIs to support gender friendly programs and activities ▶ Scholarships for females to help overcome financial barrier and incentives for those pursuing engineering related trades ▶ Redefine the role of NSTIs as hubs to promote gender diversity in the ITIs ▶ Collaboration with other ministries and resource agencies to address the barriers at the ITIs and at workplace
Strategy Key stakeholder: Directorate General of Training	▶ Support state directorates to create awareness about the ITIs using different media ▶ Strengthen counselling services for female trainees at all stages ▶ Safety and security of females to be prioritized ▶ Leadership training for the principals of the ITIs and gender sensitization for the faculty and students ▶ Include parameters related to gender friendliness in the grading system ▶ Introduce a flexi approach to popularize the apprenticeship program among students and MSMEs
Implementation: Industrial Training Institutes	▶ Include communication strategy in the plan to create awareness about the ITIs ▶ Social mobilization plan for better engagement with the community ▶ Effective career guidance ▶ Strengthen soft skills training for students ▶ Plan and implement measures to ensure safety of female trainees within the ITI

Chapter 1: Introduction

1. Introduction

The United National Population Fund (UNFPA) reports that currently India has its largest ever adolescent and youth population. According to projections, India will continue to have one of the youngest populations in the world till 2030, which is perceived as the window of opportunity, with a spurt in the working age population. However, to realize the benefits of this demographic transition completely, the working age population must be empowered with skills, education and employment opportunities.

While the schooling system improves the literacy levels of the country, it is post school education including skill and vocational training that equip the youth with marketable skills to enter and sustain in the labor market. Skill gap studies commissioned by the Ministry of Skill Development and Entrepreneurship report that an incremental demand for 10.9 crore[1] human resources will be created by 24 high growth sectors in India by 2022. (PIB 2015) On the supply side, the prevailing skill levels of country are worrisome, with only 4.69% of India's workforce said to have received formal skilling training (National Policy for Skill Development and Entrepreneurship, 2015). This increases the need to skill the youth of India with scale, speed and quality to fulfil the needs of the manpower in the economy and counter the situation of skill mismatch in the country.

The Ministry of Skill Development and Entrepreneurship (MSDE) was formed in the year 2014, to converge all the skill development efforts towards a common objective with clear policy imperatives. The Ministry has since been acting as the nodal force for unifying the fragmented efforts of skill development in the country. The federated role of MSDE was guided by the National Policy of Skill Development and Entrepreneurship 2015 and National Skill Development Mission that provides the ecosystem with the policy prerogative and strategy mechanism. MSDE also launched the Skill India Mission to amalgamate the efforts made by various states, ministries and departments to improve the skill development and entrepreneurship ecosystem and ramp up the process of equipping the youth of the country with marketable skills.

The above initiatives have gained considerable momentum with over 2.5 crore students trained, assessed and certified under Skill India Mission[2], the flagship initiative by Government of India. However, there are some challenges that remain to be countered to fully realize the impact of the skill programs. The 2015 policy on Skill Development and Entrepreneurship outlines three main reasons for why skilling has not taken roots as it has in many other countries. First, perception about skilling programs, where it is considered to have lower value than other formal education programs. Second, the industry, especially the MSMEs, treat skilled and semi-skilled individuals at par, thereby undermining the importance of acquiring vocational skills. Third, the vocational training programs are not aligned with the requirements of the industry.

While the above has a bearing on the entire youth of the nation, its triangulation with other socio-economic factors, impacts females more adversely, especially so in developing nations like India. Gender bias norms around work, mobility, information and access to networks hinder full optimization of the benefits of the various education and skill programs (Moore, Pande and Prillaman 2018). Females make up 48.5% of India's population[3], making it imperative for the country to be able to harness the skills and competencies of this population segment.

Equal participation of men and women is critical and desirable for economic and societal transformation and taking due cognizance of the same, through sustained efforts by the government and other stakeholders, gender parity at the school level has improved in the last decade. As per Educational Statistics at a Glance (ESAG), 2018, over the years, remarkable progress has been made in respect of female participation up-to secondary level and Gross Enrolment Ratio (GER) for females has exceeded that of boys, at primary through senior secondary levels.[4] Various schemes and programs were introduced to ensure not just an increase in school enrolment but also a reduction in drop outs and encouraging retention. However, the figures see a dip at the higher education level for females, with a GER of only 23%. Similar discouraging trends are seen with labor force participation rates for females being as low as 23.6% in 2018 (The World Bank 2019). Many studies are now the

[1] 1 crore = 10 million

[2] Ministry of Skill Development and Entrepreneurship, 2018. Accessed from https://www.msde.gov.in/assets/images/latest%20news/MSDE%20Achievement%20Release_Final_June6th.pdf

[3] Ministry of Statistics and Program Implementation, *Women and Men in India - A statistical compilation of Gender related Indicators in India,* 2018. Accessed from: http://www.mospi.gov.in/sites/default/files/publication_reports/Women%20and%20Men%20%20in%20India%202018.pdf

[4] Ministry of Human Resource Department, *Education Statistics at a Glance,* 2018, Page 11. Accessed from: https://mhrd.gov.in/sites/upload_files/mhrd/files/statistics-new/ESAG-2018.pdf

exploring the decline in the Female Labor Force Participation (FLFP) and finding answers to the question - why are more females dropping out of the labor force despite increase in educational levels, urbanization and rise in the economy?

One of the reasons diagnosed in previous studies (World Bank/ILO, 2013[5]; ADB, 2015[6]) shows that increasing levels of stability in family income has a deterring impact on female's participation in the labor force. Further, the lowest incidence of FLFP rates were found to be among those who had attained secondary and postsecondary (10+2) levels of education in both rural and urban areas. The FLFP rate was identified to be the highest among illiterates and college graduates in both areas. This implied that FLFP was higher for females who were either highly skilled or had to work out of necessity and low for those females who had a support structure with relatively higher income stability. Further, this was found to be linked to the perceived roles for females in traditional Indian society which ascribes them to be the caretakers. The studies found that these ascribed roles affect females both before and after marriage. Low female labor force participation was influenced by high opportunity costs associated with females. These opportunity costs were primarily rooted in domestic responsibilities such as rearing the children and other household chores. This socialization process not only impacts female participation in the labor market, but also hinders female enrolment and participation within the Technical and Vocation Education and Training (TVET) ecosystem within India.

This calls for systemic analysis to assess how the state led programs address underlying barriers to female participation in vocational training and labor markets

1.1 Female labor force participation

Out of the 17 Sustainable Development Goals (SDGs), goal number 5 targets gender equality, to empower girls and women and aims at providing equal access to women and girls towards, education, health care, opportunities to work and participation in political and economic decision-making will help economies become sustainable. Oxfam in its report on unemployment (Mind the gap – State of unemployment in India, March 2019) estimates that the GDP would rise by 43% (based on estimated GDP for 2017 – 18) if women had the same work participation rates as men. However, literature on female representation in TVET is replete with instances of under representation of females.

"India ranks 135th out of 187 nations on the gender inequality index and 108th out of 148 on the global gender gap index."

(UNDP 2018)

(World Economic Forum 2018)

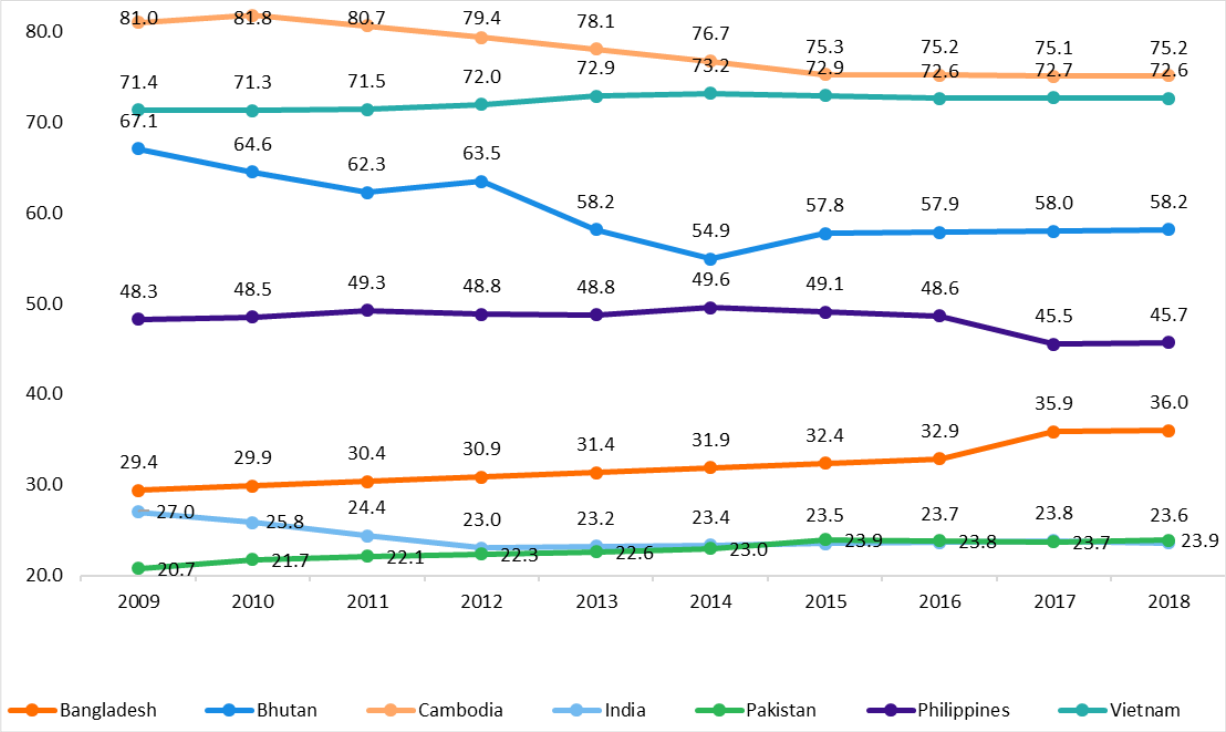
As per the International Labor Organization's Global Employment Trends 2013 Report, India ranks 120th out of 131 countries in female's labor force participation[7]. Female's workforce participation in the country is lower than many countries in Sub-Saharan Africa and the Middle East. Similar results are seen upon a comparison with the South Asian and South East Asian countries falling in the lower middle-income category. The figure given below shows some of these countries and the respective female participation rates.

[5] Possible Future for Indian Apprenticeship System Options: Paper for India, WB & ILO, 2013

[6] Women in the workforce: an unmet potential in Asia and the Pacific, ADB, 2015

[7] International Labour Organisation (2013), *India: Why is women's labour force participation dropping?*. Accessed from https://www.ilo.org/global/about-the-ilo/newsroom/comment-analysis/WCMS_204762/lang--en/index.htm

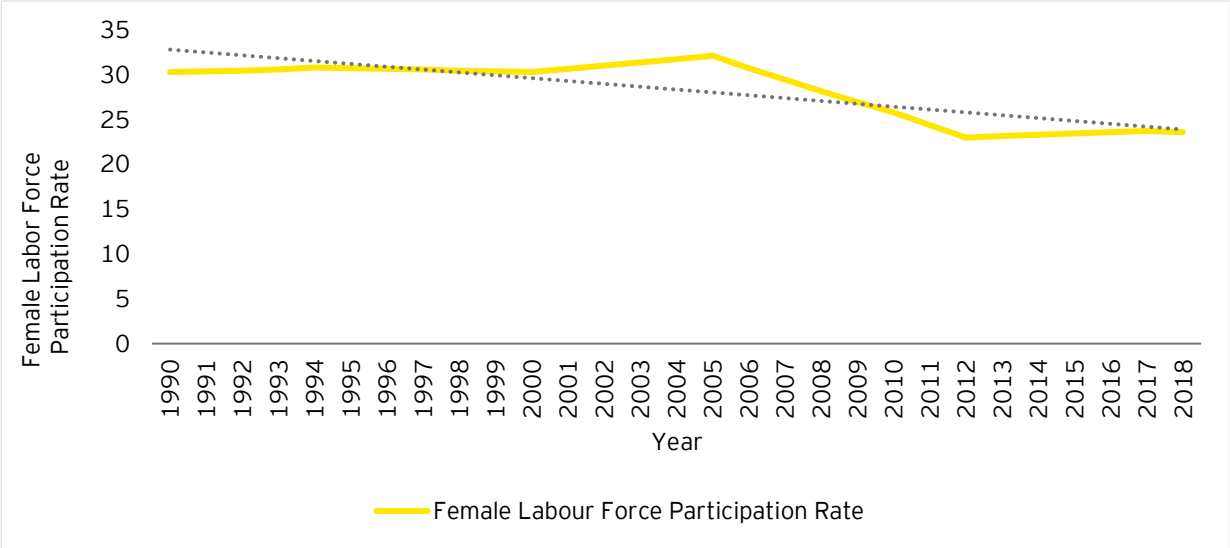
Figure 1: labor force participation rates across countries



Source: World Bank (2019), Labor force participation rate, female (percentage of female population ages 15+), Accessed from https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS , in July 2019

Data from the National Sample Survey Organization (NSSO)[8], shows that during 2017-18, about 54.9% of rural males and 18.2% of rural females were in the labor force. The corresponding figure for urban areas was about 57% of males and 15.9% of females were in the labor force. There has been a sharp decline of about 12 percentage points in FLFP between 2004-2018. World bank figures looking at the trend on a wider scale shows that from 1990 to about 2005 there was marginal increase in FLFP rate after which it has shown a steady decline.

Figure 2 trend: female labor force participation rate in India

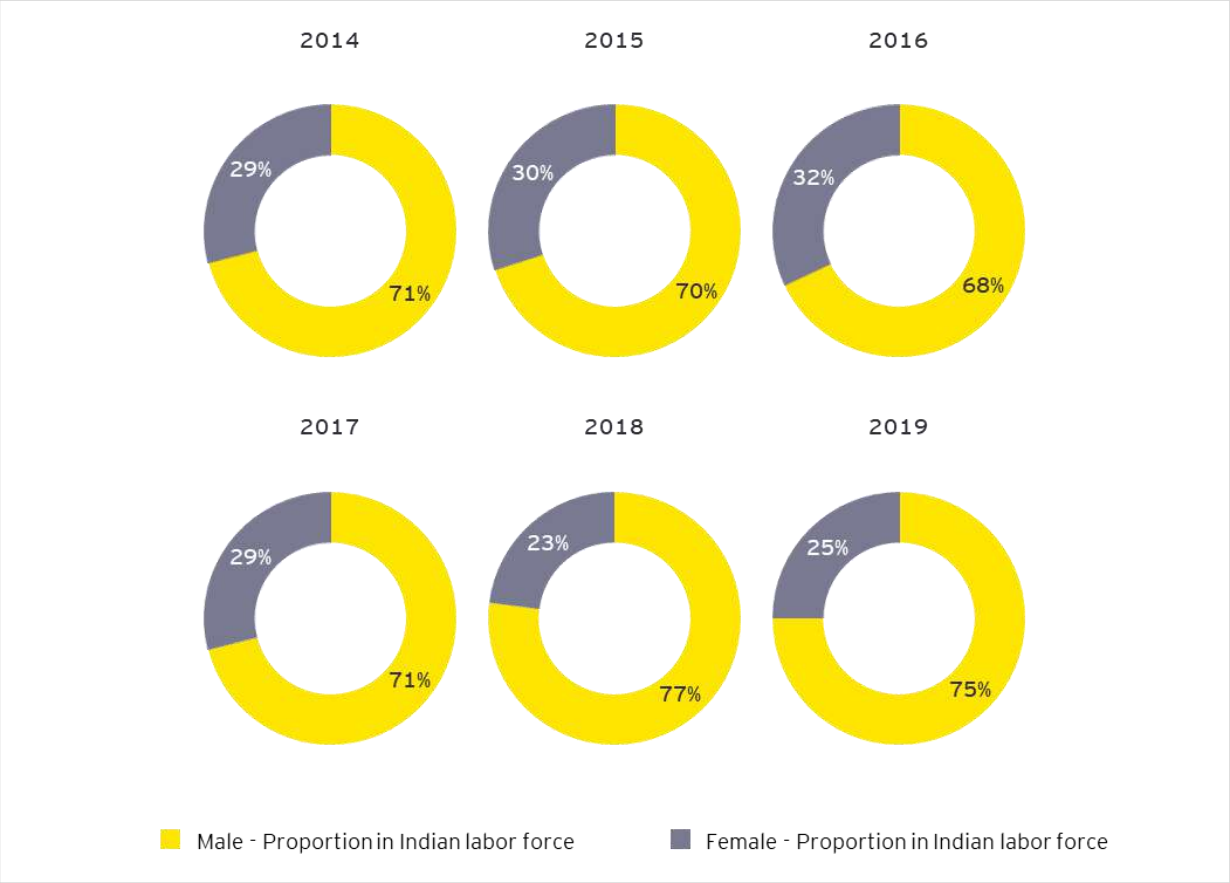


[8] Periodic Labour Force Survey, NSSO, May 2019

Source: World Bank (2019), Labor force participation rate, female (percentage of female population ages 15+), Accessed from https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS , in July 2019

As the trend indicates, the sharp decline in the female labor force participation rate raises questions about the inclusiveness of the development paradigm. Low female labor force participation has both macro and microlevel implications, namely significant underutilization of labor resources in the economy, lack of access to economic opportunities and low familial decision-making powers to the female respectively. India Skills Report 2019 shows that over the years there has been little to no improvement as far as female representation at workplace is concerned. While the country progresses, females make up only 25% of India Inc. and a much lesser proportion at managerial positions.

Figure 3: participation of females in Indian labor force

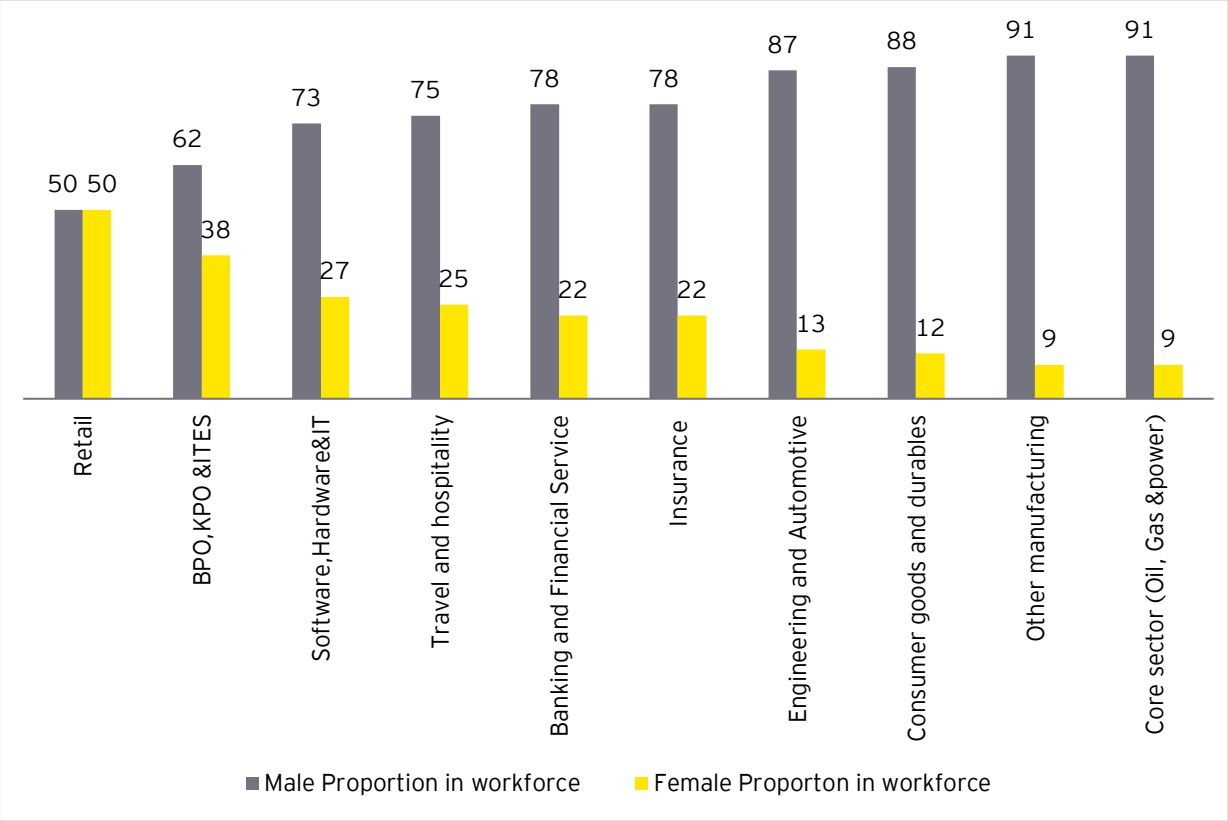


Source: India Skills Report 2019

Sector wise variation in hiring

The India Hiring Intent Survey 2018 reported the average gender ratio at workplaces is about 77:23. Sectors like automotive, oil and gas record participation of females lower than 15%. The proportion of females however is relatively better in the service sector with 50%, 38%, 27%, 25% and 22% in retail, BPO/KPO, software and travel and hospitality and BFSI respectively.

Figure 4: gender diversity industry wise



Source: India Skills Report 2018, India hiring intent result

"...sectors with the fastest growth and maximum hiring – telecom, banking and the core sectors — are dominated by men. In telecom, 83.84% of all employees are men; 78.79% in banking, financial services and insurance and 74.75% in core sectors like oil and gas, power, steel and minerals, according to the India Skills Report 2017. Women themselves show a clear preference for trades that are traditionally 'women oriented': beauty and healthcare for instance."

Clement Chauvet, UNDP's chief of skills and development[9]

Gender disparity in wages

Not only are females underrepresented in the workforce, the gender-based gap in wages remains to be a cause of concern. World economic forum's Gender Gap report, 2018 ranks India at 72 out of 149 countries for wage equality for similar work survey. The wage gap exists for all kind of workers - regular and casual, urban and rural. The females employed as casual workers in the rural economy earn the lowest in India, which is 22% of what urban regular male workers earn (ILO 2018).

The report mentions that large part of the wage disparity stems from discrimination against women which varies in level basis the choice of industry and location of employment. A woman's marital and maternal status also has impact on the employers while fixing their wages. The report points out another trend pertaining to wage differentials and highlight that it is more pronounced in the low skill/low earning group and gradually decreases as a woman's career progresses. Females in managerial and other evolved positions are better aware of their rights and entitlements and are in a better position to raise voice against workplace discrimination.

[9] Quoted in "Why Indian Workplaces Are Losing Women", 2017 by the Wire.in. Accessed from https://thewire.in/labour/indian-workplaces-losing-women-nationwide

1.2 Female participation in vocational training and apprenticeship

Time and again succeeding governments have devised policy interventions to positively impact the lives of females through education, entrepreneurial development and vocational skills aimed to encourage more females to access education and participate in vocational training. But the desired results are far from being achieved. Despite the government's measures, India's female literacy rate is 65.46% (as per Census 2011), 14 percentage points below the world average of 79.7%. The National Colloquium Report 2017 by NCPCR states that 39.4% of the adolescent girls in the age group of 15-18 years are not attending any educational institutions and of this 64.8% do so because they are forced to undertake household duties.

1.2.1 Vocational training through the ITIs

The vocational training system is India is anchored throughout the country via the network of more than 14,000 Industrial Training Institutes (ITIs) training over 20 lakh youth each year under the administrative overview of Directorate General of Training (DGT) under Ministry of Skill Development and Entrepreneurship[10]. However, the proportion of female students in the ITIs is only about 12% (DGT, MIS, 2019).

Several measures have been taken to encourage female participation in the ITIs – such as women only ITIs and seat reservation for females in government ITIs. Unfortunately, these measures have not had the desired effect because these have not been utilized optimally. While a 30% seat reservation policy was introduced in some ITIs it is found to be not fully optimized. Even the seats in women only ITIs remain underutilization of the seats, which have resulted in these ITIs to open their doors for males to cover for the expenses of running the institutes. A tracer study commissioned by Mott Macdonald shows that ITIs record an approximate 30% of female enrolment only (Mott MacDonald 2018).

A look at the data across all states in India shows that about 12 states contribute to about 80% participation of female trainees in the ITIs. Only eight states have a favorable proportion of female enrolments in ITIs

Table 1: proportion of females in ITIs state-wise

Female participation: rural urban ratio	**Percentage**
Female, rural	18
Female, urban	82
The eight states with more than 50% female participation in ITIs	**Percentage**
1. Puducherry	79.19
2. Uttarakhand	68.20
3. Mizoram	66.19
4. Assam	63.58
5. Gujarat	58.03
6. Delhi	57.06
7. Madhya Pradesh	52.91
8. Arunachal Pradesh	52.34
The eight lowest performing states with less than 20% female participation	**Percentage**

[10] In 208-19, 23.08 lakh youth were trained across 14939 ITIs - Year End Review -2019 of Ministry of Skill Development and Entrepreneurship, PIB. Accessed from https://pib.gov.in/newsite/PrintRelease.aspx?relid=195969

1. Dadra and Nagar Haveli	0.00
2. Bihar	9.90
3. Nagaland	11.01
4. Daman and Diu	12.56
5. Jharkhand	12.93
6. Manipur	16.39
7. Meghalaya	16.58
8. Andhra Pradesh	17.11
The 14 states with female participation percentage in ITIs below national average (less than 32%)	**Percentage**
1. Dadra and Nagar Haveli	0.00
2. Bihar	9.90
3. Nagaland	11.01
4. Daman and Diu	12.56
5. Jharkhand	12.93
6. Manipur	16.39
7. Meghalaya	16.58
8. Andhra Pradesh	17.11
9. Rajasthan	23.28
10. Tamil Nadu	23.61
11. Kerala	24.31
12. Tripura	24.40
13. Himachal Pradesh	25.45
14. Maharashtra	25.81
12 states alone contribute 80%age of female participation in ITIs	

Source: India Stat database 2017 – State wise Number of trainees under ITIs in rural and urban areas by gender in India (2017)

Furthermore, concentration of females in a select few sectors is a universal challenge, both in training and employment. For instance, a study commissioned by TVET Asia[11] across Cambodia, Indonesia, Laos, Malaysia,

[11] TVET Asia is an open content online journal for scientists and practitioners in the field of Technical and Vocational Education and Training (TVET) and Vocational Teacher Education (VTE) in the East and Southeast- Asian region

Thailand and Vietnam cited that "women feel destined to choose professions such as nursing, hospitality, arts and crafts, etc., which are characterized by low market demand and career progression prospects." This in turn creates low employability outcomes for women in skill development and discourages more women from participating in TVET. The same can be said for the Indian context also. Some countries, such as Philippines are making efforts to address this challenge, where the government is investing in sectors with female underrepresentation. Its Technical Education and Skills Development Authority's (TESDA) Women's Center offers vocational training to women to equip them for work in industrial sectors traditionally dominated by men. Courses include electrical installation and maintenance, motorcycle and small engine servicing and plumbing. However, by and large, this remains a challenge for women in vocational training and skill development.

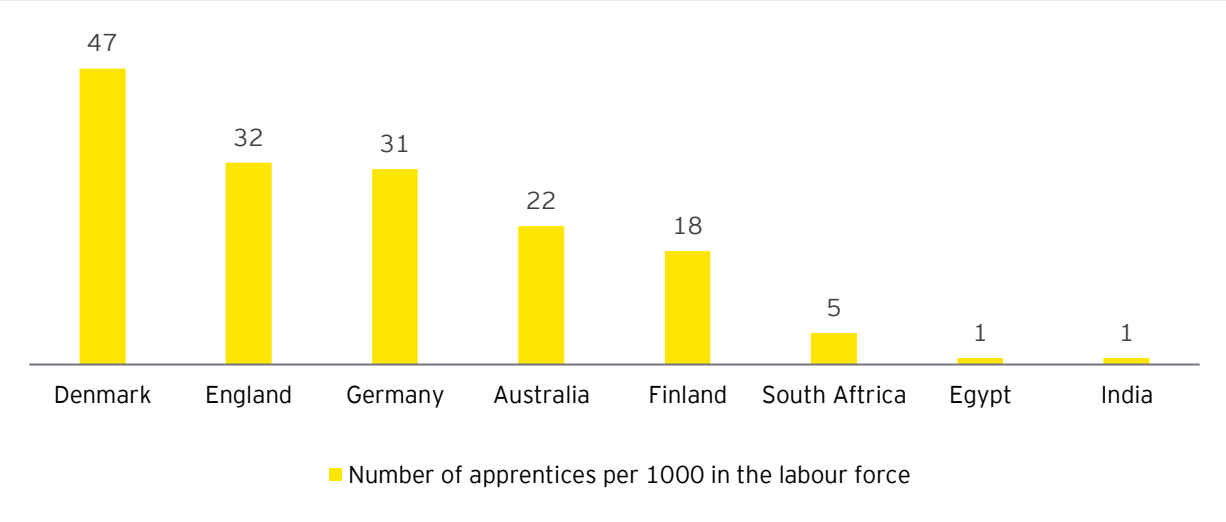
In the ITIs in India too, trainings see a gendered dichotomy wherein female enrolment is often seen concentrated in a few trades such as non-engineering trades like dressmaking, computer operations and program assistant, surface ornamentation and similar non-engineering trades. Adolescent girls are an emerging priority group but interventions for skills still struggle to mobilize them towards skilling programs that translate into jobs. Moreover, there is still less focus on non-stereotype skilling that caters to contemporary market demands - for example skills required to operate cash counters at large grocery stores, for being delivery agents for food apps or couriers, mobile repair, etc. are required (World Bank 2019).

Information asymmetry continues to be another challenge hindering participation of women in training programs, education and employment opportunities. Most the information reaches the women through word of mouth network of immediate family and relatives. Observer Research Foundation and the World Economic Forum revealed that 70% youth are not aware of government programs and schemes on skill development and 51% lack guidance on identifying jobs that can match their skill sets or type of skill sets that can be gained (Observer Research Foundation 2018).

1.2.2 Females in apprenticeship in India

An ILO (2013)[12] report estimates that proportion of apprentices in India as compared to its work force is a mere 0.01% and compares unfavorably with countries such as Germany and Australia, which both have around 3.7% of their workforces participating in apprenticeships. Within this, participation of female apprentices is even lower. A study[13] undertaken in eight countries - India, Egypt, South Africa, Finland, England, Australia, Germany and Denmark the number of apprentices per 1000 of labor force population in the age group 15-64 years were compared. India was found to be performing the worse in this case.

Figure 5: number of apprentices per 1000 in the labor forces: comparison of eight nations



Source: People and Policy – A comparative study of apprenticeship across 8 national contexts, University of Oxford,

[12] International Labour Organization (2013), *Possible Futures for the Indian Apprenticeship in India*. Accessed from https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_234727.pdf

[13] People and Policy – A comparative study of apprenticeship across 8 national contexts, University of Oxford. Accessed from *https://www.researchgate.net/profile/Maia_Chankseliani/publication/324064503_People_and_policy_A_comparative_study_of_apprenticeship_across_eight_national_contexts/links/5abb9982a6fdcc8aefe231d8/People-and-policy-A-comparative-study-of-apprenticeship-across-eight-national-contexts.pdf*)

While the low proportion of apprentices maybe accounted towards various factors, one of the challenges often pointed out with respect to apprenticeship program was low stipend. Other existing challenges include lack of coverage of apprenticeships in rural areas, absence of vertical mobility of apprentices into higher-level qualifications and limited capacity of government to administer a larger apprenticeship system of the current level of complexity among.

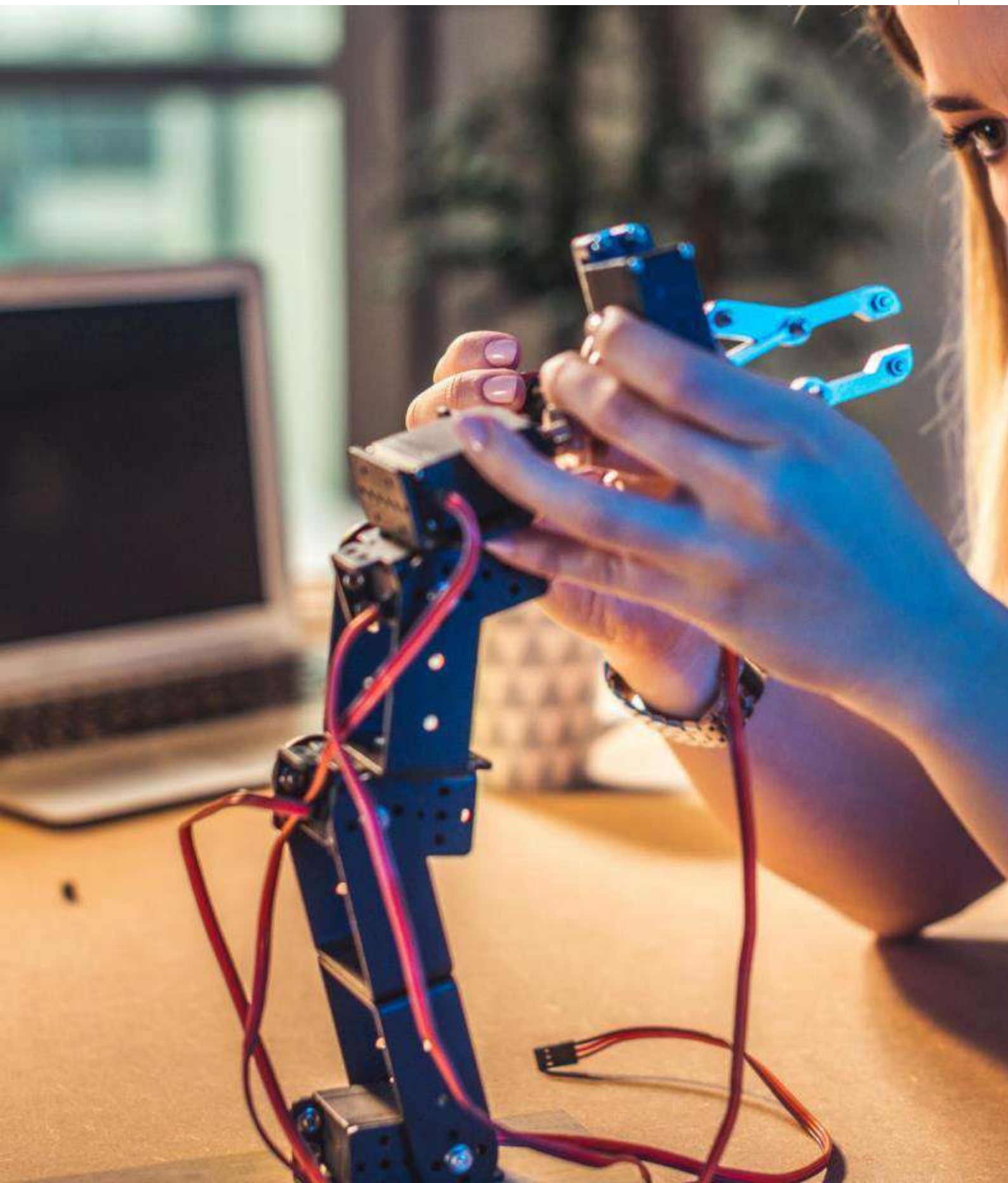
Apart from the aforementioned challenges, there is also an underrepresentation of female trainees as apprentices in the country. An ILO report of 2013 while exploring the underrepresentation of women in apprenticeships, suggests that this anomaly maybe owed to the fact that historically the trades that were focused in apprenticeship were the one that were normally favored by male participants (ILO 2013). While there is a need to improve the quality of the trades preferred by females, so they are at par with the male dominated ones in terms of wage and perceived value, females should be encouraged to consider atypical skills and not confine themselves to selection of trades as per gender stereotypes (Das 2018). Studies have also pointed the localization of apprenticeship opportunities around urban areas and bigger organizations leads to under representation of rural areas, since the stipend paid is often not enough to support migration or relocation.

1.3 The study

Government of India, through its policy framework and programmatic initiatives is striving to create a large industry led workforce for India and make it the *Skill Capital of the World*. This will be better achieved if both men and women in the country have access to vocational programs. National Policy for Skill Development and Entrepreneurship, emphasizes the need for additional infrastructure for training of females with flexible training delivery mechanisms such as mobile training units, flexible afternoon batches along with on local need-based training to accommodate women; and ensuring safe and gender sensitive training environment, employment of women trainers, equity in remuneration, and complaint redressal mechanism (Ministry of Skill Development and Entrepreneurship, GoI 2019).

This study has been commissioned by Ministry of Skill Development and Entrepreneurship through Directorate General of Training, under ambit of Skills Strengthening for Industrial Value Enhancement (STRIVE) project. STRIVE is a national program, being implemented by the Ministry of Skills Development and Entrepreneurship (MSDE). The program is scheduled to run over five years and is supported by the World Bank with the objective of *increasing access to quality and market-driven vocational training provided in ITIs and apprenticeships*. The program amongst its various objectives also aims to make trainings at ITI more gender responsive through measures such as performance-based funding approach for ITIs to incentivize them for taking steps towards increasing enrolment of female candidates. It is expected that the outcome of this study will inform the planners and decision makers to further enhance their efforts to increase diversity within the ITIs, apprenticeship program and employment.

Chapter 2: Research methodology



2. Research methodology

2.1 Objectives of the study

The Terms of Reference outline the following objectives of the study:

- Diagnose the specific constraints faced by young women in accessing skilling opportunities, particularly through ITIs, apprenticeships and productive work
- Determine the demand and supply side constraints for women in undertaking ITI and apprenticeship training, and thereafter transition into the labor market
- Analyze the Government of India intervention of setting up National Skill Training Institutes (NSTI) for encouraging women participation in skills training and recommend measures to optimally utilize the infrastructure provided to these institutes in meeting its objectives
- Identify new demand-driven entry points into skilling opportunities and the labor market

While the title of the study mentions *study to identify constraints to female participation in skills training and labor market in India*, the focus of skill training would be confined to training at the **ITIs and apprenticeship training.** As mentioned, the learning drawn from this study will provide inputs to the STRIVE initiative of DGT and provide specific recommendations to increase participation of women in ITIs, apprenticeship and workplace.

2.2 Approach to the study

A four-step approach was adopted for the study, encompassing of:

- Problem identification
- Collection of relevant information from different stakeholders
- Undertaking a comprehensive analysis of the situation
- To come up with recommendations suited to the STRIVE initiative

In doing so it was ensured that the aspects were examined through a gender lens at all stages of the study by including both male and female respondents. The four-step approach described above was put into an operational form using the identify – design – deliver – sustain (IDDS) approach.

Table 2: approach of the study

Identify	Review of literature and analysis of secondary data to understand the issues
Design	Information gathering from different stakeholders to get an understanding about barriers
Deliver	Deliver analysis of information collected to get a more nuanced understanding of current status
Sustain	Recommendation based on insights gained; provide inputs for gender friendly policies and strategies for vocational training

2.3 Methodology

For the study, a mixed methodology was used making use of both qualitative and quantitative research methods. Use of qualitative tools helped understand the perspectives of different stakeholders especially females – the challenges they faced and enabling factors. Quantitative analysis provided trends in enrolment, dropouts and other related parameters and helped to triangulate the findings from qualitative research. Details of the methodology used are given below.

2.3.1 Sampling

The following sampling methodology was used to select the states and respondents that represented all regions and geographies.

Selection of states

Out of the 36 states and union Territories (UTs) in the country[14], 12 sample states were selected for data collection using purposive sampling through the following method:

- States and UTs with 20 or less ITIs were not considered for sample selection which eliminated 14 states leaving 22 states as the universe for sample selection
- Ladakh was added as a UT only in August 2019 when data collection had already been initiated, therefore, was not taken into consideration while sampling. Delhi and Jammu and Kashmir were also not included in the sampling process for the following reasons:
  - It would have been challenging to collect primary data from the ITIs in Jammu and Kashmir in a timely manner due to the prevailing socio-political situation in the state
  - Delhi being the capital city is positioned to avail better administrative facilitation with MSDE, which may have skewed the findings. Besides Delhi being the only UT under consideration would not have given a just representation of UTs among the other sample states.
- The remaining 20 states (also identified as major states of the country by National Council of Applied Economic Research and used for calculation of various indices) were then categorized as per their performance across seven indicators that broadly indicate gender friendly environment for females. These following seven indicators were used to collate information:
  - Sex ratio (Census 2011)[15]: Indicates that there is preference for boys in the society
  - Female Transition Rate from elementary to secondary (2016)[16]: Indicates a higher proportion of females would not be eligible to take admission in the ITIs
  - Cognizable Crime Rate against women (2016)[17]: Relates to safety of women
  - Female Labor Force Participation Rate (2011)[18]: Indicates opportunities for women to participate in labor force among the other aspects that act as a barrier for absorption of women into the workforce
  - Share of Services sector in Gross State Value Added (GSVA) Score[19]: Measure of the value of services produced in the economy
  - Share of Industry sector in Gross State Value Added (GSVA) Score[20]
  - Physical Infrastructure Score: Represents level of infrastructure in a state.[21] A functional infrastructure is one of the primary requirements for success of the program, be it in terms of access to the skilling centers via road or availability of electricity, drinking water, sanitary facilities, etc.
- Value for each parameter was taken from listed sources, accorded to respective states and then standardized as the unit differed for each parameter. A composite score was used to categorize the States into three parts – good, average and poor

Table 3: criteria for the division of states

[14] Number of states and union territories as of March 2019

[15] Source: Sex ratio (Census 2011)Census 2011

[16] Source: U-DISE 2015-16

[17]Source: Crime in India – 2016 Statistics, National Crime Records Bureau

[18] Source: NSSO 2011

[19] Source: The NCAER State Investment Potential Index, 2018

[20] Source: The NCAER State Investment Potential Index, 2018

[21] Source: The NCAER State Investment Potential Index, 2018

Criterion	Standardized value
Good	1 and above
Average	Between 0 and 1
Poor	Below 0

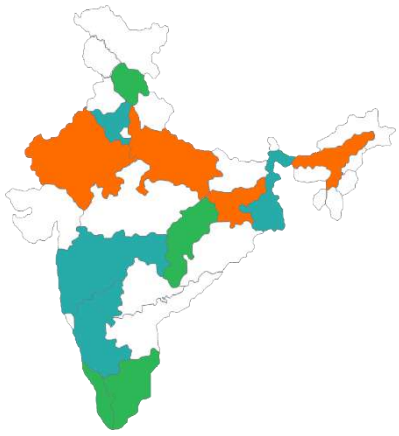
- Once the states were scored, they were categorized into the five geographical zones: North, South, East, West and Central

Table 4: division of states into five zones

North	South	East	West	Centre
Uttarakhand	Tamil Nadu	Assam	Gujarat	Chhattisgarh
Haryana	Telangana	Jharkhand	Maharashtra	Madhya Pradesh
Uttar Pradesh	Kerala	West Bengal	Rajasthan	
Punjab	Karnataka	Odisha		
Himachal Pradesh	Andhra Pradesh	Bihar		

- After categorizing the states as above, DGT, MSDE was consulted for final selection of the states. It was suggested that for an even representation of states from the good, poor and average categories, four states would be chosen from each which will also represent all the zones. Consequently, the number of states covered under the study was decided to be 12.
- The final list of 12 sample states:
  i. Assam
  ii. Chhattisgarh
  iii. Haryana
  iv. Himachal Pradesh
  v. Jharkhand
  vi. Karnataka
  vii. Kerala
  viii. Maharashtra
  ix. Rajasthan
  x. Tamil Nadu
  xi. Uttar Pradesh
  xii. West Bengal

Figure 6: geographical spread of 12 sample states



Zone-wise categorization of States	
North	Himachal Pradesh, Haryana, Uttar Pradesh
South	Tamil Nadu, Karnataka, Kerala
East	Assam, Jharkhand, West Bengal

West	Maharashtra, Rajasthan
Centre	Chhattisgarh

Selection of ITIs

- There are 8155[22] ITIs in the 12 sample states. The 8815 ITIs were further categorized by – ITI location (rural-urban), ITI type / affiliation (government-private) and ITI student mix (co-ed and women only)[23]
- Using 8155 ITIs as the universe for the study, the statistical sample was calculated as 367 using 95% confidence level.

Sample Size = 367

$$\frac{\frac{z^2 \times p(1-p)}{e^2}}{1+\left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

Table 5: sample calculation

Confidence level	95%
P	0.5
Error	0.05
Population size	**8155**
Alpha divided by 2	0.025
Z-Score	1.96
Mean	679.58
Std. Dev.	701.96
Sample size	366.86
Final sample size	**367**

- Stratified and purposive sampling technique was used for selection of ITIs for primary survey
  - ITIs where there was no female participation (3233 ITIs) were removed from the universe
  - The non-graded ITIs were also removed from the universe (2645 ITIs). These institutes had opted not to participate in the grading process, which was indicative of indifference to the process. However, it was important to consider ITIs of different grades, therefore, care was taken to include ITIs of different grades
  - After the above steps 2287 remained as the effective universe. A ratio of the statistical sample and 2287 was taken:

$$\frac{367}{2287} \times 100 = \sim 16\%$$

  - 2287 ITIs across the 12 states were stratified across the categories mentioned above. 16% ITIs were shortlisted in each of the selected states

[22] NCVT MIS information provided by DGT

[23] Refer Annexure I A

- Subsequently through a process of discussion with the DGT, a sample of 64 ITIs that was a subset of the 367 ITIs and representative of the sample was selected for primary data collection. A purposive approach was adopted to ensure that there was adequate representation of ITIs according to geography, affiliation and type of institute. A joint decision was taken with DGT to include more government ITIs and from rural areas. A list of ITIs selected for the field visits is placed in Annexure I.C and I.D

Selection of NSTIs for primary and secondary data collection

There are 33 NSTIs across India. It was decided to visit the women only NSTIs, which are 10 in number. The list of NSTIs visited is placed in Annexure I.F Therefore, the following number of ITIs and NSTIs were selected for primary and secondary data collection:

Table 6: number for ITIs and NSTIs covered through primary and secondary data collection

State	Secondary data collection	Primary data collection	NSTI
Assam	5	3	-
Chhattisgarh	20	5	-
Haryana	34	6	1
Himachal Pradesh	16	6	1
Jharkhand	7	4	1
Karnataka	15	6	1
Kerala	27	5	1
Maharashtra	65	6	1
Rajasthan	53	6	1
Tamil Nadu	17	5	1
Uttar Pradesh	82	6	1
West Bengal	27	6	1
Grand total	367	64	10

Selection of industries for the visit

It was decided that at least one industry would be visited that is in the vicinity of every ITI. While the convenience sampling has been used here but care was taken to include all three types of industries – the MSMEs, PSUs and large industries in each state. 67 industries were visited by the team the list of which is given in the Annexure 1.G

2.3.2 Data collection

Review of literature

Extensive review of literature was undertaken by the team to gain a perspective on the existing knowledge related to participation of female in TVET and the labor market. The information so gathered was used to prepare the tools for respondents such that additional information could be gathered to build on the existing knowledge and gaps identified for further enquiry.

Secondary data collection

Secondary data was also used for analysis and triangulation purpose. This entailed the usage of ITI information hosted on NCVT MIS portal for the 367 ITIs. In addition to this, other data sources were used to access secondary data especially the one related to labor market trends

Primary data collection

Quantitative data collection was carried out by developing fact sheets for the ITIs, NSTIs and the industry. The fact sheets were sent out in advance to the ITIs and the NSTIs so that these could be filled up before the team visited the institutes.

Data collection was carried out over a period of three months, from May 2019 to July 2019 including the time when the fact sheets were sent out to the ITIs and the NSTIs.

2.3.3 Tools used

Semi structured interviews

The tool was administered with:

- The faculty members: principal, training cum placement officer (TCPO), instructor
- Trainees at the ITI: those enrolled, dropped out, completed the course. The team also tried to meet with students who had taken admission but could not join
- Apprentices: both fresh graduate apprentices and ITI apprentices
- Females in labor market- employees, self-employed and entrepreneurs. The principals of the ITIs facilitated meeting with some of their ex-students who had become self-employed, many of them becoming brand ambassadors for the ITIs
- Representatives from the industry: the respondents included in this category were mostly those who were a part of human resource and training department and were entrusted with the task of recruitment, training and allocation of newly inducted employees to various departments
- Key stakeholders/informants: parents, NGO/CBO workers, other key members of the community (teachers, panchayat members, etc.). The purpose for including this group as respondents was to get the perspective of the general populace regarding inclusion of females in the ITIs, apprenticeship and industry

Focused group discussions (FGD)

- FGDs were significantly important tools for this study and have contributed immensely in capturing the students' perspective. Each FGD was conducted by two team members with about 10-15 participants in the ITI campus (the group for FGD represented different type of trainees who are either enrolled, graduate, drop-out/one who applied but did not enroll and a trainee undergoing apprenticeship program)
- For the Co-Ed ITIs, both the male and female respondents were included in the FGDs. In such cases, the FGD was broadly divided into two sections, one where both the male and female respondents joined together and second session soon after with only the female respondents
- FGDs were also conducted with female apprentices and employees at their respective employer locations

Table 7: respondent tool matrix

Respondent	Number	Tools administered
Principal ITI	1 in each ITI	Semi structured interview schedule
Principal NSTI	1 in each NSTI	Semi structured interview schedule
Instructors	At least 1 in each ITI	Semi structured interview schedule
TCPO	1 In each ITI (as per availability)	Semi structured interview schedule
ITI Trainees- Male & Female (enrolled/dropped-out/passed)	At least 1 FGD with 10-15 respondents per ITI as per availability	Focused Group Discussion
Female Students (enrolled/dropped-out/graduated)	3-5 in each ITI (as per availability)	Semi structured Interview Schedule / Telephonic interview
Other stakeholders (Parents, School teachers, members, NGOs, any other Society representatives)	4 in each State (as per availability)	Semi structured interview schedule

Respondent	Number	Tools administered
Industry (HR/Supervisor)	At least 5 in each State (as per availability)	Semi structured interview schedule
Female apprentices and employees	As per availability	Semi structured interview schedule
ITI	64	Fact Sheets
NSTI	10	Fact Sheets
Employers (Industry)	At least 5 in each State (as per availability)	Fact Sheets

2.3.4 Pilot study

The research tools including the factsheets, interviews and FGDs once developed were put through a pilot test. The visits for the same were organized on 30 April and 1 May 2019 at the government industrial training institute Gurgaon, Haryana and NSTI (W) Noida, Uttar Pradesh. The tools were revised based on feedback received from the pilot experience.

2.4 Data analysis

The following framework guided development of tools as well as identify the areas of analysis. The details mentioned in the table below are only indicative. During interactions, there were other issues identified by the respondents. These were captured and included in the analysis.

Table 8: primary data analysis framework

Level of analysis	Area of analysis	Details
Individual level	▶ Physical barriers ▶ Social barriers ▶ Economic barriers ▶ Barriers to education	▶ Proximity to an urban area / Remoteness ▶ Gender bias ▶ Affordability ▶ Entry level barriers (eligibility criteria)
Institutional level	▶ Infrastructure ▶ Access to institution ▶ Quality of training ▶ Placements ▶ Incentives offered	▶ Building infrastructure, equipment, basic facilities ▶ Information about courses, transport, ease of admission, counselling, safety of females ▶ Faculty, pedagogy, reasonable accommodation, remedial classes, soft skills ▶ Success in placements, retention rate ▶ Scholarships ▶ Mode of transport
Enabling environment	▶ Innovations ▶ Incentives for females ▶ Industry friendliness	▶ Gender friendly policies, use of technology ▶ Impact of the schemes – scholarship, apprenticeship, safety arrangements ▶ Opportunities for placement of females, tailored arrangements for females, sexual harassment policies

Data collected in the qualitative and quantitative strands of the study were analyzed concurrently with appropriate methods:

- The qualitative inputs received during data collection were codified and thematically categorized. Using quantitative rigor, the recurrence of these themes across the respondent accounts were assessed to provide validation to the study results
- In addition, the purely quantitative data when analyzed gave us trends over a period and was used to triangulate with individual account to strengthen the findings of the study

2.5 Limitations of the study

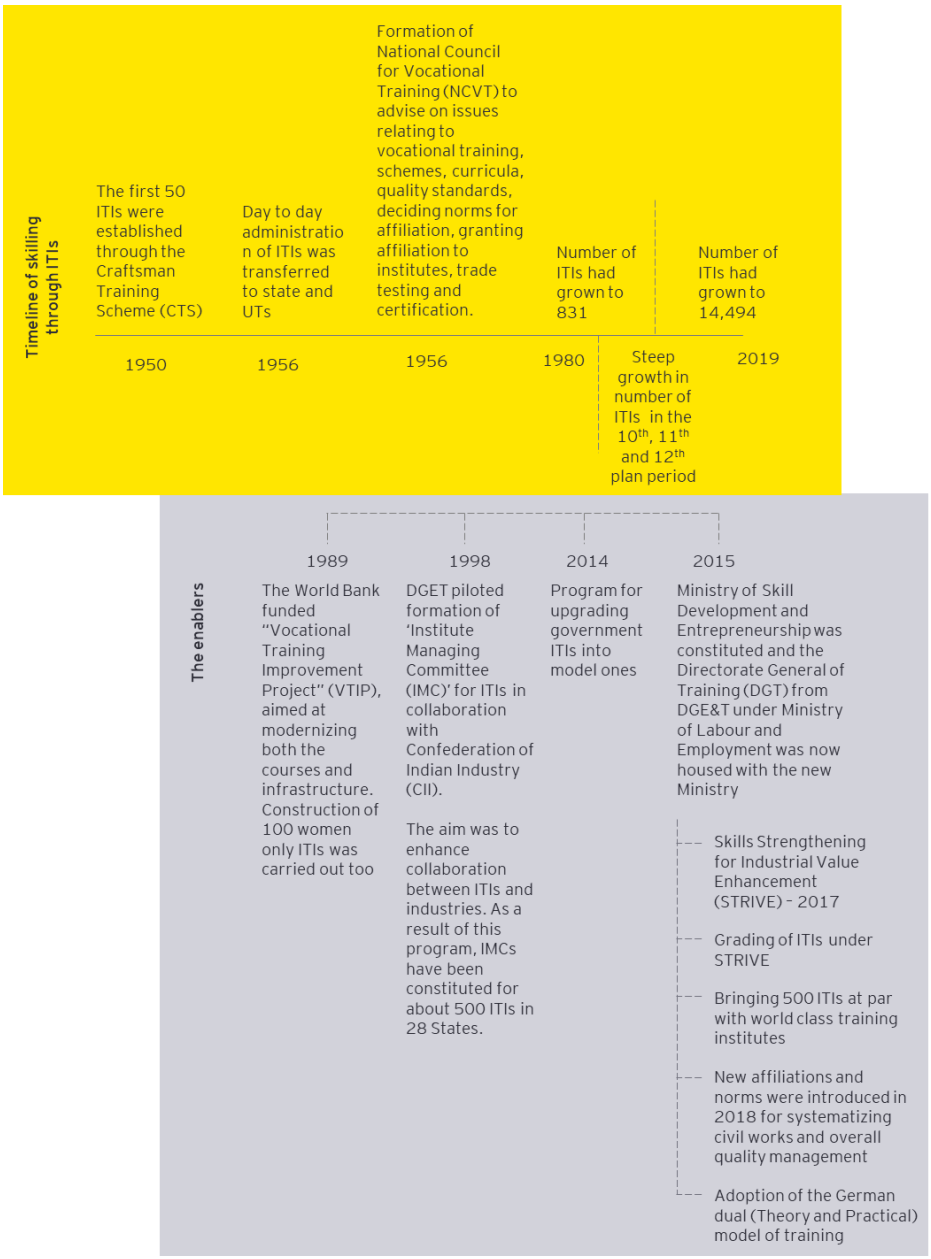
- The MIS maintained by DGT was used to receive secondary data related to the ITIs. While this helped in our analysis related to the trainees, gender disaggregated data related to the instructors could not be obtained that affected our analysis to some effect
- The NCVT maintained data related to apprenticeships does not make a distinction between ITI enrolled and fresh apprentices. Therefore, a comparative analysis between the two categories could not be made in secondary data analysis
- There was reluctance on the part of the industry to share data related to female employees. Therefore, our analysis is based on the primary qualitative research only

Chapter 3: Meeting demands of the industry

3. Meeting the demands of industry

India is the second most populated country with a population of 1.3 billion[24]. In addition, it is also one of youngest nations of the world, with a prediction of 64% of its population to be made up of young individuals (15-26 years) by 2026 (EY and FICCI 2014), which is a great asset to the economy if its maximum potential is harnessed. To achieve this, it is even more important for the youth of country to be made employable with requisite education and skills. Skill training and development has gained a place of national importance as a source of enhancing the employment opportunities for the youth and also for the utilization of the rich demographic dividend. The network of ITIs, established in 1950, are the major and erstwhile providers of vocational training in India.

Figure 7: evolution of Industrial Training Institutes in India



The network of ITIs in India, since inception has been increasing steadily as a result of various programmatic measures. The total number of ITIs have increased from 11,964 in the year 2014 to 14,494 in the year 2019

[24] World Bank. 2018. "Population, Total." Accessed 10 May 2018. https://data.worldbank.org/indicator/SP.POP.TOTL

and trainee enrolment increased from 16.9 lakh in 2014-15 to 23.08 lakh in 2018-19[25]. Since its inception, the ITI training ecosystem has gone through numerous interventions to increase the quality and scale of the trianing programs to ensure robustness and relevance of the trainings.

While the above is indicative of the positive efforts to enhance both the scale and quality of trainings delivered at ITIs in India, in order to address the existing skill gap, the training imperatives must be aligned with the industry requirements.

In the context of the study, the focus is on understanding the trends in female participation in ITIs and subsequently the labor market. This study focuses on the barriers females face at various steps when they try to access vocational training and employment opportunities.

3.1 Demand of industry and skilling gaps

3.1.1 Female enrolments in sectors contributing to majority of the demand for incremental manpower requirements by 2022

Demand side: Skill gap studies conducted by NSDC over 2010-2014, indicates that there is an additional net incremental requirement of 10.973 crore skilled manpower by 2022 in 24 key sectors.

Table 9: break up of incremental requirement of human resources across sectors

S. no.	Sector	Incremental human resource requirement (2013-22) (crores)[26]
1.	Building, construction and real estate	3.113
2.	Transportation and logistics	1.166
3.	Beauty and wellness	1.006
4.	Furniture and furnishing	0.718
5.	Tourism, hospitality and travel	0.648
6.	Textile and clothing	0.631
7.	Retail	0.629
8.	Handlooms and handicrafts	0.614
9.	Domestic help	0.488
10.	Security	0.483
11.	Electronic and IT hardware	0.461
12.	Food processing	0.44
13.	Education/ skill development	0.429
14.	Auto and auto components	0.39
15.	Healthcare	0.38

[25]PIB, 2019, Target of Skilling Young People. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1576156

[26] National Policy for Skill Development Entrepreneurship, 2015. Appendix I

S. no.	Sector	Incremental human resource requirement (2013-22) (crores)[26]
16.	Leather and leather goods	0.372
17.	Gems and jewelry	0.359
18.	Construction material and building hardware	0.27
19.	IT and ITES	0.216
20.	Telecommunication	0.208
21.	Pharma and life sciences	0.172
22.	BFSI	0.17
23.	Media and entertainment	0.09
24.	Agriculture	-2.48
	Total	10.973 crore

While these 24 sectors together will necessitate the demand of substantial manpower in the economy, around 77% of this demand is concentrated across sectors such as building, construction and real estate, transportation and logistics, beauty and wellness, furniture and furnishing, tourism, hospitality & travel, textile and clothing, retail, handlooms and handicrafts with an incremental demand for manpower of 8.52 crore by 2022. Simply put, youth trained in these sectors in relevant occupations will be able to secure sources of employment at a better rate due to increased industry impetus. With an exception of retail, beauty and wellness and tourism and hospitality, all the key sectors are primarily manufacturing and engineering in nature.

Supply side: However, when one analyses the female enrolment trends in the ITIs, it is found that enrolments are highly disproportionate with regard to participation across the key sectors generating quantum of human resource demand. Presence of females in mainstream engineering trades is almost negligible. Female trainees are mostly present in non-engineering trades like dress making, COPA, surface ornamentation, etc. (Environment and Social Assesssment - STRIVE 2016). Data on female enrolments across the country between 2014-18 indicated that[27]:

- ~85% of the female trainees are enrolled across maximum of 13 job roles
- Only 37% of the female enrolments between 2014-18 were in found to be in the priority sectors producing maximum manpower requirement.

While carrying out this study, female students were asked various questions to ascertain the key factors that affect their choice of subjects at ITIs. During FGDs and interviews, it was noticed that perception around "trades considered suitable for females by society and family" and conventional notions emanating from this school of thought thereof resulted in concentration of females in a few typical job roles.

Some other issues highlighted by female students were the lack of proper counselling while subject selection, lukewarm response of the faculty and peers towards females in manufacturing and engineering trades-also perceived as male dominated and inability to cope with the physical labor required for strenuous work with machines and equipment (more reasons discussed in detail in subsequent section), resulted in fewer females in the priority sectors indicated above.

[27] Analysis based on data provided by DGT MIS on female enrolments during 2014-18.

3.1.2 Female enrolment in in sectors with high female participation

Demand side: India Hiring Intent survey, 2019, across 15 industry domains[28] indicated the sex ratio of 77:23 prevalent in the workforce. This survey reveals some service sector industry domains such as retail (50% females), BPO and ITCS (38% females) and BFSI (22% females), tourism and hospitality (23% females) and software and hardware, IT (27% females) are leading the ratio as compared to manufacturing and core sectors which are against the tide. The sectors with relatively higher proportion of female workforce are low lying fruits, thereby indicative of training imperative for females.

As per the NSDC Skill Gap Reports, the sectors indicated above (with a favorable proportion of 20% or more, of females in the workforce) will be producing an incremental demand of manpower of 260 lakhs (2.60 crores) by 2022 - retail: (110.6 lakhs), software, hardware and IT (46.1 lakh), travel and hospitality (65.8 lakh), BPO, KPO, ITES(21.6 lakh) and BFSI (17 lakhs)

Of this 2.60 crores, if calculated on a proportionate basis as per prevailing percentage of female workforce in the industry, at least 96 lakhs[29] females can easily be absorbed in the labor market through these industry domains. In addition, NSDC's sector skill gap study on beauty and wellness also reports 50% of the workforce across market segments like salon, slimming and rejuvenation to be made up of female workforce, corresponding incremental demand for the same till 2022 being approximately 90 lakh (45 lakh minimum demand for females)[30]

Supply side: On analyzing the enrolment numbers of females in ITIs between 2014-18, it was seen that out of total female enrolments about 27% enrolled in sectors recording higher female participation in the workforce. Out of 96 lakh incremental demand indicated above, female trainees in ITIs were trained for only 1.72 lakh positions. And another 34,833 females trained for a potential of 45 lakh females in beauty and wellness.

3.2 Training imperatives as per changing industry dynamics

India is moving towards adoption of Industry 4.0 – big data, high computing capacity (graduating to quantum computing in the near future), artificial intelligence, analytics and robotics – are set to redefine the way businesses run their enterprises. As entire industries adjust, most occupations are undergoing a fundamental transformation. While some jobs are threatened by redundancy and others grow rapidly, existing jobs are also going through a change in the skill sets required to do them.

In a study done by EY and FICCI[31] it is projected that there will be a loss of jobs like office and administration, manufacturing and production, construction and extraction, art, design, legal, installation and maintenance. ITI enrolment data highlights that out of the total female enrolments *~15% of females enroll in trades* under office administration & facility management and capital goods & manufacturing - jobs which are set to undergo changes. On the other hand, there will be an increase in jobs related to areas such as business and financial operations, management, computer and mathematical, architecture and engineering, sales and education and training.

This disruption in the industry will have further repercussions for female employees who already have a low representation in the labor market. Interactions with representatives from the industry revealed that there are some sectors where there is relatively larger participation of females. These sectors have indicated a continued outlook in favor of female [32] :

- Healthcare
- Professional services
- Media, entertainment and information
- Financial services and investors
- Information technology

[28] Banking, Financial Services and Insurance, Travel & Hospitality, Electronics and Hardware & IT & ITes (including BPO,KPO), Pharma & Healthcare, Other Manufacturing (Not including FMCG, CD, Automotive & Engineering), Engineering &Automotive (Auto &Auto Components), Core Sector (Oil & Gas, Power, Steel, Minerals etc.), Consumer Goods& Durables and Retail

[29] %age of female workforce in the industry (as per India Hiring Intent survey, 2019) / Total incremental demand of the industry as per NSDC skill gap report

[30] KPMG, Human Resources and Skill Requirements in Beauty and Wellness Sector (2013-17, 2017-22)

[31] Future of jobs and its implication in Indian higher education, 2016; EY and FICCI

[32] Based on analysis of responses received during industry interactions

However only 4.7% of the females were enrolled in healthcare courses in ITIs and less than 1% for job roles under media and entertaining and BFSI, as per ITI enrolment data.

While sectoral changes are apparent with the surge in demand for automation, even the skill profile across sectors is seeing an evident change. Responses with industry representatives highlight the following skills that are becoming more important and it is important that females are trained in these skills for better employment opportunities:

- Creativity
- Complex information processing and interpretation
- Entrepreneurship and initiative taking
- Leadership and managing others
- Advanced IT skills and programming
- Basic digital skills

For instance, in a study conducted by NASSCOM, FICCI and EY[33], a deep dive into the retail and apparel sector (retail also happens to be one of the major employers for females), highlights how new jobs will be created that do not exist today and the existing ones will be radically different than what they are today.

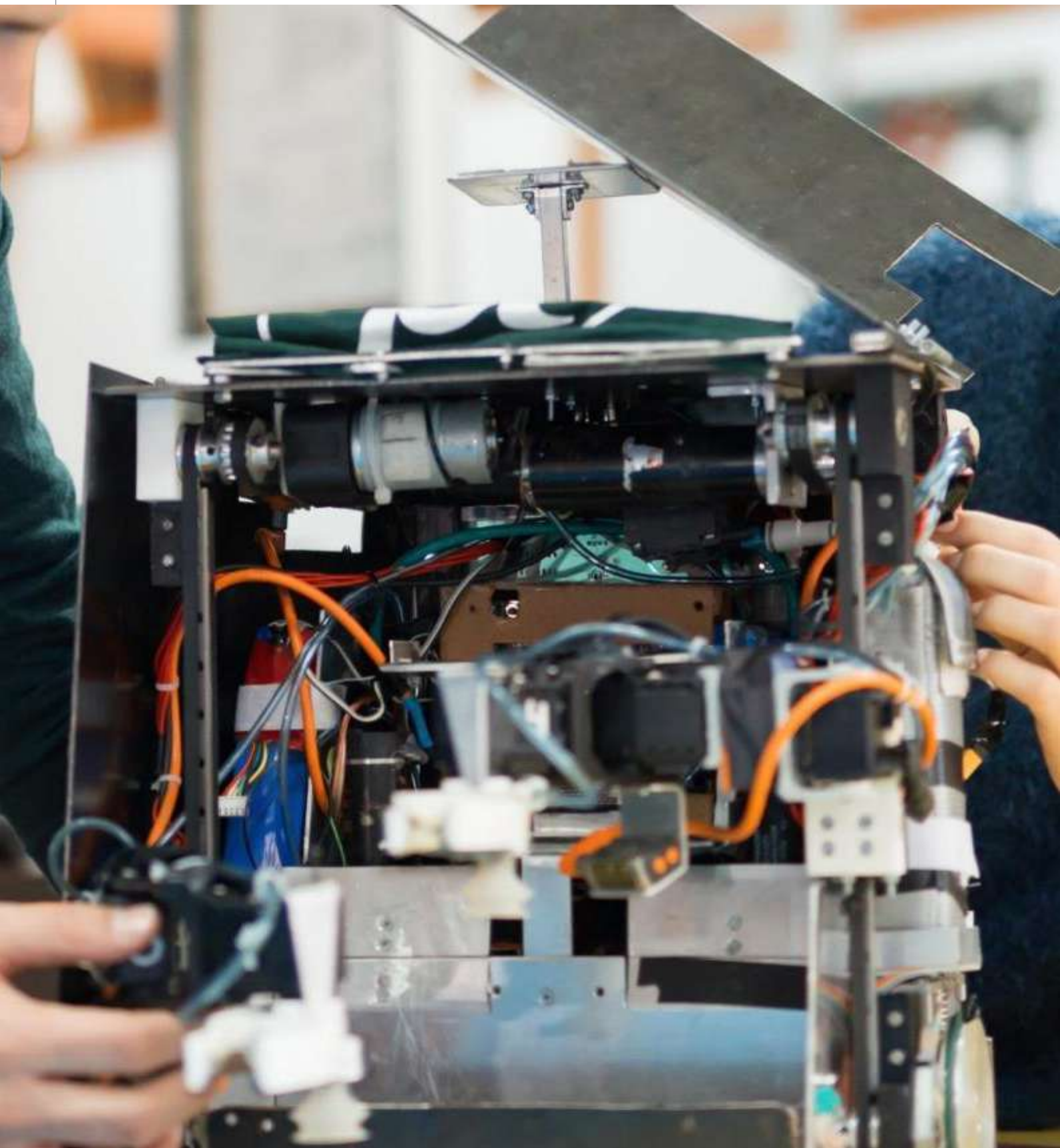
Table 10: changing profiles of jobs in the retail and textiles and apparels sectors

Sector	New Jobs to be created (%)	New jobs
Retail	5-10%	Customer experience leader, digital marketing, digital imaging, retail data analyst, IT process modeler
Textiles and apparels	5-10%	Apparel data analyst, e-textiles specialist, IT process engineer, environment specialist, PLC maintenance specialist
Sector	**Jobs that would be radically different from what these are today (%)**	**Changed jobs**
Retail	20-25%	Sales associate to fashion consultant Store assistant to product facilitator Warehouse coordinator to inventory management and logistics specialist Package sorter to package sorting machine operator
Textiles and apparels	35-40%	Merchandizer to digital merchandizer Pattern master to digital pattern master Machine operator to PLC machine operator Fabric cutter to laser cutting and assembly operator

Therefore, one may say that the requirements of the industry are changing rapidly which will make some job roles redundant but create new ones. Regarding females, the challenge is not only to encourage them to get skilled but to convince them to join courses that would get them jobs in future.

[33] Future of jobs in India – A 2022 perspective, 2016, NASSCOM, FICCI and EY

Chapter 4: Understanding enrolments of females at the ITIs and apprenticeship program



4. Understanding enrolments of females at the ITIs and Apprenticeship Program

As part of the study, data obtained from 367 ITIs was examined for trends in enrolment for the past five years according to gender, choice of trade, location and type of Institute.

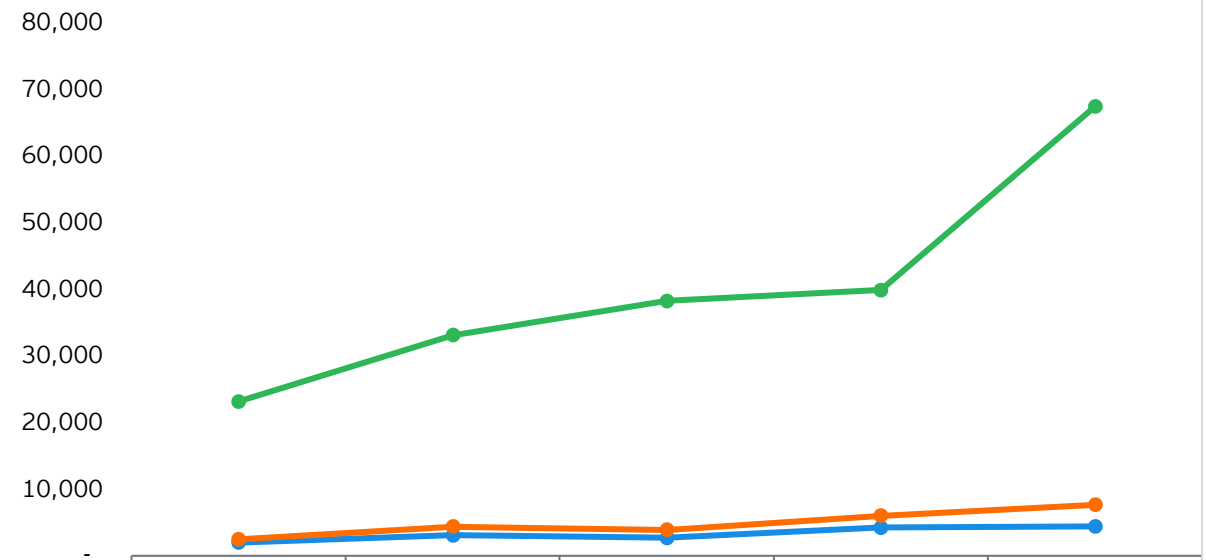
4.1 Enrolment of students in ITIs

4.1.1 Entry level qualification

A candidate who has passed Class 8 or Class 10 or Class 12 pass is eligible to join an ITI.

As per data on enrolments across 367 ITIs in India, it is seen that in the last five years, 10th class graduates have been enrolling in large numbers in the ITIs with an increase of close to 100% recorded in the year 2017-18. Similar trends were seen in the tracer study commissioned by MSDE, where 47% of the entire trainee cohorts had joined ITI after completing 10th standard.

Figure 8: enrolment trends by entry level qualification



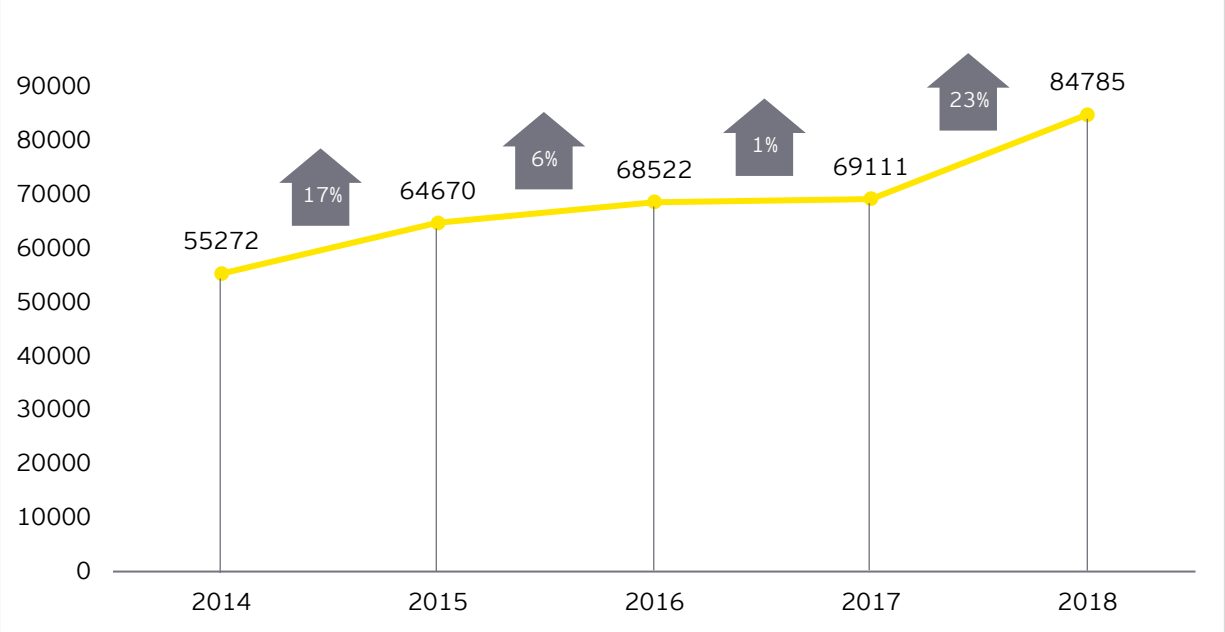
	2014	2015	2016	2017	2018
8th	1,975	3,082	2,697	4,207	4,401
10th	23,136	33,056	38,205	39,820	67,329
12th	2,465	4,387	3,877	6,020	7,636

Source: Analysis of administrative data from 367 ITIs

4.1.2 Overall enrolment trends

There has been a steady increase in the enrolments in ITIs over the last five years recording an overall increase of 34%. Various measures have been taken by the government to ensure this, such as increase in number of ITIs (focus of coverage of unserved blocks), increase in number of trades, active advocacy and awareness initiative, participation in world skills and other competition in the skills space. All these efforts have culminated into an increased enrolment in the ITIs.

Figure 9: enrolments in ITI during 2014-18

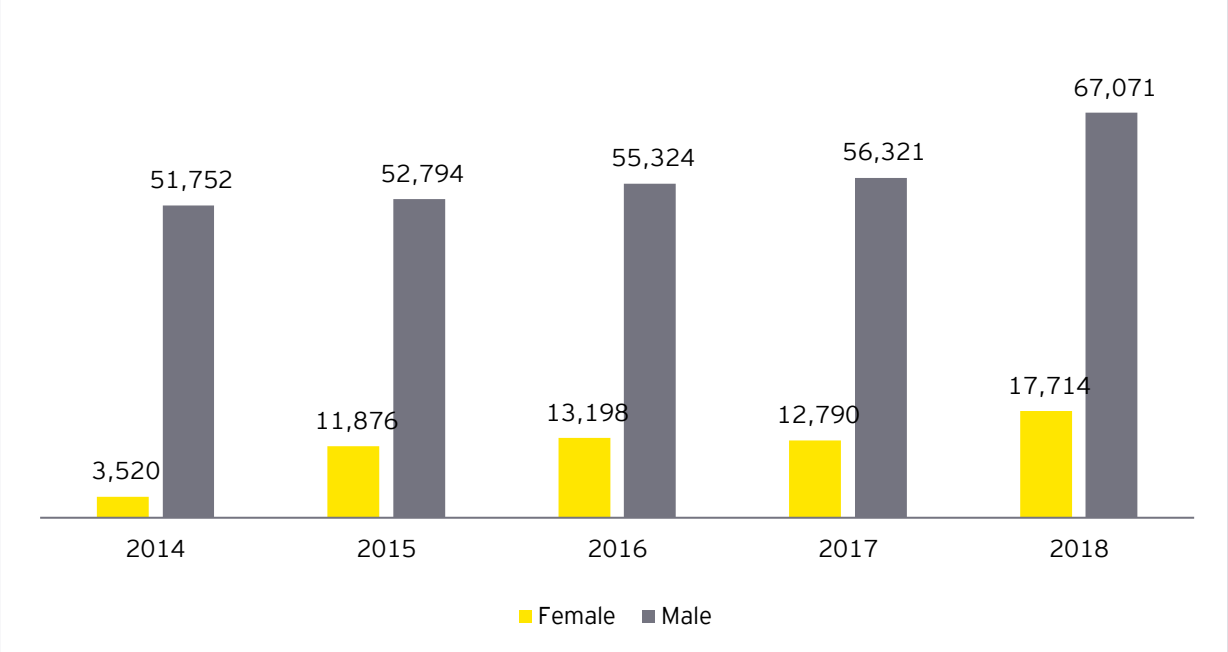


Source: Analysis of administrative data from 367 ITIs

4.1.3 Enrolment trends by gender

While male enrolment grew only marginally, four times increase in female enrolment has been seen in the last five years. However, the proportion of females in the ITIs remains to be well below a desirable 1:1 ratio. In 2014, the proportion of females in the trainee cohort was a mere 6% which has now increased by 15 percentage points and stands at 21percent. This however compares poorly to other skill development schemes, such as Pradhan Mantri Kaushal Vikas Yojana (PMKVY), the flagship scheme for skill development in India, which records a 1:1 male to female ratio for its trainee cohort.

Figure 10: gender wise enrolment in ITIs between 2014-18



Source: Analysis of administrative data from 367 ITIs

Figure 11: gender wise proportions of ITI enrolments 2014-18

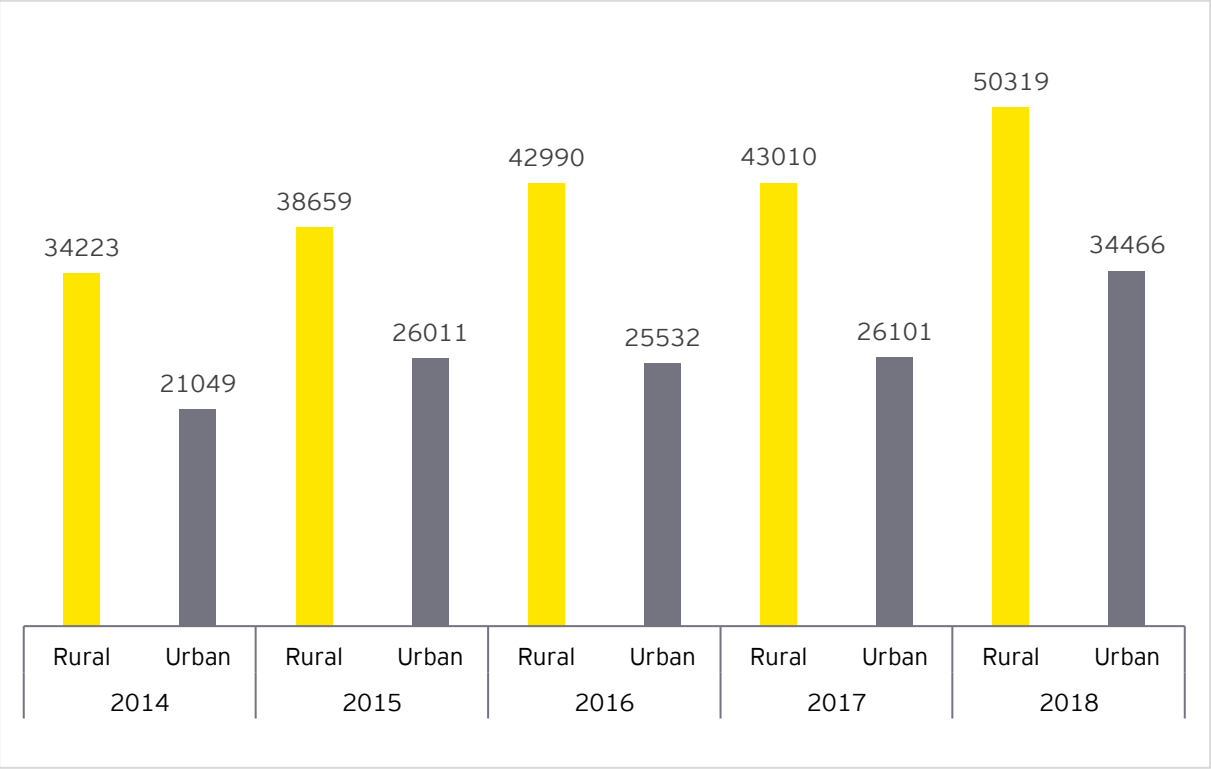
	2014	2015	2016	2017	2018
	6%	18%	19%	19%	21%
	94%	82%	81%	81%	79%

Source: Analysis of administrative data from 367 ITIs

4.1.4 Enrolment trends by location

The urban ITIs recorded a higher increase in enrolment as compared to the rural ITIs. Enrolments in urban ITIs increased by 67% while enrolments in rural ITIs increased by 47% in the last five years.

Figure 12: enrolment trends by location



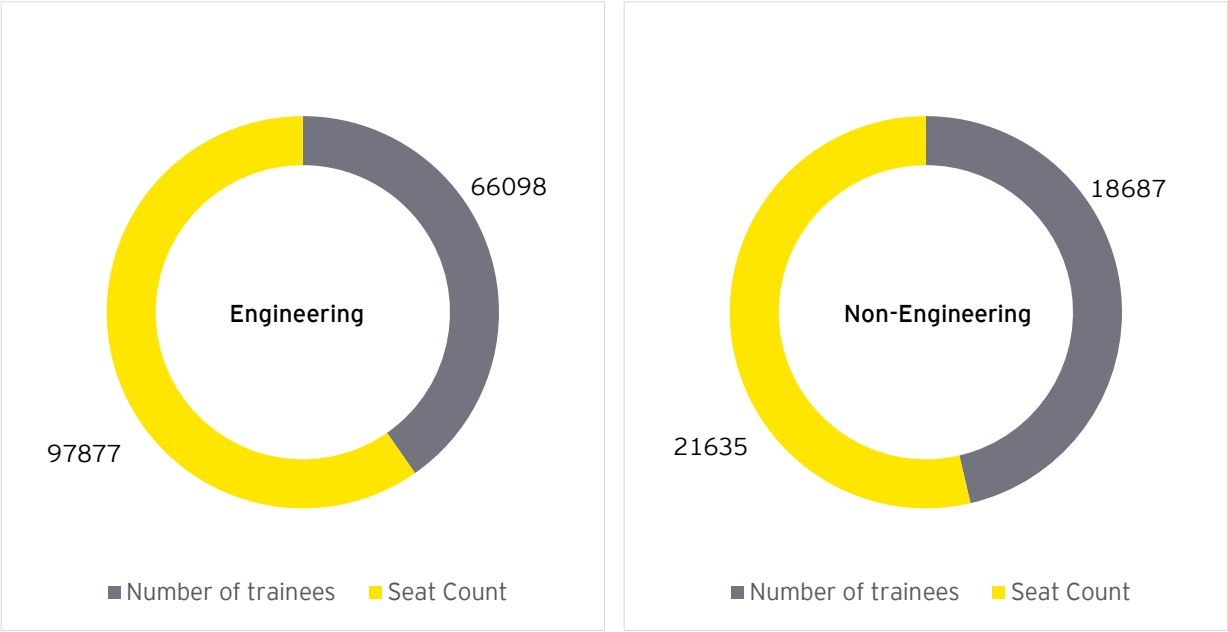
Source: Analysis of administrative data from 367 ITIs

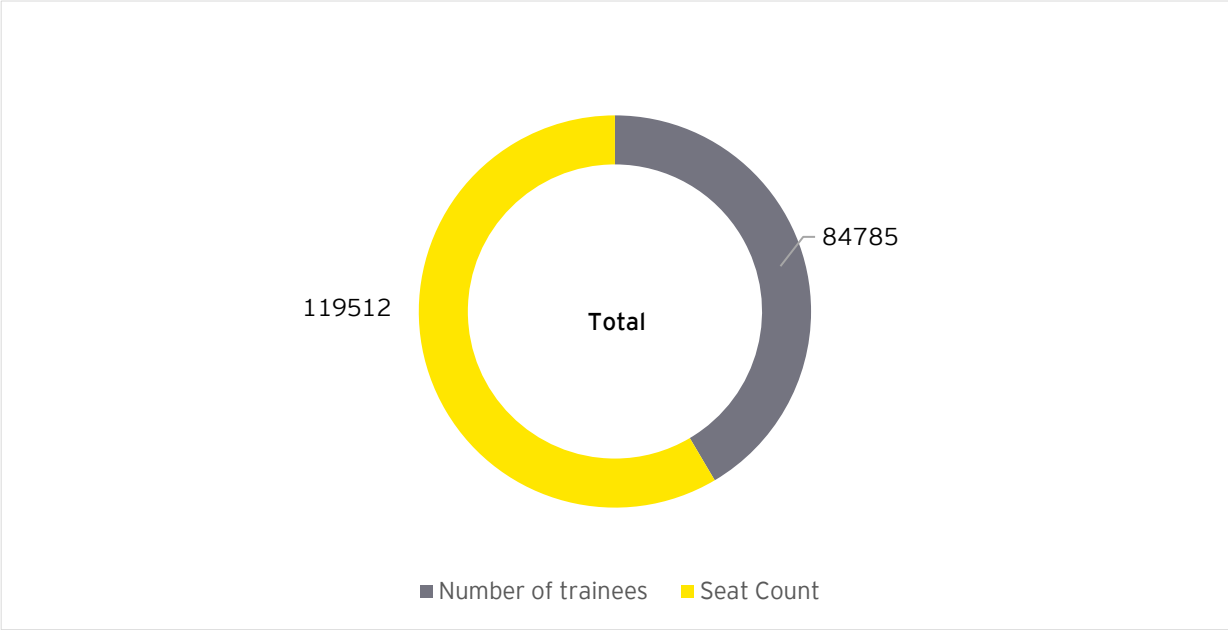
4.1.5 Trade preference

Further, it is seen that out of the total number of students who join ITIs, over 78% join engineering trades. However, it may be important to note that utilization of ITI seats in non- engineering trades is higher than seat utilization in engineering trades. In the current year (2017-2018), out of 84,785 trainees, 66,098 were enrolled across 57 engineering trades and 18,687 were enrolled in 29 non-engineering trades across 367 ITIs. Seat utilization of non-engineering trades was recorded at 86.37% as against 67.5% utilization in engineering trades.

The ITIs initially catered to the industry demand for labor to help with production and manufacturing jobs. However, over a last few decades the ITIs have diversified minimally in terms of sectors and the expansion of the service industry has not reflected in the trade offerings at the ITIs. Service sector in the country is the key driver of the economy with its share in India's 2018-19 gross value added being 54%. (IBEF 2019), with key industry segments being healthcare, software, tourism, business services, financial services, etc. However, trades to support employment in these sectors is very limited in ITIs now.

Figure 13: seat utilization by trade – 2017-18

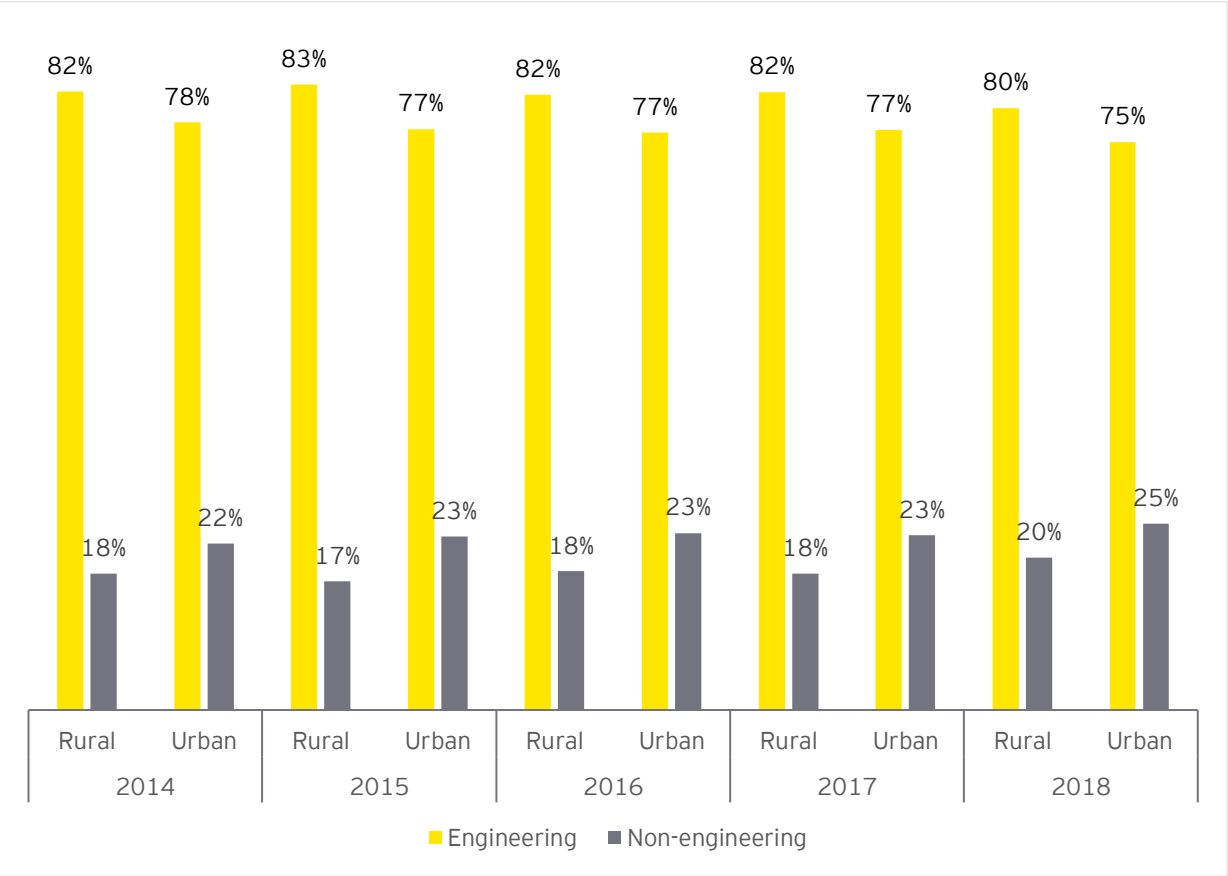




4.1.6 Trade preference by location

The data collected from 367 ITIs across 12 states on trade preference shows that in both rural and urban ITIs students prefer to join engineering courses. In the rural areas, out of the student cohort who enrolled in ITIs in the last five years, about 81% chose engineering trades. In urban areas too, the enrolments under engineering trades were found to be much higher, at an average of 77% over five years. The urban areas however record a higher proportion of enrolments in non-engineering trades as compared to rural areas.

Figure 14: trade preference by location

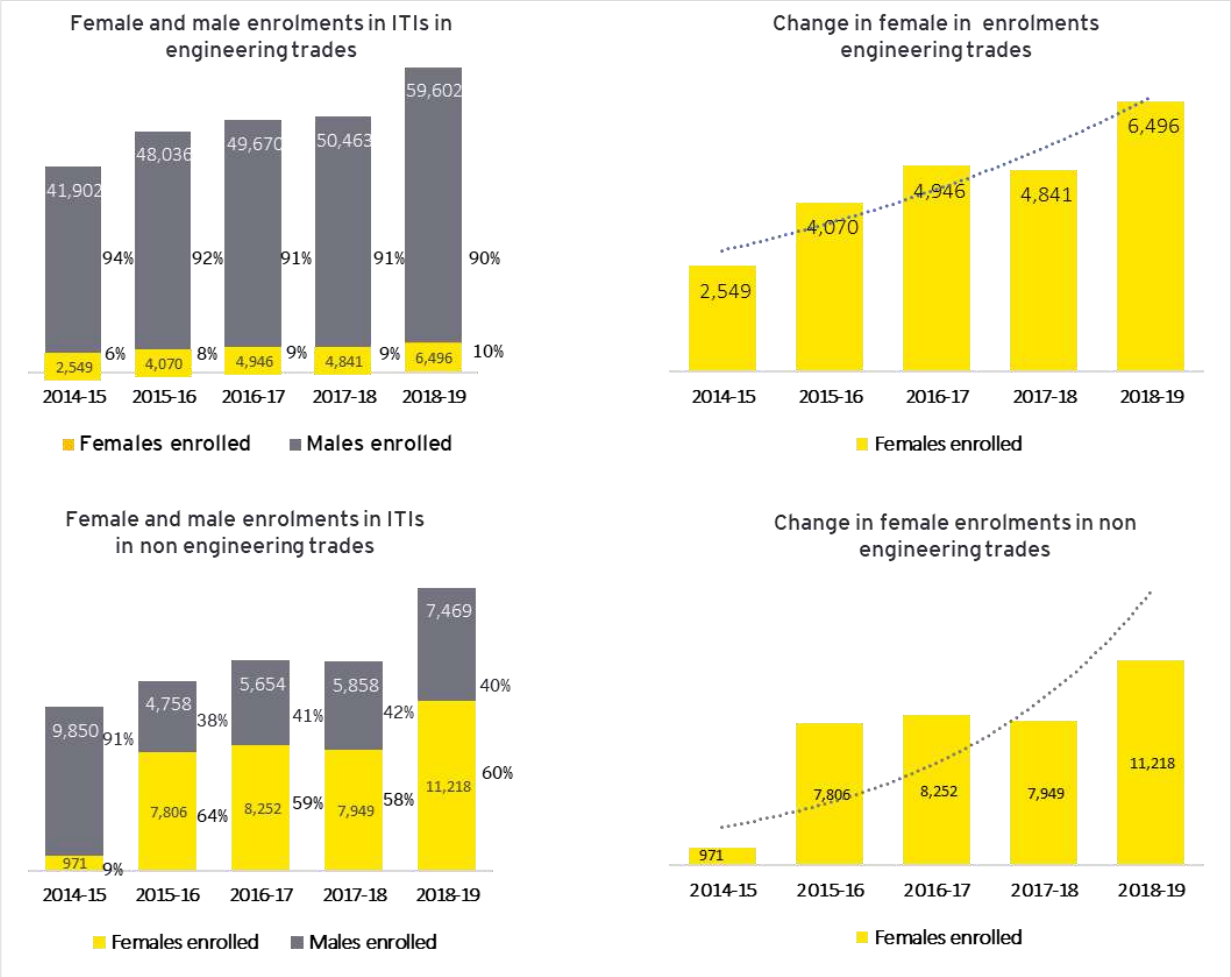


Source: Analysis of administrative data from 367 ITIs

4.1.7 Trade preference by gender

The number of females enrolled in engineering trades increased by 155% between 2014-18 for engineering trades, however, it continues to be male dominated trade with only 10% females a part of the trainee cohort. The number of females in non-engineering trades increased exponentially between 2014-18. The gender ratio here too is now favorable to females, the proportion of females in the trainee cohort has increased from 9% to 60% in the last five years.

Figure 15: gender wise enrolments across engineering and non-engineering trades



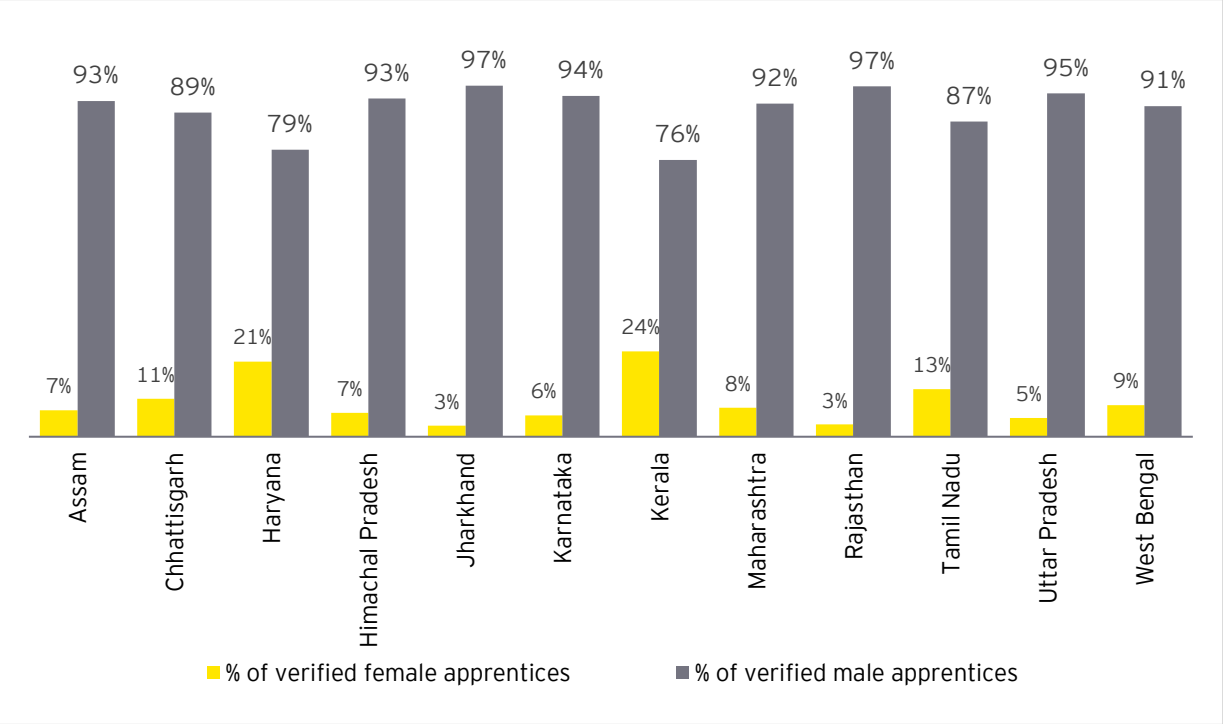
Source: Analysis of administrative data from 367 ITIs

4.2 Participation of females in the apprenticeship program

International experience shows that apprenticeship training facilitates an early link of learners to the labor market and is the most effective means for youth to transition to the labor market and acquire skills required in a rapidly changing labor market. However, the apprenticeship potential in the Indian labor has largely remained untapped. During the study, data of apprentices from the 12-sample states was accessed, where it was seen that across 12 states only 66,715 apprentices were engaged under the NAPS

- The gender divide was glaring in terms of number of female apprentices across the states. Amongst the 12 states under the study, females formed only 11% of the total apprentices in these states.

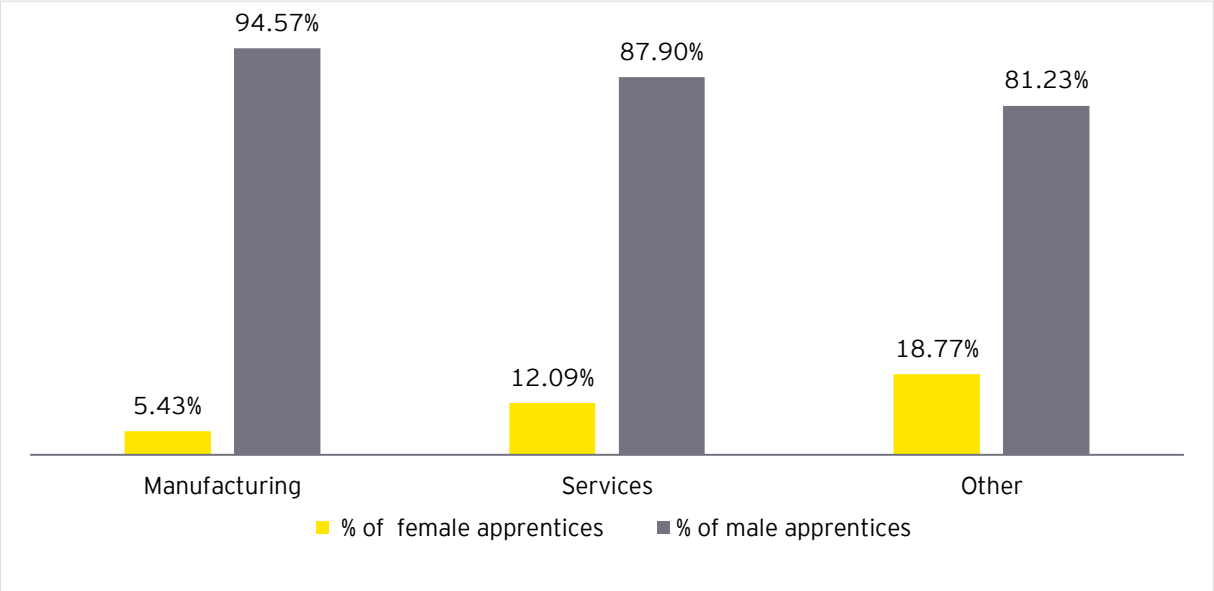
Figure 16: gender wise proportion of verified apprentices across states



Source: Analysis of administrative data from 367 ITIs

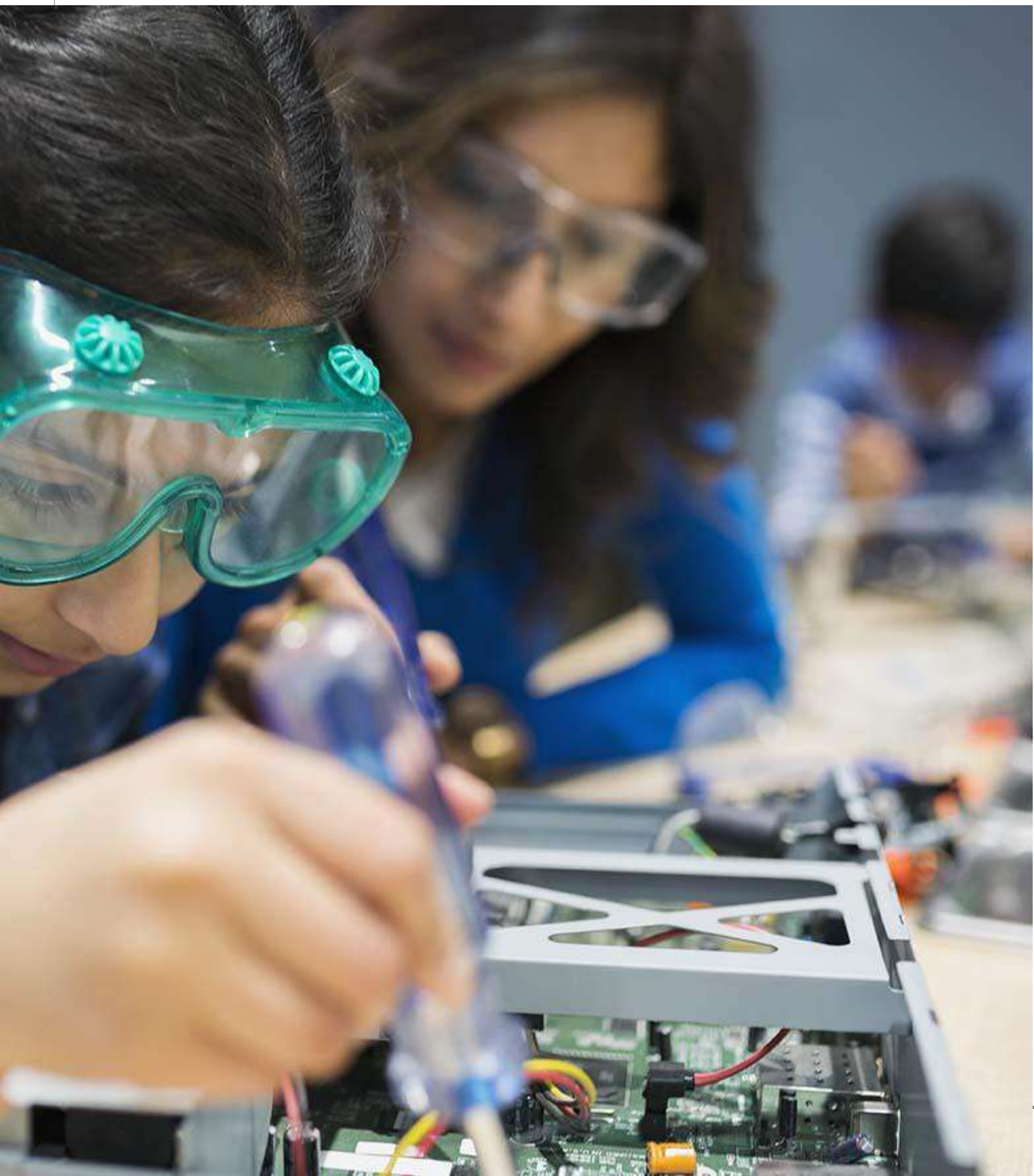
- Further to this, female apprentices in the 12 sample states accounted to a total of only 5% of all the apprentices in the manufacturing sector and 12% in the service sector

Figure 17: proportion of apprentices by industry and gender



Source: Secondary data analysis of 367 ITIs

Chapter 5: Constraints faced by female trainees at the ITIs



5. Constraints faced by female trainees at the ITIs

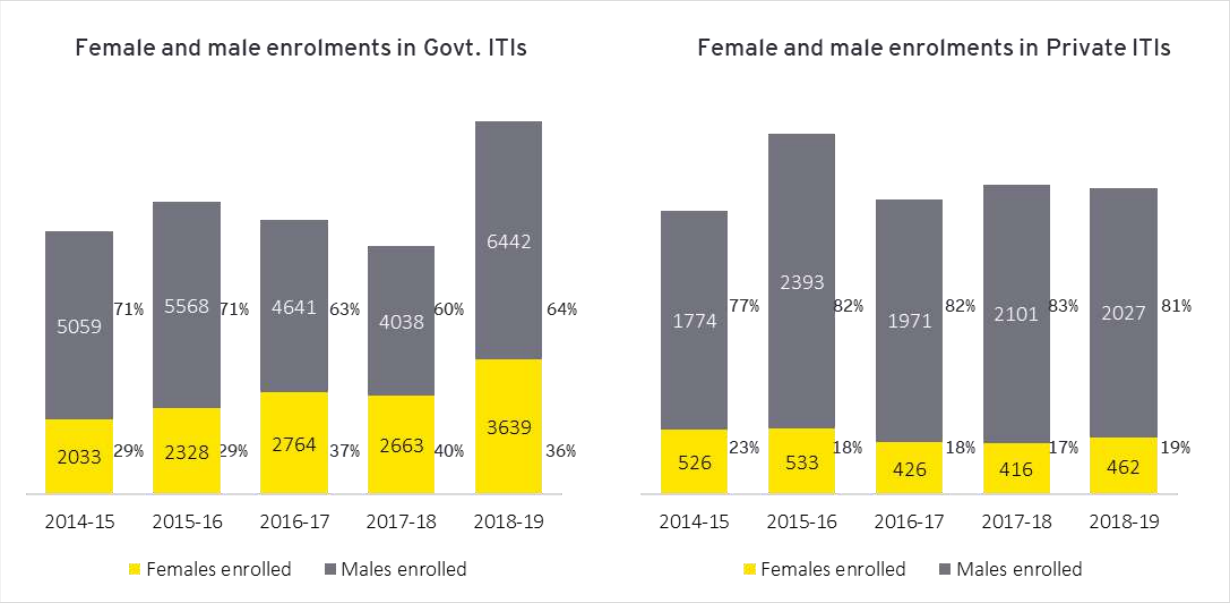
A report by Ministry of Human Resource Development in 2018, shows favorable gender parity index (GPI)[34] has been achieved at all the levels from primary till senior secondary, with a higher proportion of females in the cohort. As per the report Gender Parity Index at Primary, Upper Primary, Elementary, Secondary and Senior Secondary is 1.03, 1.10, 1.05, 1.02 and 1.01 respectively (Ministry of Human Resource Development 2018). Even at the post school education level women comprise of 47.6% of the total 36.6 million who enroll for higher education (AISHE 2017-18).

As detailed in the previous section, though the proportion of females enrolling in the ITIs in both engineering and non-engineering trades has been increasing, the proportion of females in the ITIs is still way below the 1:1 mark. There are some constraints both at the demand and supply levels which pose barriers for females to enroll themselves at the ITIs. This chapter of the report delves into some of the reasons for the existing barriers. As part of primary research, the data pertaining to the 64 ITIs was analyzed to understand the pattern of enrolment and continuation of female students at the ITIs being visited by the team.

5.1 An overview of student enrolment and course completion at the ITIs

5.1.1 Enrolment

Figure 18: gender wise trend in enrolment of students (2014-2019) – government and private ITIs

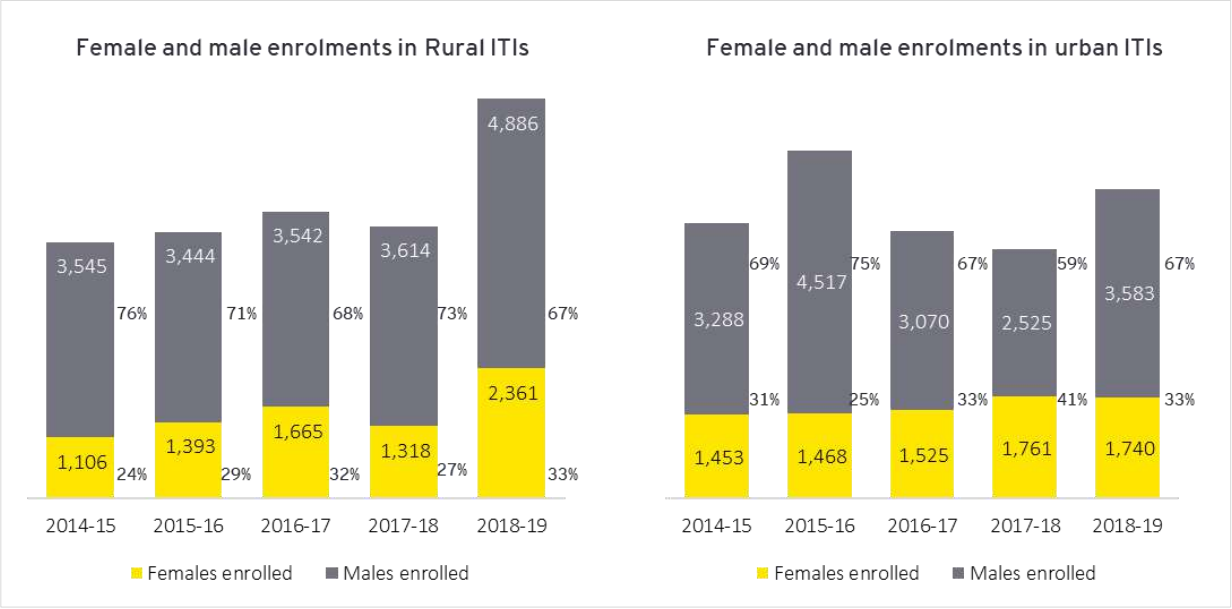


Source: Analysis of data received from 64 ITIs factsheets

- Female enrolments in government ITIs have increased by 78% in the last five years and females form a little over one-third of the trainee cohort
- The private ITIs, however, show a decrease in both female enrolments and proportion of females in trainee cohort. The enrolment of females in private ITIs has decreased by 12% between 2014 and 2019 and the proportion of females to has reduced to 19% from 23% during the same period
- The percentage of male trainees was found to be increasing in the last five years in private ITIs whereas the proportion of females has been increasing in government ITIs

[34] Gender Parity Index is the ratio of Gross Enrolment Rate (GER) of female students enrolled at primary, secondary and tertiary levels of education to the corresponding ratio of male students at that level.

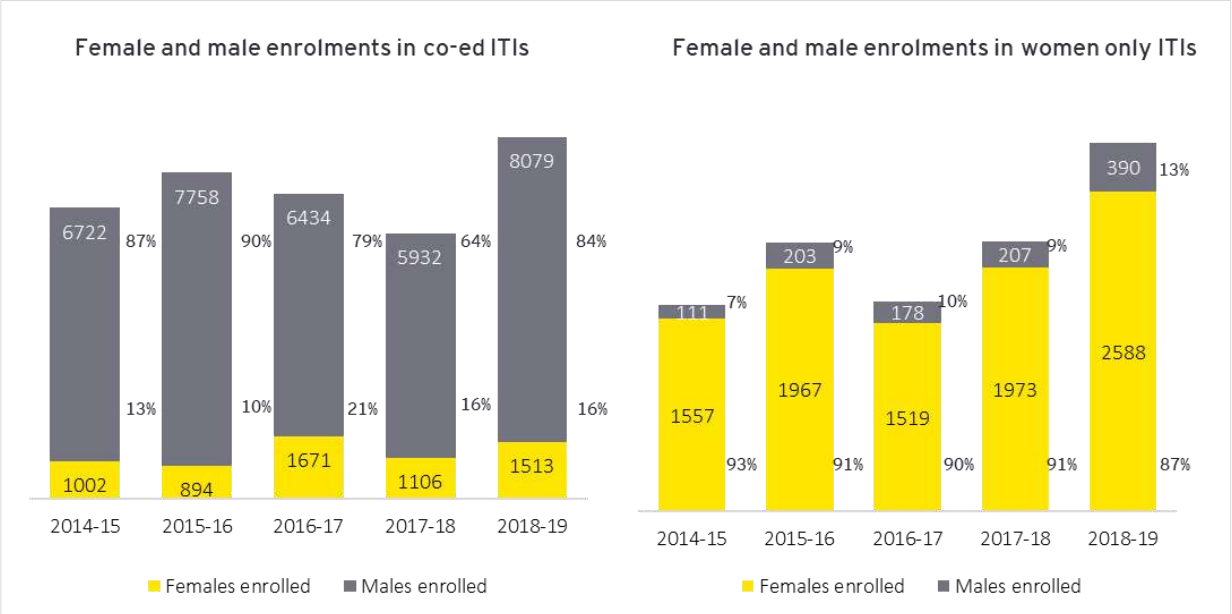
Figure 19: gender wise trend in enrolment of students (2014-2019) – rural and urban ITIs



Source: Analysis of data received from ITIs through 64 ITI factsheets

- ITIs located in rural areas are enrolling more than twice the number of females than they were enrolling five years back. The percentage of females joining ITIs in urban areas has also increased (by 19%) but not as much as it has in the ITIs in rural areas

Figure 20: gender wise trend in enrolment of students (2014-2019) – co-ed and women only ITIs



Source: Analysis of data received from ITIs through 64 ITI factsheets

- Women only ITIs are showing a steady increase of enrolment of female students. Their enrolment has doubled in the last five years. However, the women only institutes open their seats for male trainees if the ITIs are not able to fill up all the seats through female enrolments. It is seen that male enrolments in women only institutes have increased fourfold since 2015 which indicates that the ITIs struggle to fill up the seats with female candidates
- The enrolment of females has also shown about 50% increase in co-educational institutes.

5.1.2 Drop out among students

Some key trends pertaining to female students dropping out are as follows (details are placed in Annexure 1.I):

- More male students drop out of government ITIs than female students. About one fifth of them drop out before completion of the course
- There is not much difference in the dropout rates in urban and rural areas. Female trainees have shown improvement in their dropout rates in rural areas in the last five years
- Not much difference is seen in the dropout rates in co-ed and women only institutes

The reasons for female trainees dropping out were explored by asking the opinion of other stakeholders including the key informants and the ITI principals.

- The most common reason cited by them was "girls drop out if they get married while pursuing their course. They either get relocated after marriage or act as per the wishes of their in-laws. If they are not in favor of the trainee completing the course, she is compelled to drop out of the ITI"

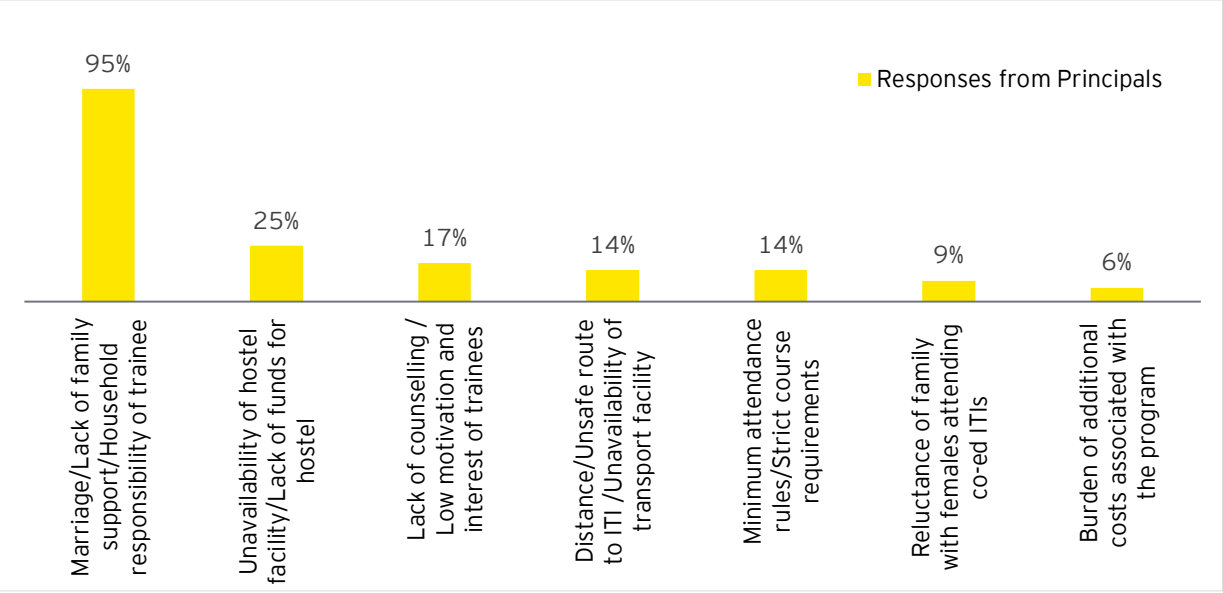
- In addition to the above, the key informants discussed that the prevailing perception of the ITIs being male dominated or are more suitable for boys than girls. This often makes the families dissuade their female wards from taking admission in ITIs or compel them to drop out mid-course

Table 11: reasons for dropouts given by the key informants

Reasons for female trainees dropping out	N = 53
Getting married while pursuing the course	31 (58.5 %)
Difficulty in commuting because lack of transport	15 (28.3 %)
Personal problems	11 (20.7 %)
No hostel facilities	6 (11.3 %)
Perception of families that ITIs are more suited for males	4 (7.5 %)
Safety and security issues	4 (7.5 %)

Source: Analysis of primary data collected – Interview with 53 key informants (Multiple responses given)

Figure 21: reasons for dropouts: response of principals



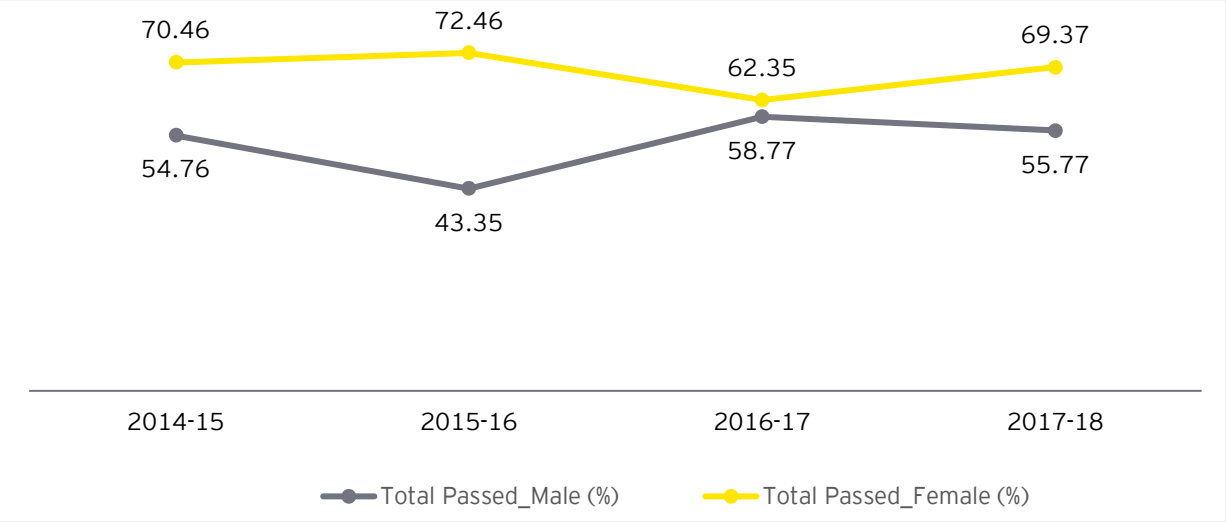
Source: Analysis of primary data collected - interviews with 64 ITI Principals (Multiple responses given)

- Travel/transport related challenges to reach the ITIs, limited information about ITIs and lack of support or reluctance from family members of the trainees, were the other key reasons cited by principals when asked why female trainees drop out from the courses

5.1.3 Pass percentage by gender

Data shows that a higher proportion of females pass their examination compared to their male counterparts. With not much variation the drop-out rates based on gender, this indicates that females perform better than boys. Once they join the ITI, they are more likely to complete the course than boys.

Figure 22: training outcomes: pass percentage by gender



Source: Analysis of primary data collected - data received from 64 ITIs factsheets

5.2 Understanding the barriers for female participation in skill training from the students' point of view

The focused group discussions provided very useful insights about female participation in the ITIs. More than 500 male and female respondents participated in these discussions across the 12 states. The issues discussed during the FGDs can broadly be categorized into the following themes.

Table 12: summary of issues identified during FGDs

Areas of concern	Specific issues discussed by groups
Demand side barriers	
Gender bias	Skilling is not considered a priority for females
	When it comes to finances, their male siblings get preference
Connectivity	Location of ITI
	Not well connected with public transport
Safety	Get eve teased on the way
	Ridiculed for wearing uniform (considered unsmart)
Financial issues	High fee in private institutes

Lack of family support / additional domestic responsibilities	Reluctance to allow them to study in co-ed ITI
	Reluctance to allow them to pursue engineering related course
	Reluctance to send them to far off places
	Additional responsibilities
	Influence of in-laws
Image of ITIs	Considered to be male dominated
	Boys studying in ITIs are perceived to be disobeying rules
Supply side barriers	
Gender unfriendly infrastructure	Unhygienic toilets
	Hostel not available for females
	Lack of a canteen or any space at the institute where they can relax or have fun
	No creche facility for children of married female trainees
Limited options for course selection	Limited choice of trades for females
	Low marks limit choice of trade
	Short term courses for similar trades available
Quality	Low trainee-instructor ratio
	Erratic supply of consumable material
	Lack of machinery with latest technology
	Insufficient equipment
	Gender bias reflected even at the ITI
	Books not in regional language
Career guidance	Lack of guidance
	Ineffective soft skills training
	Limited connect with the industry
	Instructors discourage them from opting engineering related trades
	Access to portal not very smooth
	Insufficient support for placement
	Limited opportunities for apprenticeship
	Lack of information about getting loans from banks to start their own enterprise
Safety concerns	No action against cases of harassment

Each of these thematic areas have been further categorized as demand and supply side barriers which have been discussed in this section.

5.2.1 Demand side barriers

Gender bias against females joining ITIs, which are perceived to be male dominated institutes

One of the reasons why females do not come forward in larger numbers to seek admission in the ITIs is the general perception that ITIs are male dominated. It is generally believed that the ITIs offer training to students for the manufacturing sector only and it requires a lot of physical labor. It is assumed that females will not be able to go through the course. Females across geographies shared that they are dissuaded to take up engineering courses by their parents and sometimes even the instructors citing this as a reason.

Connectivity – location of the ITIs and availability of public transport

Location of the ITIs is guided by factors like availability of land and likelihood of finding more students. The government ITIs are set up on government land, therefore, it depends on its availability. The guidelines and norms developed by DGT to set up ITIs do not include choice of location. Its focus is mostly on setting standards for infrastructure and human resource to run an ITI. Due to lack of regulations around location of ITIs, the institutes were not always found to be centrally located or well connected with public transport system. Wherever the public transport services were erratic, females were found to be using bicycles, pooled vehicles and even trains to reach the ITI. Some female students were found to be traveling distance of as much as 80 km each way. The concern was expressed more by students residing in remote rural areas where availability of good ITIs was not there.

The team also found that among the 64 ITIs visited only two ITIs – one in Chhattisgarh and the other in Maharashtra were found to be offering residential facilities for females. In Maharashtra the ITI has done a tie-up with a government run hostel. During the FGDs when the female trainees were asked whether they would want the ITIs to provide hostel facilities, a large majority of them mentioned that it was not necessary. Wherever means of transportation were available, they prefer to stay in their homes only. When the same question was asked to the principals, many of them were reluctant to have hostels in their premises because it was big responsibility involving tedious processes.

Safety and security issues

According to the UN Women Global Results report on safe cities and safe public spaces (2017), violence in public spaces, especially sexual harassment, is still largely tolerated and perceived as a normal part of social life. This reflects discriminatory attitudes and behaviors that perpetuate gender stereotypes and inequality. They impede the recognition, prevention and adequate response to sexual violence against women.

Students studying at the ITIs often face harassment while commuting to the ITIs. Female trainees mentioned that they get eve teased/harassed by boys traveling along with them or when they walk towards their institute. Some respondents also pointed out they often get ridiculed because of their uniforms, which are seen as unsmart. walked in groups to protect themselves. This experience of feeling unsafe was cited more by students residing in urban areas

> "I do not feel safe walking down the road alone. After 5 pm in the evening, many men living on the same road begin to drink. I do not like it when they call me names and tease me about my uniform. They often call me 'ITI girl'. And then laugh loudly which I find very insulting. If I tell my parents about it, they will ask me to leave the institute"
>
> **Swathi (name changed), ITI, Tamil Nadu**

Some ITIs have liquor shops/bars near their institute which makes things even worse for them. During the FGDs, the respondents were asked to provide suggestions to make their ITI campus safer for them and the following resonated with the majority:

- Transport arrangement to a common point from where they could take public transport. Their institutes could buy vehicles or have some arrangement with other local organizations
- Arrange to have Police Control Room (PCR) vans posted at the gate at strategic time when they enter or leave the institute.

Financial barrier

Though ITIs charge a nominal fee for the training course, added cost of transport add to financial burden for the female students. During the study, it was seen that private ITIs charge a higher fee as compared to the government ITIs. In addition, due lack of information, the females did not know about the various scholarship schemes that they can apply for to fund their training.

Instances were cited if the parents had to make a choice whether to educate their son or daughter, they would prefer to send their son for the training.

Influence of the family

Families play a very big role in guiding the females' choice of trade and the ITI they should take admission in. The families of the trainees insisted for them to opt for non-engineering courses in ITIs close to their homes.

The challenge accentuates for the females from rural areas. Female trainees from rural ITIs reported few available options for non-engineering trades. This further makes it hard for them to convince their families to let them attend ITIs. The respondents added that apart from their immediate family members, they sometimes have to seek the permission of their relatives before pursing ITI training and in many cases, it was unfortunate that the parents give into the resistance from larger relative groups about their female wards attending ITI.

In the context of familial factors affecting ITI participation, marriage was cited as the main reason for females dropping out of the ITIs. Females dropping out after marriage due to relocation or resistance from in-laws. The respondents shared that many of their friends were not allowed to pursue their course after marriage. If marriage of females was fixed before they joined the ITI they were more inclined to take up short term courses which they were sure they could complete before they got married.

This was validated by the principals and the key informants who also cited marriage as the most common reason for females dropping out. (Refer Figure 17; Table 10)

Image of the ITIs

In addition to the perception that the ITIs are male dominated, families also have negative perception about the co-educational ITIs in particular. In an instance cited by a student, reflects this perception and how it impacts their potential admission in ITIs. The student had gone for admission with her father to a co-ed ITI which was closer to her place of residence and offered a wider choice of trades. On reaching the institute, they saw boys hanging around, bunking their classes. They were told by some other parents that these boys get together and create a ruckus after the classes. This was enough for her father to take a call not to admit her in that ITI despite the advantages it offered.

Besides this, the respondents, including male trainees who participated in the FGDs opined that ITIs were intuitions where students from lower economic background or those who do not get good marks in school. Such views are further strengthened when the trainees compare the ITIs with the nearby colleges offering better services such as canteen, own college bus, extra-curricular activities and sports.

Some female trainees interviewed in the northern states (Rajasthan, Himachal Pradesh and Uttar Pradesh) even mentioned that having a tag of studying in an ITI affects their marriage prospects.

5.2.2 Supply side barriers

Gender unfriendly infrastructure

The sanitary conditions of most ITIs across geographies and types of ITI were found to be very unsatisfactory. The condition of toilets in most ITIs visited by the team was very poor. Very few institutes had a functional toilet mostly because of lack of cleaning staff or non-availability of water. Some ITIs would keep their toilets locked,

making them unavailable for use. In some ITIs in Chhattisgarh and Maharashtra the toilets did not even have doors making these as good as not being there.

None of the ITIs had provision to keep the sanitary pads so that females can make use of it when required or have a common room which they could use when not feeling well. Fulfilment of these basic requirements can go a long way in making females feel comfortable in attending the institute, not to mention take care of basic health issues.

Marriage and childbearing while pursuing the course has been cited as one of the main reasons for dropouts. Since the ITIs, do not have creche facility, in the absence of anyone at home to take care of their children, the trainees have to drop out of their courses or female with children do not consider attending the ITIs.

Safety and security of females

Safety and security of female trainees is a matter of concern both while commuting to the ITI and within the ITI. The prime responsibility of the ITI is to ensure that safety and security measures are taken care of at the institute. The ITIs on their part are taking measures to provide security by posting guards and installing CCTVs at the premises.

However, the ITIs visited offered no redressal mechanism to address complaints of harassment and misbehavior at ITI campus. Even if such a system does exist, there was lack of awareness about it, thereby, making it redundant. The female respondents across all ITIs were not aware of any guidelines which were followed to ensure security of females. In one instance it was shared that the male instructor had behaved inappropriately with female students. The students did not know how to deal with this issue. The Affiliation Norms for the ITIs have elaborate guidelines for safety and security measure, however, there are no guidelines to address this aspect.

Rajasthan was seen an exception in this case. The ITIs which were visited in Rajasthan ITIs had redressal policies against harassment. Some ITIs in the state also offered training in martial arts to the female trainees.

Quality of training

Respondents during the FGDs pointed out several issues, pertaining to poor instructor trainee ratio, poor quality of equipment, erratic supply of material for training, non-availability of teaching learning material in vernacular and instructor absenteeism, that adversely impacts their experience at ITIs. Though these issues are a matter of concern for all ITIs and for both male and female trainees, it has a stronger bearing for the females, especially those, who, had to face resistance against pursuing ITI training:

- Limited choice of trades: Female trainees feel they have fewer trades to choose. The issue is more pronounced in private ITIs, since they largely offer engineering related courses owing to their popularity. The female trainees however expressed they would prefer more varied courses to be offered other than just manufacturing and engineering courses. It was also noted that the trainees from the urban ITIs were more vocal in identifying limited choice of trades as a challenge in pursuing training at ITIs
- Gender bias demonstrated even by the faculty: The gender bias which is held by parents and the community at large sometimes continues even at the ITI. Female students are sometime dissuaded by the instructors from opting for trades like fitter and mechanic because it is their belief that females would not have the physical strength to do the mandatory practical work. Even when they join these courses, boys are asked by the instructor to go and help the females with their practical work, or they were simply asked to observe what boys were doing. This challenge was discussed during interactions across all the 12 states
- Lack of regular career guidance for students at all levels: Respondents across all ITIs expressed their dissatisfaction over the lack of /low quality of career guidance given to them at all levels including at the time of admission. It was shared that students who came for admission were recommended a trade as per availability of seats and not based on any assessment of their individual aptitude. The process has become more impersonal ever since the admission process has become online where they must give their choice of trade, often without understanding what they are opting for. The names given to some of these courses are also not self-explanatory making the choice even more difficult. The respondents did mention that ITIs set up help desks during the admission process, however, that is more to hand hold or trouble shoot any technical issues during admission and not a counseling process
- Guidance at the time of completion of the course is even more important for students. Due to limited exposure to the industry, students need guidance and skills on many fronts to become industry ready. Female trainees from ITIs in urban areas were more aware of this requirement. They expressed their

dissatisfaction placements, absence of soft skills to prepare them for interviews and the placements, limited support to join the apprenticeship program.

- There were other female respondents who expressed the desire to start their own entrepreneurial ventures but were unsure as to how to go about it. They did not receive any guidance or support in a structured manner related to preparation of business plans, getting loans from the ITI in this area.

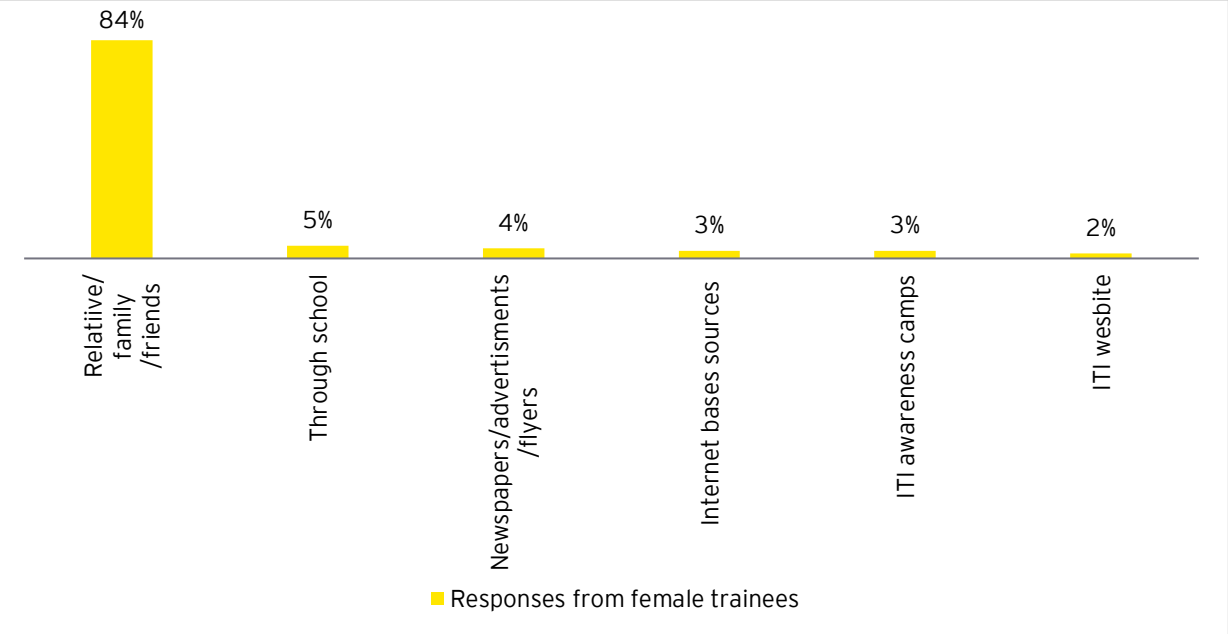
> "There are loans available under various schemes. But we are not informed about the same,"
>
> **A student from ITI in Jharkhand**

5.2.3 Other factors influencing female participation in skill training

Limited awareness about the ITIs

The most common sources of information about the ITI, as shared by the trainees in their interviews, are relatives and friends followed by advertisements circulated by some ITIs in the form of pamphlets, posters and hoardings. This information is geared towards all students not specifically the females. There was little evidence that proactive measures were being taken by the ITIs to reach out to females specifically. In some institutions, as in the case of an ITI in UP, the number of applicants is many times more than what they can accommodate, so they do not feel the need to create more awareness.

Figure 23: sources of information and awareness about ITI



Source: Analysis of primary data collected - Interview with 92 female ITI trainees (Multiple responses given)

Some states including Maharashtra, Tamil Nadu and West Bengal are taking proactive steps to increase their outreach to potential female candidates.

In Tamil Nadu incentives are being offered to female students in the form of free bus passes, bicycles, laptops, uniforms, stitching fees for two sets of uniform, shoes, textbook and classroom materials as well as a monthly stipend. Awareness programs are carried out by the ITIs with students at the government secondary schools, especially schools only for females. Graduate trainees are included in the team for greater impact.

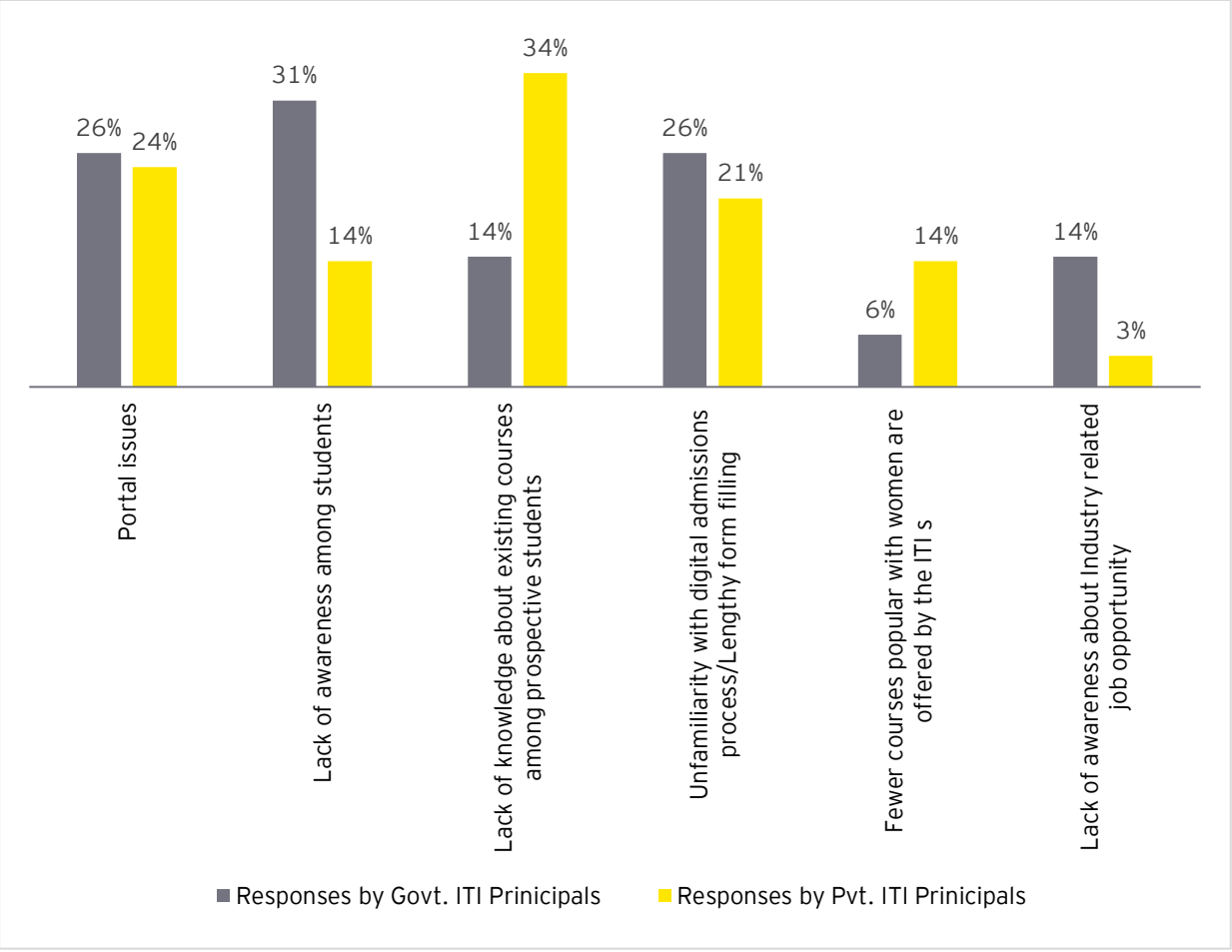
In WB, three out of the six ITIs visited were also taking proactive steps to reach out to secondary schools in the vicinity and create awareness about the courses being offered at the institutes.

In Maharashtra it was found that pamphlets are distributed every year before the start of the academic year. These are written in the local language and placed in newspapers, so that the information reaches a wider audience. Despite these efforts, by and large it was found that awareness about the ITIs reaches individuals by word of mouth.

Challenges faced by ITIs to increase enrolment of female trainees

A higher proportion of principals from government run ITIs struggle to create awareness compared to their counterparts in private ITIs. The response of the principals finds resonance in the issues raised by female trainees during the FGDs. Like students, the principals also shared that enrolment of female trainees at the ITIs is affected because of unfamiliarity with the course content and new online procedures which have been introduced to make the process transparent.

Figure 24: challenges faced by ITIs in improving enrolment of female trainees



Source: Analysis of primary data collected – Interview with 64 ITI Principals (Multiple responses given)

Gender imbalance among faculty and staff

During interactions with the instructors at the ITIs (N=98), they were of the view that having female faculty is helpful in many ways. Almost half of them opined that having female instructors on the faculty helped in resolving issues with female trainees. 37% were of the view that it gives comfort to the parents if there are more female faculty members. Principals from co-educational institutes observed that if females are recruited even at the support staff level, they observe an increase in enrolment. These views were echoed by principals from Maharashtra and Rajasthan.

During our interactions with female trainees during FGDs it was found that more than the trainee themselves, the matter of female faculty was an assuring factor for the families of the trainees. For the female trainees, gender of the instructor was not an important factor in making a choice to join an ITI.

Insufficient preparation by ITI to prepare female trainees for labor market

The instructors in the ITIs were asked about the factors that influence the choice of trade of the trainees. 37% of the instructors said that female students choose courses that help them to get a job, 30% of them said students choose courses that help them to set up their own entrepreneurial ventures. Only 17% of the instructors said that the trainees choose a course as per their interest and aptitude. According to the instructors, the trainees need guidance to help them make the right choice and for career and prepare them for employment.

The TCPO appointed in each ITI is required to play that role and help the trainees and potential trainee with market relevant information about the courses chosen by them and help them make an informed decision in this regard. In most ITIs visited there was no regular appointment of a TCPO. It was usually the principal or some instructor who had taken this role as an additional charge.

Table 13: factors influencing students in choice of trades as cited by ITI instructors

Factors influencing choice of trades	N = 98
Trade that helps in getting a government job	37 (37.7%)
Trade that helps in getting a job in the industry	36 (36.7%)
Trade that helps them become self employed	30 (30.6%)
A trade that requires less physical labor	23 (23.5%)
Interest in the trade	17 (17.3%)
Family influence	16 (16.3%)

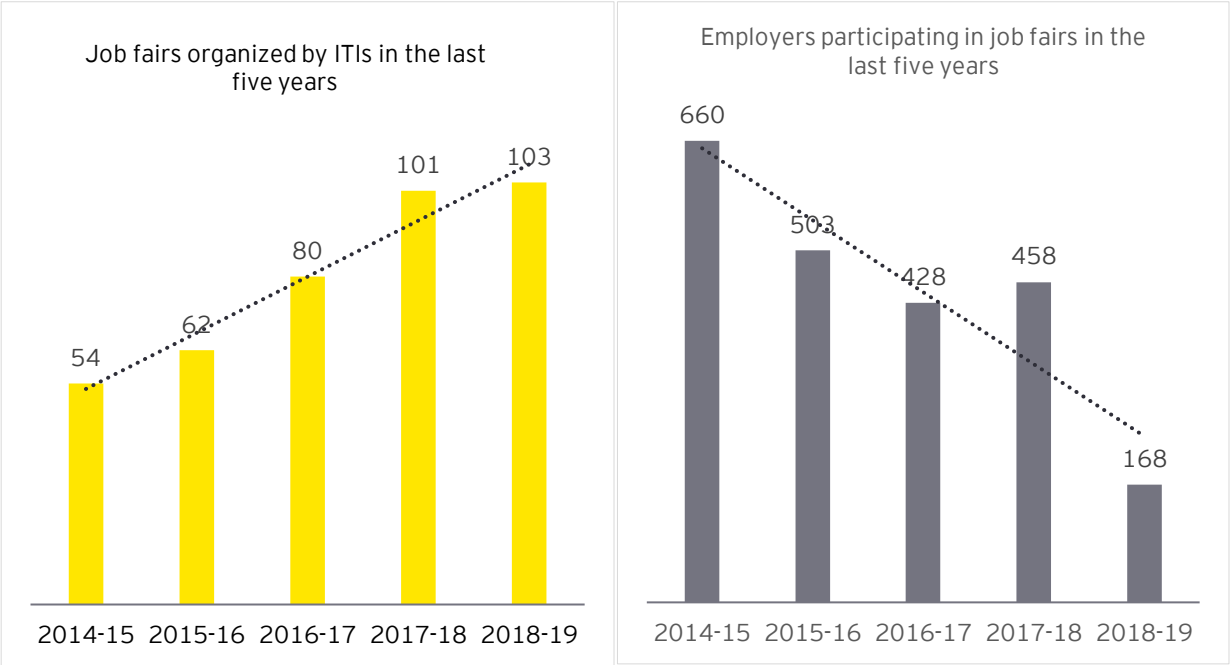
Analysis of primary data collected - Primary interviews with 98 Instructors (Multiple responses given)

Insufficient interface between the industry and the ITI

A fallout of not having a regular TCPO is limited information about industry demand for manpower. The interaction with industry is largely confined to organizing job fairs, but this activity did not appear to be all pervasive. Even when the job fairs were organized, participation of the industry is found to be waning in the last few years. Limited industry interaction also hinders the placement process.

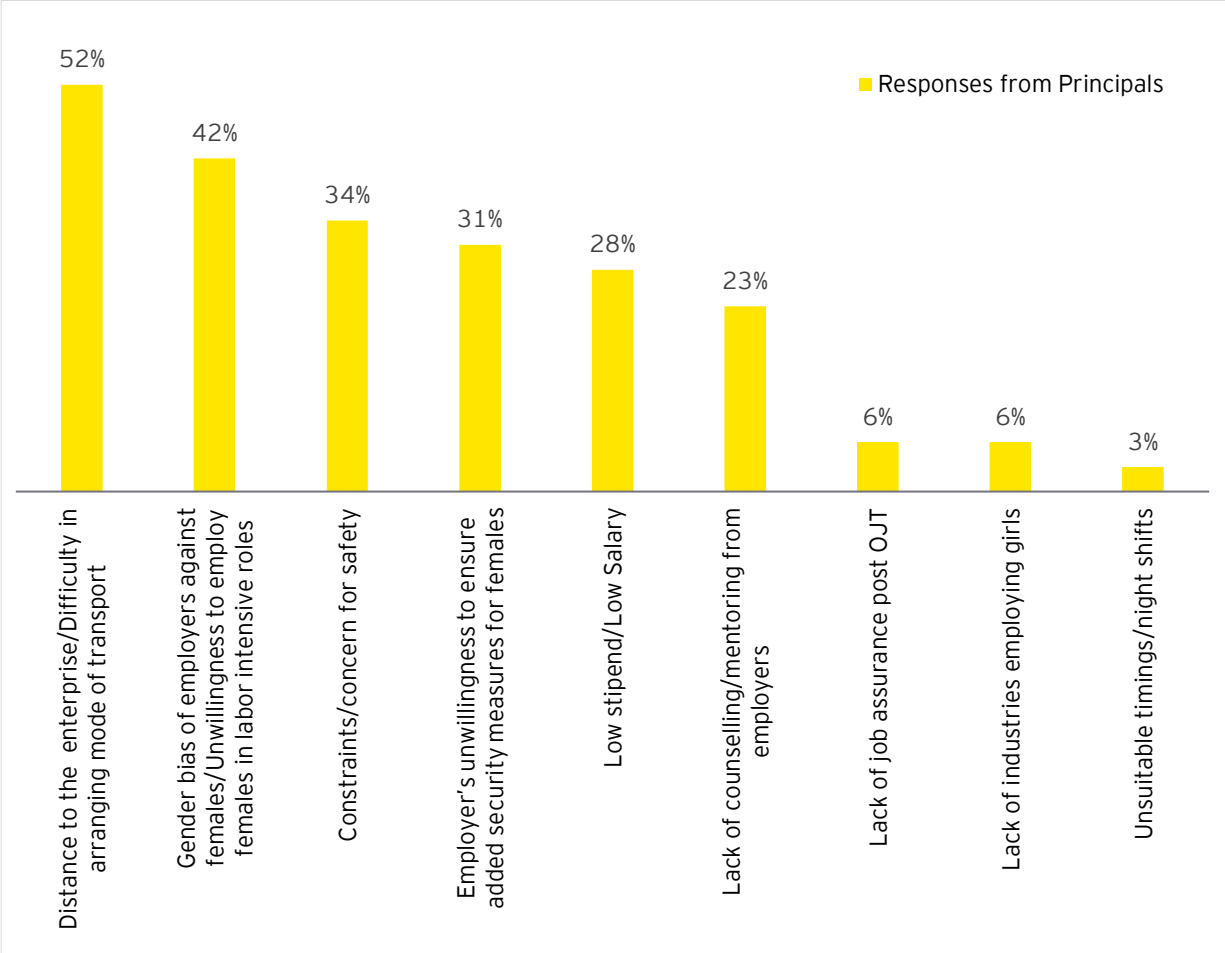
Students from ITIs in Hubli, Bijapur and Matikai mentioned that no industries visited their campuses. Assam was one of the states where active industry interactions were being organized through guest lectures and industry visits for the students.

Figure 25: industry participation through job fairs



Source: Analysis of data received from 64 ITIs factsheets

Figure 26: challenges faced by the ITIs to place students



Source: Analysis of primary data collected - Interview with 64 ITI Principals (Multiple responses given)

Women only ITIs find more favor than co-educational ITIs

There has been an increase in the number of co-educational ITIs. These institutions offer a wider choice of trades to females. However, female trainees shared that they were more comfortable studying in women only ITIs than co-ed ITIs because they felt that they got more attention from the instructors in women-only institutes and are able to express themselves more freely. At co-ed institutes female trainees found that the instructors often gave preference to male trainees over female trainees.

In one of the ITIs in Karnataka, although it was a women ITI, male students were included after the ITI was not able to fill up all the seats. While conducting the interactions, female trainees appeared uncomfortable anytime a male entered the rooms. They showed this by quickly wearing their burqas anytime a male or a stranger entered the room. A change in their behavior was observed too. Without the presence of males in the room, the trainees were talkative and playful.

Thus, when the situation of female trainees at the ITIs is examined against the backdrop of their readiness to adapt to the emerging requirements of the industry in future, it shows that they have a long way to go. They are still struggling with the basic issues related to access to the ITIs. To bridge the gap between the demand of the industry and preparedness to join, the ITIs will need to enhance their efforts to strengthen the interventions towards imparting skills to the trainees make them job ready, engage with the community as well as the industry to remove the barriers females face in accessing the ITIs and the work place.

Another aspect worth considering is that there is scope for self-employment and entrepreneurship among students pursuing non-engineering trades because it gives them more flexibility. Students are largely being guided for placements in the industry and with very limited focus on becoming entrepreneurs or self-employed.

5.3 Success stories

Reema (name changed), 22, an alumnus of ITI Jadgalpur, shared her journey at the institute. Her father is a tailor and could afford the post school education of only one of his two children. Her brother got preference over her because he wanted to join a polytechnic and the family believed that had better prospects than ITI.

However, she did not give up and through her uncle's guidance she filled an application form for fitter trade in ITI Jagdalpur. Seeing her physical state, since she weighed only 38 kgs, instructors suggested her to opt for COPA, but she was interested only in the fitter trade.

So, she began her skill training in 2015 and finished her training with the highest marks in her class in 2017. She got an opportunity to work as an apprentice with the company TVS. This changed Varsha's life. She completed the training of three months with an appraisal and a job offer from Hero group. She worked as a technician for more than a year there. Later she qualified for government job and currently she is working as a Technical Officer in PHE department with a handsome salary plus government perks. She has set a benchmark for all her juniors in the institute and she has been selected as the ambassador too, by the institute.

Radhika Devi, aged 46 is an ITI graduate from women government ITI, Guwahati. She got married immediately after completing class 10. She passed her class 12 and during the second year of her graduation, she got pregnant. Her family asked her not to continue with her study, but she managed to complete it because her husband's support. However, possessing a graduate degree did not help her find a job. Her husband was working in the government ITI and suggested that she take admission in an ITI. She graduated from Women ITI, Guwahati in Secretarial Practice trade and got an offer to join IOCL as a Stenographer. Today she is working as an Accounts Officer Grade 2.

She was nominated by the ITI for the Brand Ambassador of Skill Development Award and she was selected by DGET to receive the award which she received on the World Youth Skills Day in an event organized in Delhi

5.4 Gender friendliness of ITIs

The research team selected seven parameters to assess the gender friendliness of the ITIs. These parameters were – location, availability of functional toilets, availability of transportation, female faculty, safety and security, residential facilities and additional efforts made by the ITI to increase enrolment of females.

All 64 ITIs were given a score for each parameter on a three-point scale based on their performance and a composite score. The composite score was used to categorize each ITI into good, average and low. If only 33% ITIs were getting a good score, then the overall performance was low; 34-66% for average and 67% and above were good performing. Details of scores received for all categories are placed in Annexure J.

Table 14: marking of states as per the quality of their ITIs

	Low	Average	Good
Assam	19.0	42.9	38.1
Chhattisgarh	42.9	37.1	20.0
Haryana	42.9	38.1	19.0
Himachal Pradesh	33.3	26.2	40.5
Jharkhand	42.9	25.0	32.1
Karnataka	47.6	35.7	16.7
Kerala	22.9	28.6	48.6
Maharashtra	28.6	38.1	33.3
Rajasthan	35.7	28.6	35.7
Tamil Nadu	31.4	48.6	20.0
Uttar Pradesh	64.3	28.6	7.1
West Bengal	33.3	26.2	40.5

Table 15: categorization as per performance on gender friendly index

Regions	Low	Average	Good
North	Haryana, Uttar Pradesh		Himachal Pradesh
East	Jharkhand	Assam	West Bengal
South	Karnataka	Tamil Nadu	Kerala
West		Maharashtra, Rajasthan	
Central	Chhattisgarh		

This gives an overall idea about gender friendliness of the ITIs in the respective states. Having categorized the states according to their gender friendliness, its correlation with enrolment was ascertained. The objective was to see whether providing a gender friendly environment can lead to a higher enrolment. A compounded figure of growth in enrolment for the last five years was taken and mapped against the performance of the states on their gender friendliness for each parameter.

Table 16: mapping of gender friendly score of ITIs (State-wise) with compounded growth in enrolment (2014-15 to 2018-19)

State	Location of ITI	Female faculty	Availability of toilets	Safety measures	Residential facilities for girls	Transportation facilities for girls	Outreach programme for girls	Compounded Growth Enrolment
Assam	Good	Average	Average	Good	Average	Poor	Good	-6%
Chhattisgarh	Average	Average	Average	Average	Poor	Poor	Poor	13%
Haryana	Good	Average	Average	Average	Poor	Poor	Poor	9%
Himachal Pradesh	Good	Good	Average	Good	Poor	Poor	Good	35%
Jharkhand	Good	Average	Good	Average	Poor	Poor	Poor	6%
Karnataka	Poor	Average	Average	Good	Poor	Poor	Poor	-22%
Kerala	Good	Good	Good	Good	Poor	Poor	Average	8%
Maharashtra	Good	Average	Average	Average	Poor	Poor	Good	1%
Rajasthan	Average	Average	Good	Good	Poor	Poor	Average	19%
Tamil Nadu	Average	Average	Good	Average	Poor	Poor	Average	1%
Uttar Pradesh	Average	Average	Average	Poor	Poor	Poor	Poor	-4%
West Bengal	Average	Average	Good	Good	Poor	Poor	Average	13%

Location of ITI: Out of 12 states, ITIs in all states except one were located either in average or in good location. 9 of these 11 states (barring Assam and Uttar Pradesh) observed growth in enrolment averaging 12% in the last five years. In Assam and Uttar Pradesh, however, in spite of most of the ITIs reported to be in good areas, the enrolment declined by 6% and 4%, respectively. Karnataka displayed relatively poor ITI location and showed 22% decline in enrolment

Female faculty: All the states displayed either average or good for the presence of female faculty. This reflected in the positive enrolment of female trainees in ITIs for all states, barring Assam, Karnataka and Uttar Pradesh. These three states showed a decline in enrolment despite average response towards the said parameter

Availability of toilets: While all states displayed average or good performance for the availability of toilets in the campus of ITIs, only nine states showed a growth in enrolment. In the case of Assam, Karnataka and Uttar Pradesh, a decline in enrolment was observed with an average condition in terms of availability of toilets, implying that availability of toilet was not a major factor for enrolment in these three states. It is important to note that availability of toilets here related to the availability of separate toilets for female trainees in the ITI campus and not whether these were hygienic and functional

Safety measures: Out of 12 states, 11 had either average or good amount of safety measures in their institutes. 9 out of these 11 states also displayed growth in enrolment. This correlation between safety measures and enrolment was not observed in Assam and Karnataka, which displayed declined enrolment. High correlation was observed in the case of Uttar Pradesh, where most of the ITIs responded to be having poor safety measures thus a decline in enrolment over the years

Residential facility for female trainees: It is interesting to note that out of 12 states, 11 states' scores displayed poor residential arrangements for female trainees. Yet these 9 states observed growth in enrolment over the years. On the other hand, Assam, while belonging to average category for residential arrangement, displayed negative enrolment, only two states – Karnataka and Uttar Pradesh – displayed a linear correlation with poor residential facilities associated with decline in enrolment of female trainees over the years

Transportation facility: Relation of the poor transportation facility was directly mapped with decline in enrolment over the years in Assam, Karnataka and Uttar Pradesh. The same was not true in case of other states, as - despite responding to have poor transportation facility - there has been a growth in enrolment over the years, showing lesser importance accorded to transportation facility for female trainees

Outreach program for female trainees: Enrolment over the years has been positive in 9 states out of listed 12 states. The correlation held true only in case of Karnataka and Uttar Pradesh, where due to limited outreach program for female trainees, enrolment had also declined over the years. The case was found to be contradictory in Assam as enrolment has declined even with good outreach programs

In a nutshell, out of seven parameters three parameters; location, female faculty and safety measures in the campus, were found to have a strong positive relationship with the growth in enrolment over the years.

While availability of toilets was pointed out as a factor during interactions, as per the above index, it did not have much of an impact on enrolment of female trainees. The females expressed that they have to compromise on this factor and have learnt to adjust but are certainly very unhappy about the lack of this basic facility for them.

This goes to define the priority areas for intervention, the three parameters which were found to have an impact on enrolment - remove location as a disadvantage by helping females with residential or transport facilities, recruit female faculty members and take measures to improve safety and security of females

In conclusion, one may say that there is a growing interest among females to participate in skill development programs at the ITI as reflected in an increase in enrolment and higher rate of completion of the course. Once a female trainee joins, she is more likely to complete the course. With support in areas like access to information, overcoming the gender stereotypes that determine the choice of trades for females and guidance for future, a number of challenges can be addressed at the institution level. In addition, behavior change communication and advocacy with the families and communities can help to improve their poor perception about ITIs and is likely to encourage more females to join these institutes.

Chapter 6: Demand and supply side constraints for female apprentices

6. Demand and supply side constraints for female apprentices

6.1 Overview of apprenticeship program

In India apprenticeship was formalized through the Apprenticeship Act1961. It was made mandatory for the industry to offer opportunities for apprenticeship in various trades. Since 1961, there have been several changes made to the Act (1973, 1986 and 2014) to promote apprenticeship. The National Skill Development Policy 2009 recognizes apprenticeship as an effective way to transition from school to work. (ILO 2013). More recently in 2016 the National Apprenticeship Promotion Scheme (NAPS) was initiated to give a further fillip to apprenticeship by promoting public private partnership as a strategy through its industry friendly and inclusive program features.

Several changes were made in the Apprenticeship Act

- Increasing the age limit for designated trades related to hazardous Industrial work to 18 years
- Increasing the number of apprentices an industrial establishment could take
- Expanding the number of trades for which apprenticeship could be provided. It extended to non-engineering trades
- Outsourcing of basic training to an institute of employers' choice
- Removing penal provision of imprisonment of employer in case of default instead penalty to be imposition of fine
- Expanding the scope of intake of apprentices from other states too
- Certification can be done by any competent authority

Any individual above the age of 14 years who has completed at least class 8th and ITI pass-outs is eligible to undergo apprenticeship program in designated trades. In certain trades, B.Sc. pass is a prescribed qualification. The duration of apprenticeship varies from six months to about three years although in some trades it may go up to four years. As of now there are 40 sectors offering apprenticeship program in 259 trades. This includes optional trades which means that the employer can decide any trade. It is just that they need to have a training program for 500 hours.[35] According the NCVT data related to apprentices, only about one fourth students who register for the apprenticeship program complete it. Others drop out before they complete the program. In the 12 states covered during the study, it was seen that while a number of youths were registering themselves on the portal, the rate of conversion to actual apprenticeship was very low (less 30% in some states)

Table 17: apprenticeship verification rate across 12 states for both female and male

State	Total apprentices	Verified apprentices	Percent verification
Assam	2869	792	28%
Chhattisgarh	3565	619	17%
Haryana	47092	15646	33%
Himachal Pradesh	1885	286	15%
Jharkhand	17420	2285	13%
Karnataka	28235	5606	20%
Kerala	9458	1996	21%

[35] As on 5th September 2019. Source: https://apprenticeshipindia.org/

State	Total apprentices	Verified apprentices	Percent verification
Maharashtra	93164	24718	27%
Rajasthan	7786	1135	15%
Tamil Nadu	19367	7334	38%
Uttar Pradesh	44208	7330	17%
West Bengal	4389	1253	29%
12 states	279438	69000	25%

Source: NCVT MIS Portal

Proportion of verified female apprentices to total number of apprentices varies from as low as 3% to 24%. Haryana and Kerala are among those states where the apprenticeship program for females has been more successful than other states (Ref. Figure 17).

This study looks at the reasons for low participation in the apprenticeship program with a gendered lens. There are several barriers for females which have been discussed in this section. While looking at the barriers from the students' perspective, the employers' perspective was also considered.

There are four categories of apprentices in the current context:

- Those who have graduated from the ITIs
- Trainees who are pursuing the Dual – learning mode from ITI
- Individuals who have participated in the PMKVY/MES programs
- Those individuals who have had no formal training but have minimum qualification to join the industry. These are also called fresh apprentices. The age limit for this category of students is 21 years

For this study we have considered the ITI graduates and fresh apprentices to understand the challenges female apprentices face while pursuing apprentices and gaining access to such opportunities

Table 18: respondent count: female apprentices

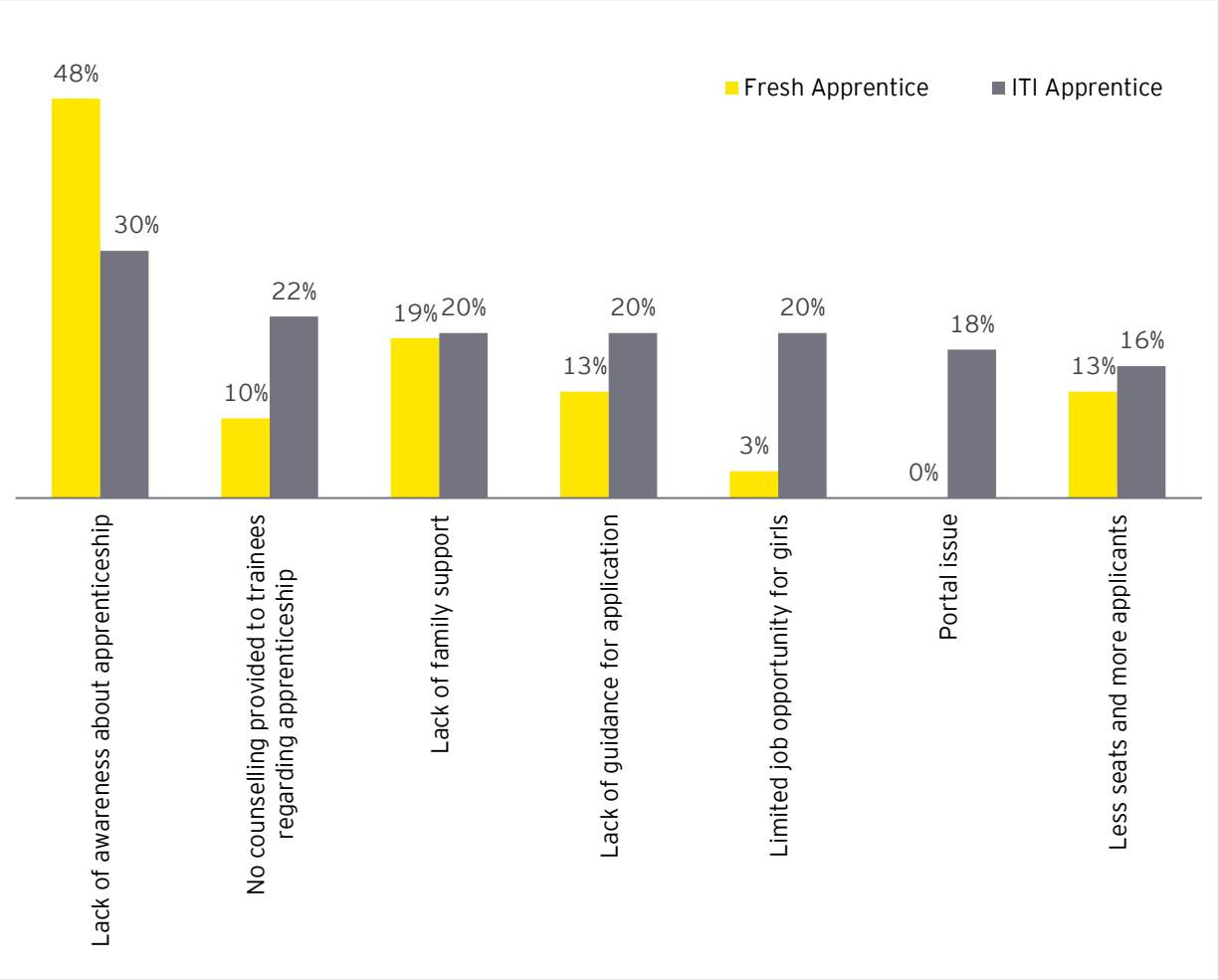
Number of fresh apprentices covered in interviews	31
Number of ITI apprentices covered in interviews	47
Apprentices covered in FGD	67

The research team visited 67 industries and met with apprentices. In addition to conducting FGDs with them, interviews were also carried out to deep dive into the issues identified by them. The industries visited were of different categories – PSUs, large industries and MSMEs.

6.2 Barriers for the apprenticeship program: students' perspective

The apprentices identified challenges that they face not only during apprenticeship but while accessing apprenticeship opportunities as well.

Figure 27: challenges faced by female trainees to enroll for apprenticeship



Source: Analysis of primary data collected – Interviews and focus group discussions with female apprentices

Lack of awareness about apprenticeship opportunities

Apprentices from the ITIs: While apprenticeship/ on the job training is an integral part of the ITI training, only 40% of the ITI apprentices had received information about apprenticeship opportunity from the institutes, either by a teacher or through their curriculum. Interaction with the respondents revealed that they would like to get more support from the ITIs with respect to identifying apprenticeship opportunities. Respondents felt there was no formal arrangement to get information about the apprenticeship scheme: trades, companies, stipend, application processes, etc. At the ITIs, the females could only rely on the instructors for such guidance. The TCPO was not identified by the respondents as someone who they looked up for guidance, once again raising a question mark on the role being played by the counsellors at the ITIs.

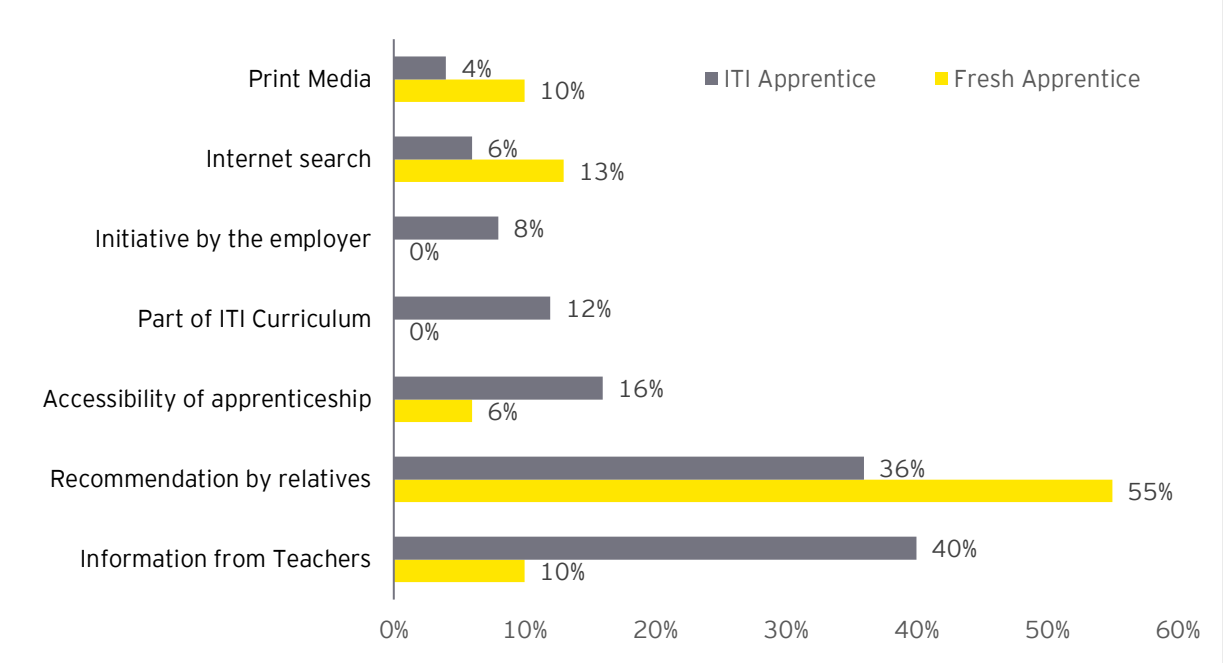
36% of the ITI apprentices depended on their family and relatives for apprenticeship and employment related information.

Only 8% of the respondents claimed to have been appointed through campus drives for apprenticeships. Some companies like the HUL were found to be undertaking female enrolment drives both for apprenticeship and for regular jobs. As a company policy they gave preference to recruit female apprentices after assessing their performance. Further it can be seen that very few respondents claimed to have learned about apprenticeship through internet/social media/print advertisements. This is partly accorded to poor internet percolation to remote/rural areas and low media footprint of the ITIs in general.

ITI apprentices and ITI female trainees, both highlighted that there was insufficient interface between the ITIs and the industry, which adversely impacts their scope of industry exposure, knowledge about market relevant skills and access to placement and apprenticeship opportunities. Because of this disconnect, most employers were not even aware about the presence of ITIs in the vicinity and about the trades offered there. Amongst the

fresher apprentices, 55% reported to have received information about apprenticeship opportunities through family and relatives with limited information available at the level of their collages/institutions.

Figure 28: key sources of awareness about apprentice program for fresh and ITI apprentices



Source: Analysis of primary data collected – Interviews and focus group discussions with female apprentices

Lack of counseling and mentoring for apprenticeship and its application process

After access to information, lack of proper counseling at the ITI/graduation level was seen as an impediment by females accessing apprenticeship. About 33% of the respondents reported that there is lack of counseling and handholding support during the application process. The current system of applying for the apprenticeship program is through an elaborate online portal. The portal was designed to make the system run more efficiently and bring in transparency. While it has eased the paperwork that was required before the process became online, some HR professionals mentioned that they would prefer to meet with the candidates face to face to make an assessment about their aptitude and capacity for the role. Several students mentioned that they found applying through the portal difficult. This was especially pertinent for females residing in rural areas where they often must depend on others to apply for the program

Interactions with students through focused group discussions helped to get a better understanding of the issues they faced about the program.

Table 19: key issues identified during FGDs with the apprentices

	Key issues identified
Society/family related	Parental resistance against travelling to far off places for apprenticeship
	Safety and security concerns at apprenticeship/while travelling
ITI related	Gap between ITI training and industry expectations
	Machinery and equipment at the industry are superior to the ones that were used for training at ITIs
	Limited support given at the ITI for online application of the apprenticeship program
Industry related	Offered low stipend

	Key issues identified
	Accommodation not available
	Do not consider any difference between a fresh apprentice and ITI trained apprentice
	Jobs assigned are not related to the training they received at the ITI
	Long hours at the factory, difficult to follow
Others	No apprenticeship opportunities for some trades offered at the ITI
	Job not guaranteed on completion of apprenticeship program

Society/family related

- Reluctance to travel to far off places for apprenticeship: There is reluctance among females to relocate themselves or travel long distances to do their apprenticeship program. Female apprentices especially from UP and Maharashtra during their interactions shared that their parents were more open for them to relocate if they get a salaried job, but they were not keen that they did the same for apprenticeship. Firstly, they were not convinced that even after completion of the training their daughters would get a job because they found conversion from apprenticeship to a job to be very low. Wherever there was assurance of apprenticeship leading to a job, the parents were more encouraging
- Safety and security issues: Parents were concerned about the safety and security of their daughters because the shop floors mostly employed men. Having erratic hours and long hours of travel did not find go down well with the parents. They would rather have their daughters explore opportunities close to their homes. This impacted females who were keen to pursue trades that weren't offered by the industries locally

Factors related to ITIs

- The online application process being very cumbersome, the trainees have expectations from the ITI that they would get some guidance on how to apply online. They usually do not get this support from the ITI and must fend for it themselves or seek help of their friends or family members
- On joining the industry as an apprentice, the trainees find a big gap between what they learnt at the ITI and what they see in the industry. The equipment on which they train at the ITI is quite outdated whereas the one on which they are expected to work is very superior. Often, they are not allowed to operate the machine. This defeats the purpose for which they joined the program

Factors related to the Industry

- Low stipend amount: It was found that the apprentices get a stipend amount in the range of INR5000-10,000 per month. With this amount they found it difficult to make ends meet especially in urban areas where the cost of living was much higher. This aspect was shared during the focused group discussions in almost all the states – Kerala, Uttar Pradesh, Haryana, Himachal Pradesh, Jharkhand, Maharashtra and Assam. Parents were not too keen to incur more expenditure for something that did not ensure employment for the daughters. Most of them said that it would be helpful if some transport arrangements could be made for their travel and residential arrangements offered. At the state level Tamil Nadu government has taken measures to supplement the stipend amount. This is done to encourage females to join the apprenticeship program
- Tasks assigned do not match with their skill sets: When female apprentices joined the industry, they faced a few challenges while pursuing on the job training. Respondents across Assam, West Bengal, Maharashtra, Tamil Nadu and Jharkhand shared that the management had a gender bias against them. It was assumed that they will not be able to take up strenuous and hazardous jobs like the male counterparts. As a result of this many a times they were given tasks that were not aligned to the trades they were trained in
- Female apprentices reported that they are not encouraged to work on the machines while they get trained on the job. This challenge was faced by female trainees even at the ITI level. This limited exposure to equipment and machinery leads to sub optimal results when they join the industry

"... not involved in tasks related to rigging, welding and drilling. Also not allowed to undertake repair work of transformers. Given supervisory work or desk jobs in spite of being trained in trades like Fitters and Welders. The apprenticeship experience owing to such instance got reduced to just performing duties to obtain a certificate to apply for jobs"

...Apprentice from Assam

"After doing COPA they were not given any computer related work and were asked to do odd jobs. Apprenticeship has not added much value to our existing knowledge. I am only looking forward to giving competitive exams to get a permanent government job

... (Translated) Apprentice - Nagpur

Other factors

- Majority of the female trainees at the ITIs opt for non-engineering courses. Students keen to take up apprenticeship program are unable to do so because there are little/no opportunities for certain trades like cosmetology, fashion technology especially in the rural areas. Although the trades have been broad based under the apprenticeship program to include many additional trades, this has still not trickled down especially to the rural areas
- There is expectation on the part of the apprentices that they would get a job after completion of the training. They feel disappointed when this does not happen. The guidelines for the program clearly outline that it is not binding on the employer to offer job to the apprentices who train with them.

To sum up, while the challenges females faced while pursuing apprenticeship are many, there are few that resonated with all the apprentice respondents (both ITI and freshers). The biggest impediment in females accessing apprenticeship is information asymmetry. They have limited awareness about apprenticeship opportunities. Further they expressed that better handholding and mentoring would help them in understanding the trade offerings in the market. Inadequate counseling impacts their knowledge about relevant trades, and they continue to pursue conventional trades that are perceived suitable for females.

There is a general feeling that opportunities available for females are very limited. This problem is even more acute for apprentices in the rural areas due to lack of industries and formal employment establishments.

In addition to the systematic challenges, respondents also face opposition by families on account of long travels, perception of male dominance in apprenticeship, safety issues, low level of awareness regarding apprenticeship and its benefits.

6.3 Barriers to apprenticeship of female trainees: industry perspective

Difficulty in sourcing female apprentices

- As mentioned earlier in this section, intake for the apprentices has been made online which was envisaged to give more visibility to the industry keen on offering apprenticeship and help widen the area from where they could source the students. However, interactions with the respondents from the industry showed that the number of apprentices joining them has dropped after the admission was made online and the potential apprentice cohorts is still in the process of getting acquainted with the new processes
- Some companies find it difficult to include female apprentices in the program because they do not find female trainees in engineering related trades. To cite some examples, the employer from Numaligarh Refinery Limited, Assam, mentioned that they find it very difficult to find females in trades like fitter, turner, welder. Similar opinion was expressed by a representative from Tata Cummins, the company has taken 125

apprentices out of which there were only 5 females, firstly, because the trade offerings are not conventionally popular amongst females and, secondly, due to lack of awareness about the program amongst females.

- Some industries are mandated to include fresher apprentices as a part of their company policies; however, posts open for apprentices after other mandatory recruitment has been done for specific categories. For instance, in three states – Rajasthan, Jharkhand and Maharashtra – respondents from the industry mentioned that they do induct fresher apprentices, but these overlap with some other categories for which they are also mandated to recruit such as youth of those relocated/rehabilitated families due to industry set up and wards/relatives of deceased employees. Often such recruitments take place in lieu of apprentices

Perception about female apprentices

- While the female apprentices complained that they were not given tasks to match their skill sets, most employers believed females prefer to take up job roles that are less strenuous. According to them female apprentices preferred desk work and find working on the shop floor for seven to eight hours difficult. This is contrary to what the females shared where they complained that they do not get to work in jobs for which they have received training specially engineering related because their supervisors think that they will not be able to take up heavy work
- The fact that females were traveling long distances for their apprenticeship training was not given special consideration to by the employers. This is because the companies have to offer relaxation of timing work duration to the females. The companies felt that such relaxations adversely affect the factory/machine schedule and production cycles
- In addition, during interactions with industry representatives, they expressed that having females on the team necessitates extra precautionary measures for their safety to be put in place. These measures can only be obtained at an added cost. In addition, for outdoor tasks and assignment it may not be always feasible to have security personnel to be deployed at all places

Responses from interviewed companies -

"Girls are not serious about their apprenticeship. They come late and leave early. A machine cannot be kept vacant"- Karnataka

"Women were more concerned about their looks than work on the shop floor"- **Haryana**

"They do not like to do `dirty work' such as work with lubricants"- **Rajasthan**

Dissatisfaction about the quality of apprentices hired from ITIs

- There is a general perception within the industry that the candidates, irrespective of gender, coming for apprenticeship were not ready to work in the industry. Respondents from UP and Maharashtra mentioned that they have to spend considerable time and money to re-train them on how to work on the machines. The ITIs do not have the latest machinery so the exposure level of trainees to the latest technology was limited

When the team spoke to female apprentices, it was seen that some of the females overcame their challenges and emerged successful. However, this was only possible when the females had a support system and an enabling environment for the same.

First female machinist apprentice at JSW Steel

Sheetal (name changed), is a resident of the Botibori, an industrial suburb of Nagpur. She chose to tread a path no woman in her community had taken before, by pursuing a course as a machinist at a local ITI. Her parents, who are also working salaried jobs, encouraged her to follow her interest in mechanical courses. Bharati has always aimed to get educated and work towards financial independence. She got accepted to an ITI that was over a 50 km commute from her home.

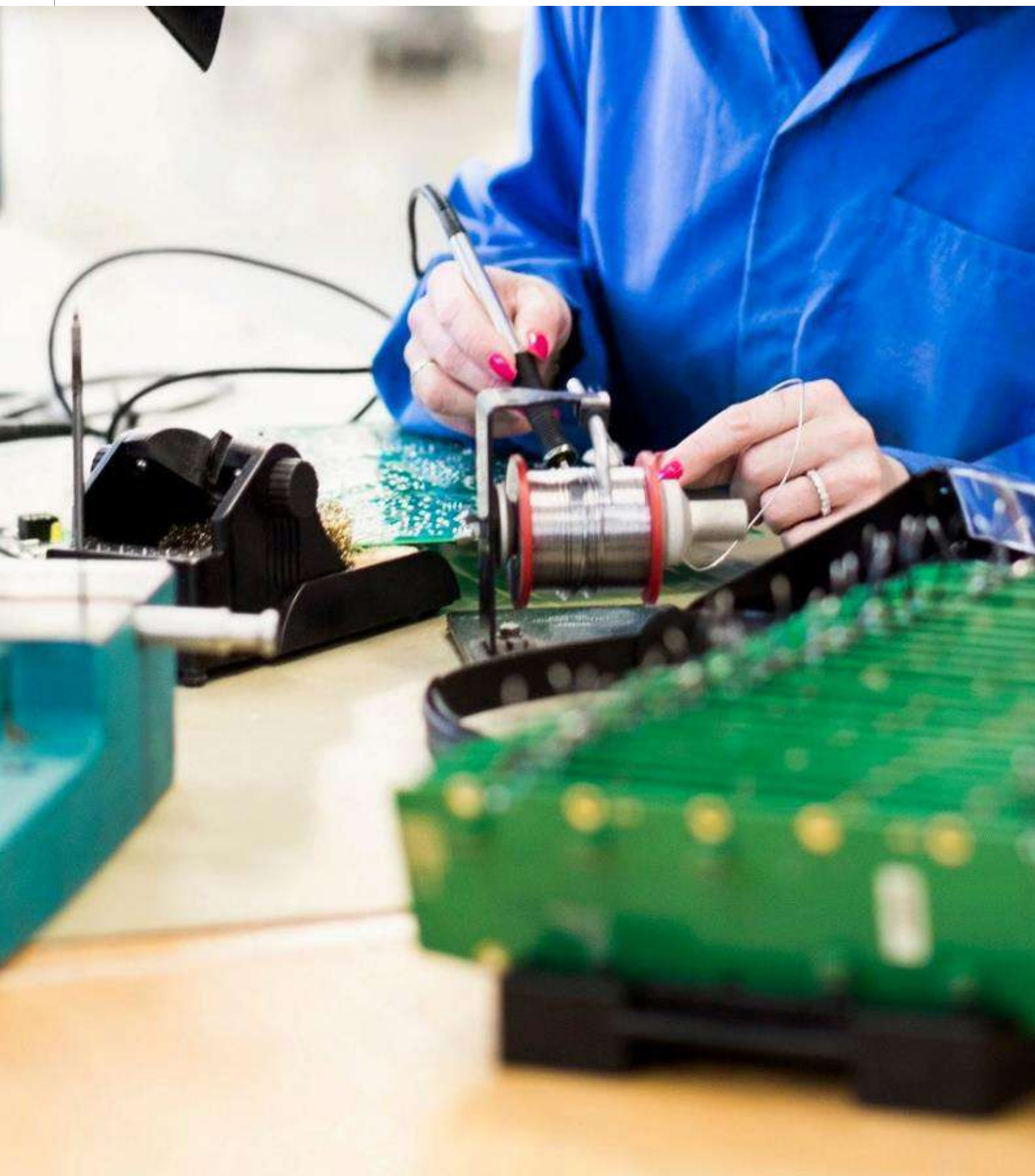
Her class at the ITI was male dominated, as she was the only other girl pursuing the machinist trade. While there were some hiccups with her experience, she had support from her instructors and teachers, who were not biased and gave her the confidence to do well in class. By her own admission, she started slower than her male counterparts but through perseverance and determination she did well in her trade.

She was accepted as the first female into the apprenticeship program by JSW on completing her course. Since the plant was close to her residence, she accepted the offer and has had a great experience since then. Her line managers have guided her to use many types of machines across production lines at JSW, and she is able to gain valuable experience. Sheetal greatly appreciated the level of dedication her mentors in the facility showed towards improving her learning curve during her apprenticeship. She says, "When there is no work in the department I am working for, they encourage me to go and observe other lines which can help me improve my skills and increase my exposure to the industry." In addition, JSW production facility constructed washrooms for females on the shop floor soon after she joined and have since employed 10 female engineers.

In conclusion, it may be said that the apprenticeship program is faced with some challenges. The program is yet to penetrate the service sector as much it has been associated with the manufacturing sector, as females are more willing to take up apprenticeship in these trades. Besides, in bigger industries with highly sophisticated machinery, apprentices (especially female) are seldom allowed to work on machines.

Employers do not make much distinction between fresh apprentices and those who join the program after ITI. Those who are interested in acquiring new skills, do not always get an opportunity to take part in the program because they find sustenance a big problem because of low stipend if they must relocate or travel long distances.

Chapter 7: Barriers for female workers at workplace



7. Barriers for female workers at workplace

The research team visited 67 industries across the 12 states under the study. These were a combination of Public/State Sector Undertakings, government, private industries both large ones and MSMEs. During the visit the team met with the employers – mostly from the HR and training department or owners in the case of MSMEs and female workers who had been employed. While the barriers to females joining the workforce have been explored, some good practices by the industries to encourage female participation have also been documented in this section.

The example of Sheela, a respondent from Maharashtra, during the study encapsulates the challenges faced by female trainees to enter the labor market. It reflects the mismatch between the industry requirements and training provided at the ITIs, it demonstrates their struggles to get themselves industry ready and despite the willingness to be self-employed, the constraints in getting started.

Sheela's (name changed), said, "I went to the ITI hoping to learn how to operate a computer and eventually get an office job. But the training provided to us included mainly computer hardware repair and other electronics repair related tasks. I did not get any job as most jobs in the IT sector require typing & data entry as basic skills – none of which were taught in the ICTSM trade"

She had to complete a three-month Tally course at a private institute to make herself employable. Further, she struggled with job interviews as there was no one to guide her and even the ITI where she completed her training from, had not offered any soft skills/communication training. She had wanted to open her own computer shop but had been held back by the absence of familial support as her parents believed that it is not appropriate or safe for females to run their own shops. This hesitation was further exacerbated by her family's economic situation and lack of funds, as they had little information on how to obtain loans for entrepreneurial ventures.

Three key stakeholders who influence the decision of female trainees to join the labor market are the institute from where the individual receives training, the family members and the industry. In this section we examine the barriers faced by female trainees to take up a job or become self-employed from the perspective of all three.

7.1 Facilitation by ITIs for female trainees to enter the labor market

The position of a TCPO was created at the ITIs, to effectively undertake industry connect for placements, apprenticeships and other activities. The role of a TCPO also entails support and handholding to ITI students aspiring to become entrepreneurs/self-employed. They do it by organizing job fairs, exposure visits for the students and organizing soft skill training for all trainees.

However, contrary to the above, out of the 64 ITIs visited during the study only 28% - 31% of the ITIs each year were organizing job fairs, with a maximum of 26 ITIs (40%) organizing job fairs in 2017-18. Further the efforts of the ITIs are rather disparate across the locations. The maximum number of jobs fairs each year were conducted in the urban areas by the Government ITIs garnering the maximum industry participation (Table 20 & 21). This puts the students in the rural ITIs at a disadvantage due to limited exposure to the industry.

Table 20: number of jobs fairs organized in the last five years

Year	Rural		Urban		Total job fairs
	Government ITI	Private ITI	Government ITI	Private ITI	
2014-15	14	8	27	5	54
2015-16	14	22	21	5	62
2016-17	15	22	37	6	80
2017-18	21	30	43	7	101
2018-19	22	12	62	7	103

Source: Analysis of data received from 64 ITIs factsheets

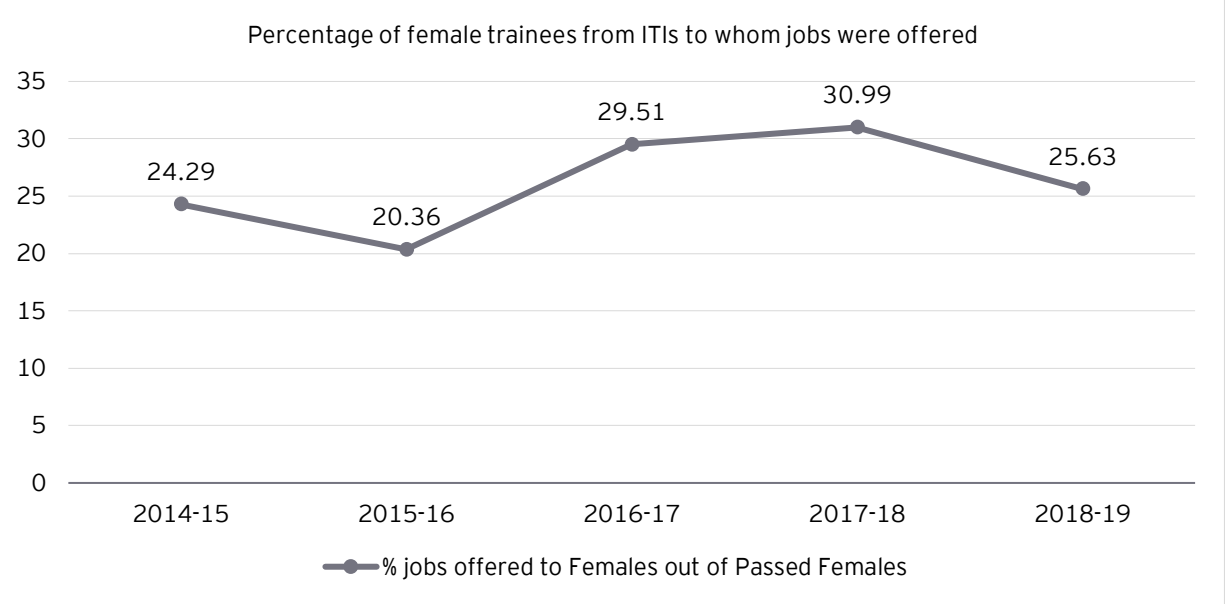
Table 21: number of industry partners participating across ITI job fairs each year

Year	Rural		Urban		Total Industry partners
	Government ITI	Private ITI	Government ITI	Private ITI	
2014-15	43	108	504	5	660
2015-16	24	39	406	34	503
2016-17	152	106	145	25	428
2017-18	177	133	129	19	458
2018-19	63	15	69	21	168

Source: Analysis of data received from 64 ITIs factsheets

Further the data also shows that less than 1/3rd of females get job offers. During interactions with female trainees it was pointed out that often the opportunity is not in the field of their training as well.

Figure 29: percentage of female trainees from ITIs who were offered jobs



Source: Analysis of data received from 64 ITIs factsheets

According to the TCPOs, there are several reasons for lesser number of female trainees getting hired.

Table 22: reasons given by TCPO regarding barriers to hiring of female workers

Barriers to hiring of female workers – perception of TCPOs	N=39
Reluctance on the part of females to travel long distance	20 (51.3%)
Females not able to take up tasks requiring physical labor	18 (46.15%)
Reluctance by industries to address safety and security issues	15 (38.5%)
Females are irregular in their attendance	3 (7.7%)

Source: Analysis of primary data collected – Interviews with 39 ITI TCPOs (Multiple responses given)

Both ITIs and the industry need to actively engage with each other to be abreast of the needs of the industry, so that the ITIs can update their curriculum and infrastructure to ensure training relevance. There seems to be very limited interaction between the two on an ongoing basis. It is important for the industry to industry to

understand the ITI offerings. And the ITIs also need to be aware of the latest developments brought about by rapid advancements in technology in the industry and providing training on similar standards. In the words of an employer from a large private sector organization that hires apprentices and full-time employees from the ITIs – "ITIs should upgrade their syllabus and make their trainings market relevant".

Besides, there could be emerging opportunities for females that need to be tapped. In the words of a respondent from Kerala, "Automation in the industry is creating more opportunities for females because there they do not have to lift loads". At the moment, very few industry partners are even aware about ITIs let alone their offerings. This was voiced by many trainees, apprentices and members from the industry.

Examples of successful collaborations between ITI and industries

ITI Janjgir Champa (Chhattisgarh), had proactively engaged with the industry because of which they had a very high percentage of placement

UP Natraj Mobile Pvt Ltd, proactively hired women from ITI Jhansi, due to their active engagement with the ITI.

In Haryana the ITIs arrange interactions between the students and the bank officials to create awareness about different loans they can apply for and the process to do so. This support is valued by the students.

7.2 Key considerations by the industry in hiring female employees

On a positive note, employers do see a lot of value add to the overall performance of the company when they have diversity within the staff. They cited several reasons for this. They do find females more sincere, better at communication than males and are good team players. While seemingly they appear to be in favor of hiring female trainees, business considerations take precedence, or they are unable to find females with relevant skills for their industry which makes it difficult them to have a gender balanced team.

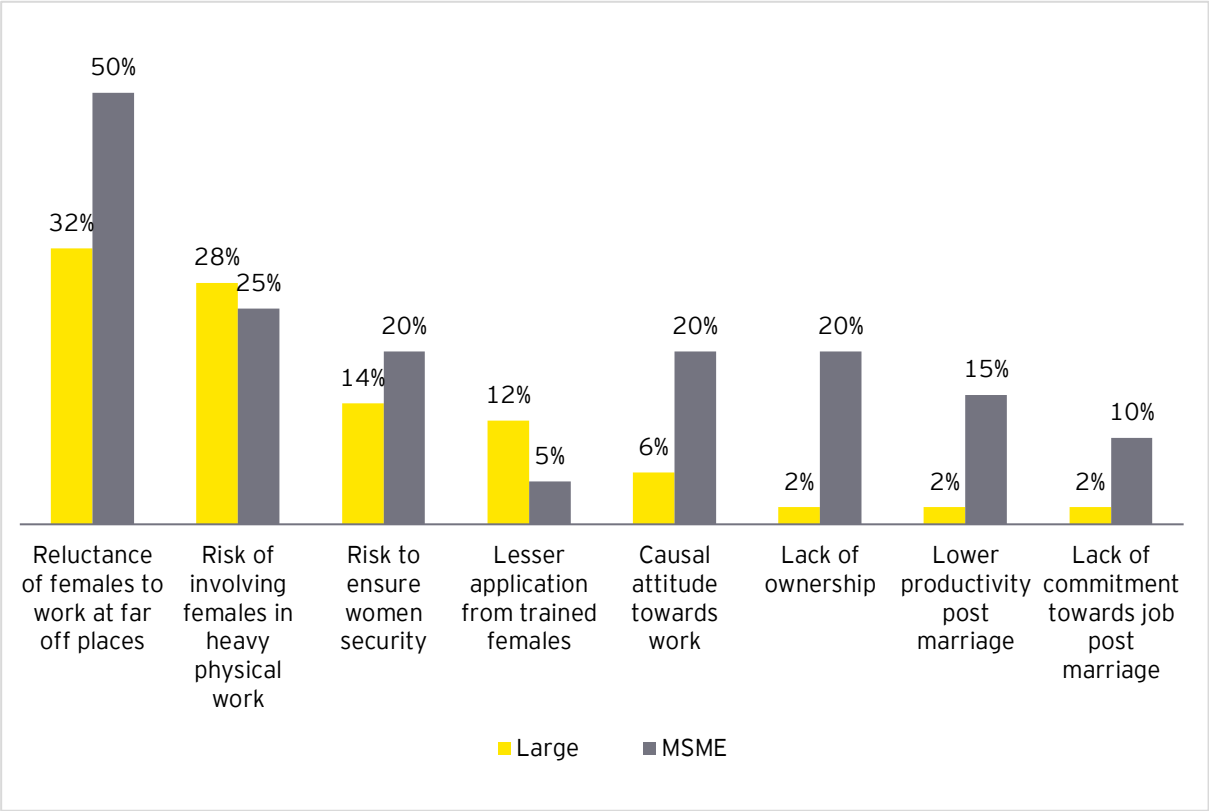
Table 23: top five advantages of hiring female employees as cited by employers

Advantages of hiring female employees	N = 70
Can create a balance in the team	25 (35.7%)
Sincere with their job	24 (34.3%)
Good at teamwork	12 (17.1%)
Good at customer engagement	9 (12.8%)
Would like to follow good industry practice (POSH)	6 (8.6%)
Good at communication	6 (8.6%)

Source: Analysis of primary data collected - Interviews with 70 employers (Multiple responses given)

The companies often hired female employees through recruitment agencies because females do not actively respond to job vacancies. These agencies can be important stakeholders to engage with to enhance a company's outreach. The reasons cited by the employers for their inability to hire female employees in larger numbers resonated with what the TCPOs had also mentioned, i.e., the candidates being reluctant to travel and hesitation to take up job role that required hard physical labor. This concern of the employers is not totally unfounded. There were some employees who mentioned during the FGDs that they find it difficult to work near boilers and that they find the job in a manufacturing sector too heavy.

Figure 30: challenges faced by employers while hiring females across MSMEs and large enterprises



Source: Analysis of primary data collected - Interviews with 70 employers (Multiple responses given)

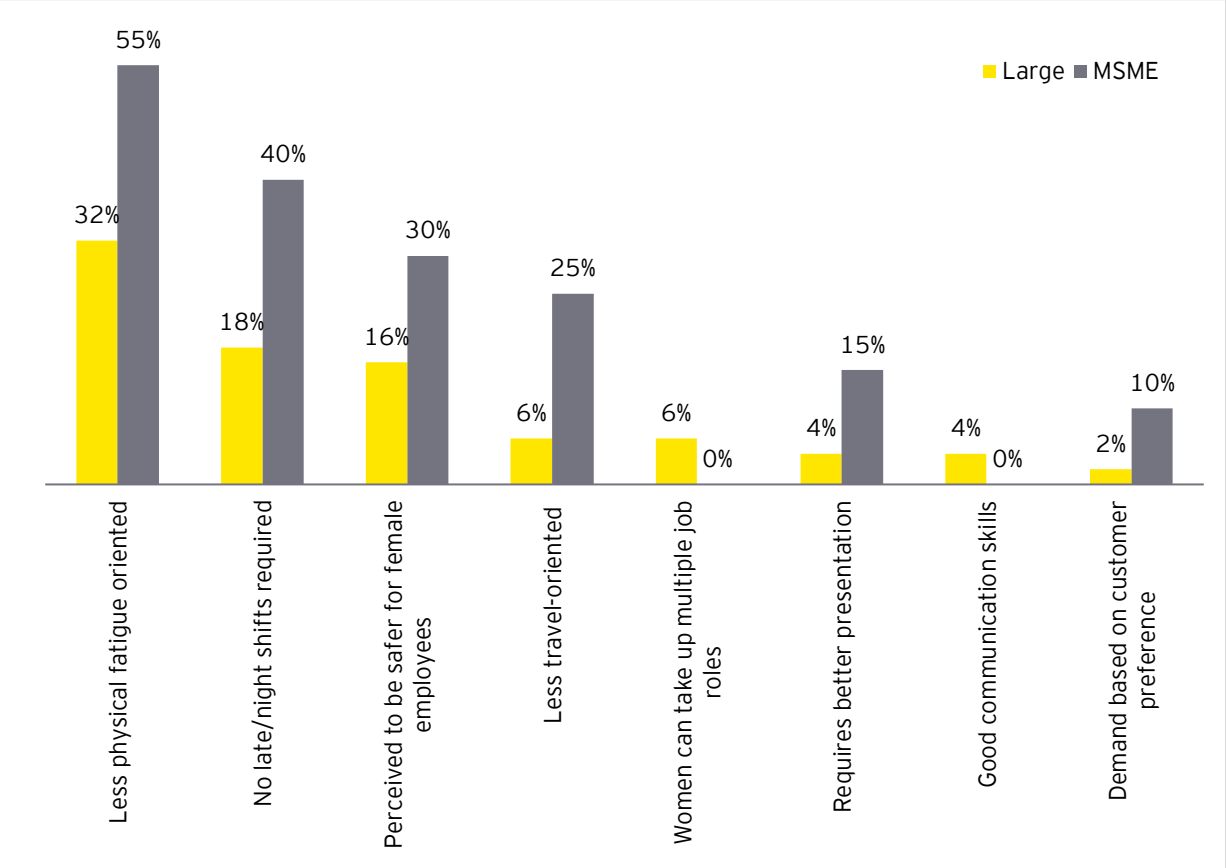
Some variations were observed between the responses of the large companies and the MSMEs. About 20% respondents from the MSME sector (N=20) felt that engaging females would impact the pace of production, if they gave relaxations to women travelling from long distances to reach the workplace.

Marriage and childbearing are big barriers that come in way of employment of females. While several respondents across Chhattisgarh, Karnataka, Jharkhand and Tamil Nadu showed reluctance by their companies to hire married women an employer from Rajasthan very clearly states his reasons for hiring few or no females. He mentioned that only unmarried women should seek employment. He was open about his unwillingness to invest much time in their training because most of them quit their jobs after marriage. So why put in the effort. Indian women are seen to drop out of labor market owing to marriage and relocation and even when they join back it happens at the expense of loss in pay, position and work profile (Fletcher, Pande and Moore 2017). Thus, marriage remains one of the most significant barriers for access to the ITIs and the workplace by women.

Job allocation for female employees

Once the companies recruit female employees, they take several factors into consideration while doing job allocation. Generally, they refrain from allocating those jobs to females which require more physical labor. More respondents from the MSME sector gave this response. In sectors like hospitality, retail, which have more customer facing roles, find that females do a better job.

Figure 31: employer perception about criteria of job selection by female employees



Source: Analysis of primary data collected - Interviews with 70 employers (Multiple responses given)

7.3 Constraints faced by females to join labor force

Dissuasion by family and industry to join engineering related trades

The biases expressed by the parents and their relatives continue to affect females even when they seek employment. They continue to persuade their daughters to take up jobs what do not require too much travel and physical labor. Strong industry biases exist against females taking up employment in engineering related trades. This was noted in the responses given by representatives from the industry in Rajasthan, UP, Jharkhand and Assam during the study. According to them, they are more suited for jobs like customer relations, sales and desk jobs.

However, some positive examples were also identified during the study. One could also see some proactive steps being taken by the industry especially in the Southern states. For instance, Keynes in Karnataka is taking special measures to enable learning pathways for females. The team met with a staff member who had transitioned from being an apprentice to a training manager in the same company. She gave credit to the company for facilitating this change.

Relocation or traveling long distances not convenient and cost effective

There was reluctance among females to travel long distance or to relocate themselves for employment opportunities. The same reasons about safety and security which impacted their decision to join an ITI, were highlighted by them in the case of apprenticeship or employment also. From the industry perspective (Fig 29) also, 50% of the MSME employers and 32% of the large reported "reluctance of females to work at far off places" as a major hurdle in employing females. Going for night shifts was a clear no for females by their parents, which posed an additional barrier for them and 40% of the MSME employers and 18% of the large employers (Fig 30) reported that females preferred jobs where no night shift will be required.

In Assam, it was found that Hindustan Unilever Limited allowed females to come for night shift if they wanted to. But it was also seen that they make proper arrangement for pick up and drop and safety measures for them at the factory.

Female entrepreneurs – creating opportunities for females

Kirti is a female entrepreneur running a garment manufacturing MSME unit in Jalgaon, Maharashtra. Having worked in clothing units in Mumbai and other districts of Maharashtra in the past, Kirti was motivated to start a unit of her own in her hometown Jalgaon. She hired six female apprentices from the Jalgaon women ITI, apart from 40 other local women. Both the trainees and the instructors were upbeat about this opportunity that offers them a chance to work on industry-standard equipment, without having to relocate to different cities.

For Kirti, hiring trainees from the ITI gives her several advantages. First, she gets access to a regular source of skilled staff for her expanding factory operations. Second, females feel more comfortable in working at the unit, as they have each other for company, both in the factory and on the way to the factory from their respective homes, which goes a long way to ensure retention. Third and most significantly, the ITI trainees are better equipped to handle faster and more modern machinery, so they act as an inspiration for other local women working in the factory. In Kirti's words, "*In ladkio ko dekh ke ye auratein bhi behtar karne ki koshish karti hain.*" (The women watch the output of the ITI trained females and try to do better themselves)

- Kirti Varke, owner garment manufacturing unit at Jalgaon, Maharashtra.

Gender unfriendly environment

The female employees during FGDs expressed that they face hostility from their male counterparts, who do not think females should be working in a factory on a shop floor. This gets reflected in the way they deal with the female employees. A comment by a supervisor from industry in UP is indicative of this mindset. "*Have you ever seen men wearing salwar kameez? Then why are females trying to wear pant shirt and try to do what men should be doing and are more suited to do?*" This shows that females are not welcome in areas which are considered male dominated.

While the above instance points at employers discouraging female participation, some companies were found to welcome female employees but are yet to take measures such as construction of separate toilets, rest rooms and flexibility in timings. Some female workers had also adjusted to this fact. In West Bengal while interacting with the owner of an MSME regarding absence of a separate toilet for females, the female workers *responded that we all are like a family. At home also, we have one toilet for the family, so there is no problem if there is no separate toilet*.

During the study, some companies were also seen to be willing to walk an extra mile to ensure diversity in their staff. There were several good examples from the industry that were sensitive to the requirements of female employees and were seen capitalizing on their skills and strengths while making their stint conducive to both professional and personal growth.

Some industry best practices observed by the team during the study are as follows:

The Public Sector Units have the Women in Public Sector (WIPS) to promote growth of women in the public sector. The group organizes several programs including gender sensitization program for all the employees.

HUL in West Bengal was also reported to be conducting gender sensitization workshops for their staff on a regular basis

ITC unit in Assam, had many gender friendly practices such as placing female security guards, a separate entry gate for females. The buses they plied for females were GPS enabled to give them a sense of security

Atul Rajasthan Date Palms Ltd (ARDP), Rajasthan is engaged in the production and marketing of tissue culture raised date palms with an aim to improve the ecology and economy of the arid regions of India. ARDP is recruiting mostly female apprentices for their organization. They mentioned that lab work producing tissue culture is exclusively done by female staff only since the nature of work is such that requires patience, hygiene and discipline and females outperform males in these qualities. About regular employment, they have 70% female technicians and 40% females in managerial positions. The organization provides technical training to the female employees along with hygiene and life skills lessons. The female employees/apprentices who work here have benefitted a lot, gained skills and managed to build on savings.

At Tata Cummins, the following facilities are provided for both its female employees and apprentices: female wardens are appointed in shifts, dedicated toll-free numbers available for both female employees and apprentices to report any issues, ethics committee – employees and apprentices can approach them for any issues and the committee gets it resolved while maintaining anonymity and confidentiality, pick-up and drop

facilities are available for the late shift (2-10 pm), separate seating arrangement for our female staff and on-campus creche for working female employees.

Gender bias against working females starts right from the stage of recruitment. Most of the Indian men are not ready to accept that women are capable enough to work side by side with men in all the sectors. The study has identified the barriers and challenges that stand in the way of females participating in the labor force. The findings show that barriers are seldom unidirectional, but induced by a female's social network, institutional network and public network. Gender stereotyping, under estimation of her capacity, social responsibilities limits their employment and career growth opportunities. On the supply side, Indian households often require that women prioritize housework. On the demand side, females face legal, normative, and economic constraints to work. Indian women are still subject to laws governing when (i.e., which shifts) and in which industries they can work. (Fletcher, Pande and Moore 2017).

7.4 Emerging opportunities for female trainees to join the labor force

One of the objectives of the study was to identify some emerging opportunities for females. Some key areas which were identified by the respondents from the industry, wherein they mention the key job roles or trades that have seen successful female participation or has potential for the same. These have been mapped against the existing trades being offered in the ITIs and the pre-requisites for admission such that it is ascertained at what level of education would these opportunities open for females

Table 24: emerging training and employment avenues that females should explore – new job roles /occupations for females to explore

Suggested areas	Training availability with ITI (Yes/No)	Pre-requisite for admission (ITI/other vocational courses)
Mobile repair	Yes	▶ 10th pass under 10+2 system
Rationale ▶ Tele density in India has generally followed an upward trajectory, apart from a brief slack during the 2011 – 12, with the trend being positive for both rural and urban areas[36] . In recent years, the advent of cheaper phones (feature phones) with web browsing facilities, connectivity expansions and affordable connectivity plans have helped boost the usage further. Projections now estimate that India will have 920 million mobile subscribers by 2025[37] ▶ The growth in mobile usage undoubtedly makes a case for a post sales service ecosystem in the country. Apart from the repair chains managed by the conventional mobile phone brands, numerous start-ups have already started leveraging the demand for repairs and the existing informal repair facilities ▶ Start-ups and e-commerce giants[38] have already set their footprints in the mobile repair sector, hence it is essential for training institutions to collaborate with them for a better observation		
Suggested areas	**Training availability with ITI (Yes/No)**	**Pre-requisite for admission (ITI/other vocational courses)**
Motor vehicle driving	Yes	▶ 10th pass under 10+2 system with science and math or its equivalent

[36] https://www.ceicdata.com/en/indicator/india/teledensity-mobile

[37]https://www.business-standard.com/article/pti-stories/india-may-have-88-million-5g-connections-by-2025-gsma-119060500842_1.html

[38] "Flipkart acquired mobile repair chain F1 Info Solutions, marking the entry of deep pockets into a market that's often been all about jugaad – low-cost workarounds. The five-year-old company has a network of 158 centres in 135 Indian cities, and 1,000 workers, potentially providing the e-commerce giant with an opportunity to standardise the repairs ecosystem". (https://scroll.in/article/855093/from-roadside-jugaad-to-chains-run-by-big-startups-mobile-repair-is-now-serious-business-in-india)

Rationale

- The existence of cab aggregators in major cities and the continued expansion of the same creates a requirement for drivers. Female drivers once trained can be inducted for the same. Though the percentage of female cab drivers to the male counterparts is miniscule, certain non-profit entities have begun training females for the role already
- Also, the government has recently decided to do away with the minimum education criteria required for obtaining driving licenses for transport vehicle category. This has been done considering shortage of drivers in the sector and at the same time to enhance employment opportunities. Though the members enrolled in the ITIs are above the minimum required qualification (class 8 pass), this is a welcome move and clearly points at the demand for drivers in the sector

Considerations

- The widely prevalent misconception of females being bad drivers among the masses might affect the acceptance of female drivers

Suggested areas	Training availability with ITI (Yes/No)	Pre-requisite for admission (ITI/other vocational courses)
JCB Operator	Yes ▸ Stone Mining Machine Operator ▸ Stone Processing Machine Operator	▸ 10th pass under 10+2 system with science & math or its equivalent

Rationale

- Apart from temporary periods of economic slowdown and major policy changes having a monetary implication, construction of roads and buildings are activities that go on year after year. Such activities demand usage of heavy machinery and hence the requirement of operators naturally comes into picture

Considerations

- The contractors/ builders must take up the responsibility of providing a gender inclusive environment, which shall include both the physical infrastructure (restrooms, sanitary facilities) and acceptability/behavior of other members of the group towards the female employee

Organic farming	▸ The plantation component will not be under the ambit of ITI and repair of farming equipment is already included in the list of courses offered

Suggested areas	Training availability with ITI (Yes/No)	Pre-requisite for admission (ITI/other vocational courses)
Jewelry designing	Yes A component of fashion design and technology	▸ 10th pass under 10+2 system

Rationale

- With the increase in disposable income, India in 2017, was the largest consumer of gold in the world
- The Gems and Jewelry sector plays a significant role in the Indian economy, contributing around 7% of the country's GDP and 15% to India's total merchandise exports. It also employs over 4.64 million workers and is expected to employ 8.23 million by 2022. One of the fastest growing sectors, it is extremely export oriented and labor intensive[39]
- With people getting increasingly conscious about their lifestyle the demand of lifestyle/luxury products like jewelry is only set to rise with a corresponding demand in manpower

[39] https://www.ibef.org/industry/gems-jewellery-india.aspx

Suggested areas	Training availability with ITI (Yes/No)	Pre-requisite for admission (ITI/other vocational courses)
Tissue culture	No	▶ Students who are pursuing or completed their B.Sc. in any discipline of Biological Sciences or BE / B.Tech. Biotechnology is eligible[40]
Rationale ▶ Tissue culture, especially the for plants, has emerged as an important tool to multiply varieties of high quality, disease and climate resilient high yielding plants artificially, throughout the year. ▶ It has also proven to be a cost-effective tool to boost farm produce. In India the tissue culture Industry is growing at a rate of 15% per annum[41] ▶ Considering the growth, a course on *tissue culture lab assistant* may be initiated at the ITI's		
Suggested areas	**Training availability with ITI (Yes/No)**	**Pre-requisite for admission (ITI/other vocational courses)**
Solar energy	Yes	▶ 10th pass under 10+2 system
Rationale ▶ The solar industry has got a major boost in recent years. Solar capacity has increased by eight times between 2014 to 2018 in the country, among the other renewables[42]. The government through its dedicated ministry (Ministry of New and Renewable Energy – MNRE) brings in adequate recommendation and regulations to help this sector grow. As the outlook for this sector generally looks positive, training the youth (females in this case) would be a beneficial.		
Suggested areas	**Training availability with ITI (Yes/No)**	**Pre-requisite for admission (ITI/other vocational courses)**
Civil land surveying	Yes	▶ 10th pass under 10+2 system
Rationale ▶ India's construction industry is expected to grow at a compounded annual average of 6.44% to US$690.9 billion in 2023[43]. Topographic surveys are instrumental in achieving successful civil engineering, architectural and structural design elements for proposed improvements Consideration ▶ Since this will include travel to remote geographies, the contractors/ builders must take up the responsibility of providing a gender inclusive environment, proper security measures need to be put in place before deploying female to survey locations, conveyance cost considerations for travel to survey locations and accommodation, if required, to avoid travel at odd times		
Suggested areas	**Training availability with ITI (Yes/No)**	**Pre-requisite for admission (ITI/other vocational courses)**
Paramedics/ X-Ray and ultrasound technicians	▶ Paramedics: no ▶ X-Ray and ultrasound technicians: Yes (Radiology Technician)	▶ Paramedic: 10th pass under 10+2 system[44] ▶ radiology technician : 10th pass under 10+2 system

[40] https://www.dypatil.edu/schools/biotech-and-bioinformatics/certificate-course-in-plant-tissue-culture-technology/

[41] https://www.business-standard.com/article/news-cm/national-certification-system-for-tissue-culture-raised-plants-117111500277_1.html

[42] https://www.ibef.org/industry/renewable-energy.aspx

[43] https://www.constructionweekonline.in/business/9399-indias-construction-industry-regains-growth-momentum

[44] https://www.aicvps.org/paramedical-course.php

Rationale

- In a developing country like India there is acute shortage of skilled and trained health-care professionals. At present, India requires 64 lakh paramedics to cater to the increasing need in the health sector. Currently, there is a dearth of such trained professionals, which can only be compensated with increased world – class training and education in paramedical sciences[45]

Suggested areas	Training availability with ITI (Yes/No)	Pre-requisite for admission (ITI/other vocational courses)
Software modeling	No, basic computers course/software testing course is there	- 12th pass in any stream as per B. Voc course eligibility in software development course - software testing course (ITI) - 12th Passed under 10+2 System with science and math

Rationale

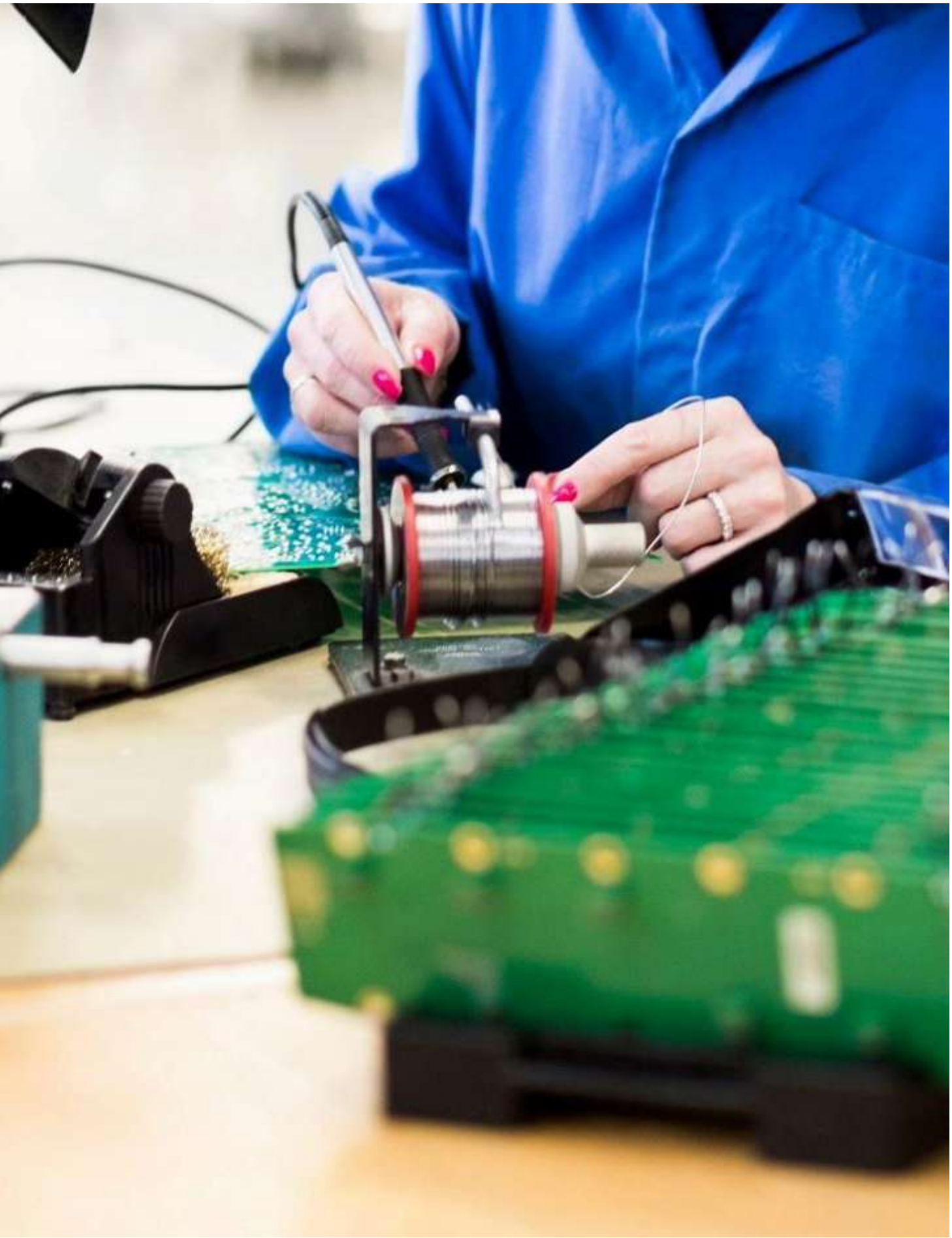
- India's IT industry contributed around 7.9% to the country's GDP. The industry added around 1,05,000 jobs in FY18 and is expected to add over 100,000 jobs in FY19. IT industry is fueling the growth of start-ups in India, with the presence of more than 5,200 start-ups
- The Indian software sector's value proposition is unmatched in the world. Entry level wages remain 8x-10x lower than in developed nations. India is the leading sourcing destination across the world, accounting for approximately 55% market share of the US$185-190 billion global services sourcing business in 2017-18. India acquired a share of around 38percent in the overall Business Process Management (BPM) sourcing market[46]
- It offers avenues for starting one's own start up, offer work from home services, etc. hence it will be helpful if females are trained in this job role

Most of the opportunities identified by the respondents are related to engineering trades. The study shows that there is a huge barrier that limits the involvement of females in engineering trades many of which, in the current form, require physical labor. While there is a need to work towards bringing about a mindset change to encourage females opt for engineering related trades, the scope of trades offered under this category also need to expand. There were many voices from the industry that were convinced of more opportunities are getting created within the industry with increased automation.

In doing so, a basic challenge would need to be overcome — how to encourage females to opt for STEM at the school level to become eligible for these trades. To achieve a higher level of skill sets, a background in science subjects would be essential. Female students are hesitant to opt for STEM subjects at school level. In 2016-17, out of the total enrolments into higher secondary level into science streams, less than half the students were females (42.23%) (U-DISE Flash Statistics 2016-17). Gender divide at this level also needs to be addressed. Finally, even for non-engineering trades, female trainees will need to equip themselves with basic IT skills.

[45] https://www.smart-academy.in/blog/advantages-of-being-a-paramedic-in-india/

[46] https://www.equitymaster.com/research-it/sector-info/software/Software-Sector-Analysis-Report.asp



Chapter 8: National Skill Training Institute (NSTI)

8. National Skill Training Institutes

National Skill Training Institutes (erstwhile Advanced Training Institutes or ATIs) are technical institutes under the aegis of the Directorate General of Training. These institutes were set up in the 1960s to contribute to addressing the increasing demand for skilled people in the industry. They imparted training and skills through short duration courses conducted in modules and tailor-made courses as per the specific needs of their industries, government establishments, Public Sector Undertakings and technical institutions. To encourage females into this domain separate institutes were set up for females. This was part of Women's Vocational Training Program (WVTP) that was designed and launched in 1977 to mainstream women into economic activities. Under this project, vocational trades were identified that were particularly suitable for women and their implementation planned and courses run for them.

Specific mandate of the NSTIs is to develop - skilled manpower for industry, instructional staff for the Industrial Training Institutes, and upgrade the skill of in-service persons from industry. To fulfil this objective, the NSTIs offer the CTS, CITS courses in both engineering and non-engineering trades, short term courses and need based courses for the industry. The Craftsman Training Scheme (CTS) is similar to the training offered at ITIs except that these offer a wider range of engineering related trades including some new age courses.

The Crafts Instructor Training Scheme (CITS) is to train instructors in the techniques of transferring hands-on skills, in order to train semi-skilled / skilled manpower for industry. Structure of training program is such that comprehensive training both in skill development and training methodology is imparted to the trainees. The team visited the NSTIs for women only.

8.1 Infrastructure and capacity utilization

Figure 32: NSTI building in Jaipur

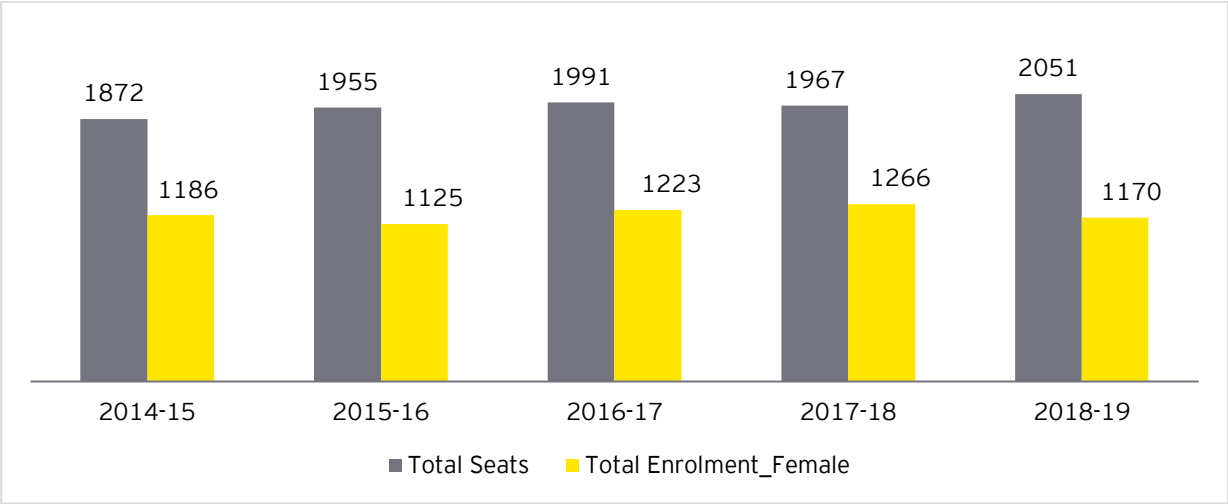
The institutes provide a good ambience for learning through well-equipped classrooms, hostel facilities and well-maintained buildings. The NSTIs mostly have an up-to date and advanced machinery and the management constantly invests in keeping it up to date to increase the relevance of the trades.

Karnataka NSTI was one of the NSTIs visited during the study had good quality modern infrastructure

- The Karnataka NSTI has an impressive infrastructure, hygienic, with separate labs and theory rooms for each of the courses offered
- All the facilities such as computer and sewing machines required for various courses were in the ratio of 1:1 student to machine
- The NSTI also had a 100 bedded hostel with power backup, water supply and WIFI facility. The hostel had rooms with attached bathrooms
- 24-hour security system for female candidates
- The NSTI has been designed in such a way that it has access pathways for persons with disability. Toilets are being designed on the ground floor for the disabled students

An overall superior infrastructure at the NSTIs, indicates that these institutes would be very much sought after by the students. However, a look at trends in utilization of the seats shows that there is underutilization of seats at the NSTIs. Seat utilization for the years 2014-15 to 2018-19 has been 63%, 58%, 61%,64% and 57% respectively for each year. This includes both the CITS and CTS courses together.

Figure 33: trend of enrolment of female students against in NSTIs in the last five years



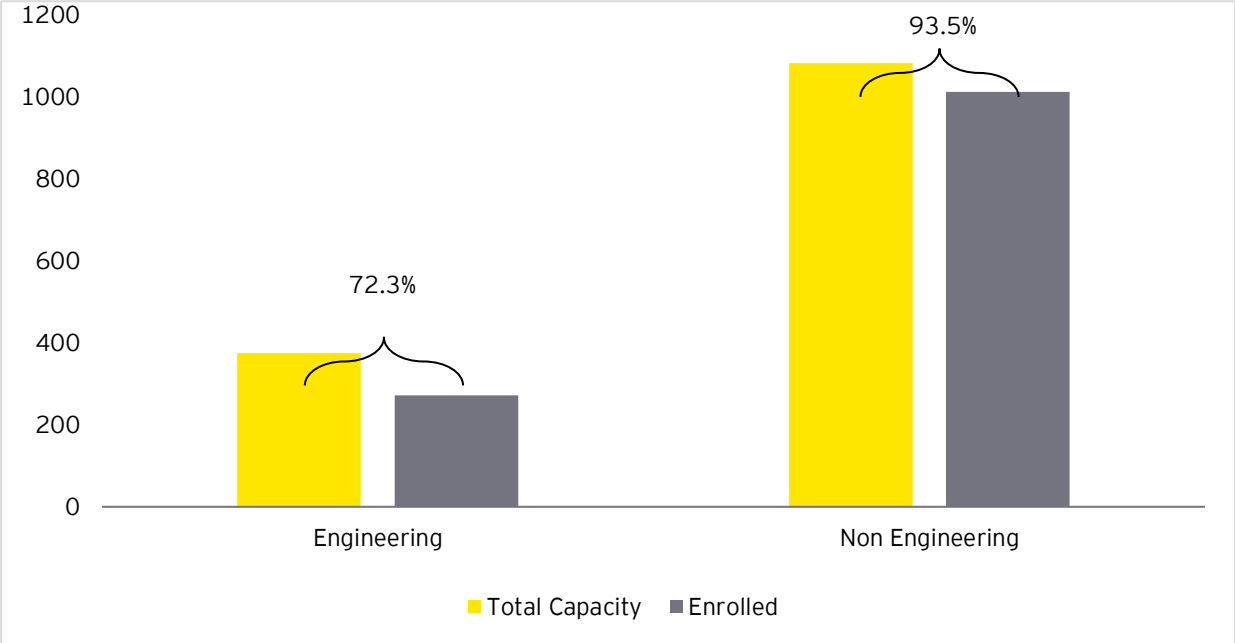
Source: Analysis of data received from 10 NSTI factsheets

Some reasons cited by the students for the seats remaining vacant was the fact that the admission process has become centralized which leads to allocation of the NSTI according to merit. This means that students do not necessarily get admission in the NSTI of the state to which they belong, and many students are reluctant to go to other states to pursue the courses offered.

8.2 Attractiveness of courses for students

Data related to enrolment of students for different courses at NSTI shows that students prefer to join the CTS course as compared to the CITS course. This is reflected in variation in the number of seats offered under the two courses. As per the available data the number of seats in CITS is about 60% of the total number of seats offered under the CTS. Further, there is clear preference for non-engineering trades for both the courses. The enrolment percentage is higher in non-engineering trades in comparison to engineering trades under CTS courses. Only 7 percent seats remain vacant for the non-engineering trades as compared to more than 25 percent seats in engineering trades.

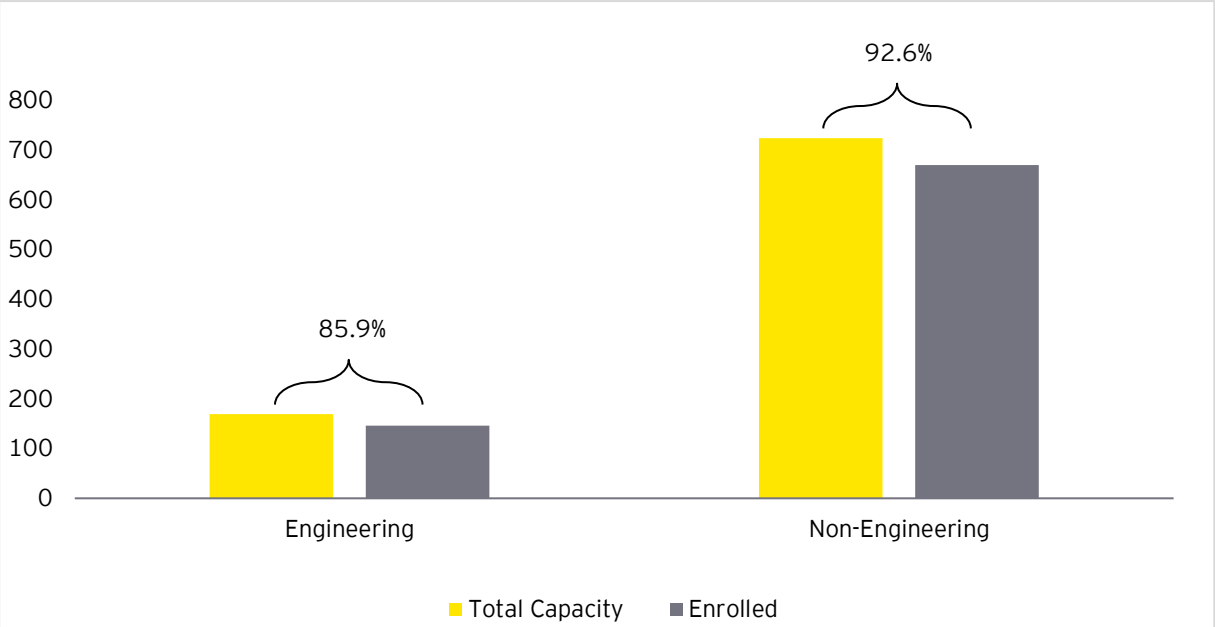
Figure 34: number of seats vs. enrolment of students in CTS course



Source: Analysis of data received from 10 NSTI factsheets

A similar trend is observed with respect to CITS course although a higher proportion of females opted for engineering related trades. While about 7% seats under the non-engineering related trades remain vacant, a corresponding figure for engineering trades was 14%. One of the objectives of the NSTI was to develop instructors for the ITIs. While that mandate is getting fulfilled to a large extent, more female students are joining the NSTIs to get basic skills and not become instructors.

Figure 35: number of seats vs. Enrolment of students in CITS course



Source: Analysis of data received from 10 NSTI factsheets

Interactions with the principals of the NSTIs provided further insights. Some engineering trades that are offered are draughtsman (civil) and electronic mechanic are not perceived as courses that will get them a job. For other new age trades, there is lack of awareness among potential students. As an example, in NSTI, Mumbai, where new courses like IoT have potential, enrolment of students is only 54% of the total capacity in the trade.
As compared to the general NSTIs, those for females do not focus much on conducting short term courses and most of the training programs are in engineering trades, which, as already seen in the preceding sections, fails to attract female trainees in large numbers

8.3 Proactive measures being taken by the principals to strengthen the institutes

The principals of the NSTIs were found to be taking measures more proactively to forge linkages with the industry and guidance to trainees. The following responses were given by the principals when asked what measures are taken by them to engage with the industry. The institutes conduct sessions for students in areas like soft skill training, guiding them to make informed choices and career counselling.

Table 25: Measures taken by principals for industry engagement

Measures taken by institute for industry engagement	Frequency: N-10 (Multiple responses given)
Soft-skill training to the trainees for better preparedness for the industry	6 (60%)
Guidance to apply in various industries	4 (40%)
Industry exposure (field visits, internships, etc.)	4 (40%)
Tie-up with local industries for hiring of skilled workers	2 (20%)

Measures taken by institute for industry engagement	Frequency: N-10 (Multiple responses given)
Job related counselling	2 (20%)
Tie-ups with NGO/Organizations to provide career counselling/ mentorship to trainees	2 (20%)
Conduct mock interview to make them job ready	1 (10%)

Source: Analysis of data received from 10 NSTI factsheets

NSTIs also have the advantage of an allocated budget to take up awareness activities. The amount varies for each NSTI from 1-4 lakhs, but the principals were able to make use of these funds by using print media advertisements, make use of local radios, put up stalls in exhibitions, visit local schools and participate in female centric events, wherever these were held. Advertisements in newspapers also help to supplement the networking efforts.

Some NSTIs such as the facility in HP reaches out to schools and even panchayats to create awareness about the institute. They have taken measures to improve the image of the institute to make it appear professional. For instance, the uniform for the females have been redesigned with professional design elements and has received positive feedback from the female trainees.

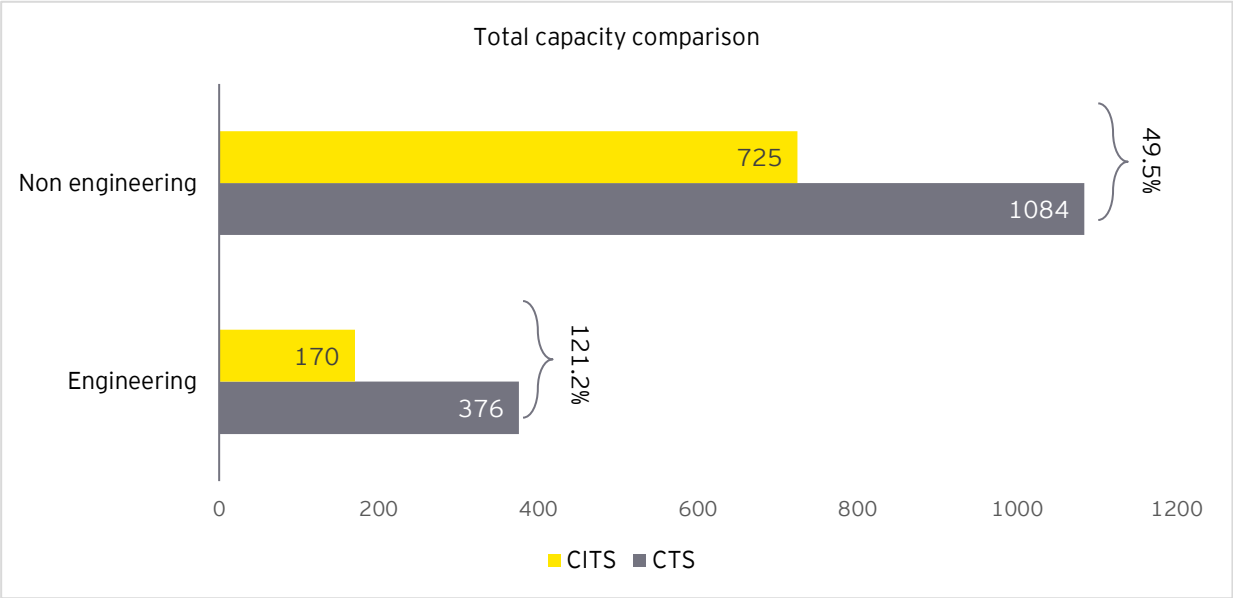
8.4 Revisiting the mandate of the NSTIs

Overall, the NSTIs are offering a good learning experience to the students and it is valued by them. The research team reviewed the performance of the NSTIs against its stated objectives and the outcome. As mentioned earlier the three mandates for the NSTIs were to develop skilled workforce for the industry, train instructional staff for the ITIs and upgrade the skill of in-service workforce of the industry. Each of these areas were examined.

8.4.1 Develop skilled workforce for industry

The NSTIs are fulfilling this mandate by offering a wider range of courses offered through well-equipped classrooms and proactively reaching out to the industry for forward linkages. However, it is seen that the capacity of the NSTI remains underutilized since majority of students opt for non-engineering trades. Therefore, it can be inferred that while the NSTIs are fulfilling this mandate, it is yet to break the gender stereotyping when it comes to female candidates who continue to demonstrate preference for trades that are considered non-traditional for them. Analysis on trades offered at NSTIs show that in engineering trades, the total capacity is more in CTS by 121.2%. It has a bearing on female enrolment in NSTIs since enrolment has been seen to be higher for CTS courses, but females tend to be more inclined towards non engineering trades to be trained in.

Figure 36: capacity comparison between CITS and CTS for engineering and non-engineering trades



Source: Analysis of data received from 10 NSTI factsheets

8.4.2 Instructional staff for the industrial training institutes

The CITS courses are the advanced versions of the CTS courses and prepare the trainees to become instructors in agencies providing skill training, especially the ITIs. There has been a gap related to existing policy. Although DGT has taken appropriate steps to address this gap, it will take some time before its impact is realized at the ground level. To become an instructor, till now the eligibility criteria includes a degree or diploma in related area. The trainees from the CITS course do not necessarily have these qualifications. This aspect has been examined by the DGT and the norms eased out. As per the MoM[47] (Recommendation Committee of DGT) CITS certification is going to become a mandatory requisite to become instructor at ITI. Additionally, the committee also recommended that a 4-week CITS orientation to be done for current ITI batch/ex-ITI students to make them aware of the career option as ITI instructor. An ITI pass out with NTC/NAC in relevant trades with three years of experience can apply to become and ITI instructor.

8.4.3 Upgrade the skill of in-service persons from industry

Only 6 of the 10 institutes visited by the team offer short term courses. Some NSTI were seen to be offering innovative short- term courses. For example, NSTI West Bengal offers courses in computer aided drafting, 2D presentation drawing, basic 3D modelling and landscaping. Similarly, Karnataka offers 48 courses categorized under 5 sectors.

Table 26: mapping of courses offered under CTS and CITS at NSTIs

CITS		CTS	
Engineering	**Non-engineering**	**Engineering**	**Non-engineering**
Architectural assistant	Cosmetology	Electronic mechanic	Secretarial practice
Computer software application	Dressmaking	COPA	Secretarial assistant
Machinist	Sewing technology	Architectural draughtsman	Fruit and Vegetable processing

[47] Minutes of the Meeting of Recommendation Committee of DGT on Norms and Courses. January 30, 2019

CITS		CTS	
Engineering	**Non-engineering**	**Engineering**	**Non-engineering**
Electrician	Surface ornamentation technique	Internet of Things (IOT)	Basic cosmetology
Electronic mechanic	Office management	3-D printing	Dress making
Draughtsman civil	Fashion designing and technology	Machinist	Computer aided embroidery
Fitter (in a co-ed NSTI)	Catering and hospitality	Solar technician	Fashion design and technology
Desktop publishing		Mechatronics	Interior design and technology
Turner		Computer software application	Stenographer
Welder		Draughtsman Civil	Food production
Computer technology		IOT (Smart City)	Catering and hospitality
		Computer hardware networking maintenance	
		Smart phone	
		Geo info assistant	
		Desktop Publishing	

Source: NSTI and DGT Websites

8.5 Optimum utilization of infrastructure

Given the quality of infrastructure available to them, there are several other initiatives which can be taken up by the institutes. Some potential areas of intervention are discussed as under:

Develop itself as a resource agency for the ITIs in the state

Some areas of challenges where the NSTIs can support the ITIs and further improve their service offerings are:

- Limited public awareness about the ITIs
- Limited counselling and guidance services being offered
- Not enough female faculty members
- Weak linkages with the industry leading to inadequate understanding of market expectations
- Insufficient focus on guiding and preparing the ITI graduates for self-employment and entrepreneurship
- No structured opportunity for in-service training
- Insufficient ongoing research to guide the planning process.
- Limited formal gender friendly safety and security guidelines for the ITIs and gender sensitizing programs

NSTIs are well positioned to support the ITIs by taking up the role of a resource agency. While the state directorates take up the administrative role, the NSTIs could become state resource centers along the lines of State Councils of Education Research and Training which play a similar role for the education sector. The resource agency may take up the following functions:

- Refresher training of the instructors at the ITIs

- Development of need-based modules. For example, modules for gender sensitization of staff
- Conduct research on a regular basis to develop intelligence around demands of the industry and need for introducing relevant skills
- Facilitate interaction with the industry associations
- Develop capacity of the ITIs to enhance gender friendliness
- Serve as incubation centers to support self-employment/entrepreneurship

It is seen that across the ITIs and even the NSTIs there is a strong inclination among females to pursue non-engineering trades. While they need to be encouraged to pursue engineering related trades too, those pursuing non-engineering related trades also need to be supported since these trades have potential for making the trainees self-employed or become entrepreneurs. To achieve this, trainees would need a lot of guidance to get started. Setting up of incubation centers within NSTIs for females to start their business and can serve as a one stop window of information for these new ventures, can give them the support required at the initial stages. Providing guidance, relevant information, linkages with other schemes and creating networks are some functions that can be taken up by these incubation centers.

Offer only select courses under CTS

Several non-engineering trades offered at the NSTIs are similar to those offered at the ITIs such as cosmetology, dress making and secretarial practice. While students would get better facilities and learning environment at the NSTIs, this is duplication of efforts. As a strategy the NSTIs could focus on setting trends and developing training programs for niche courses and trades. NSTIs can focus on the new age trades and develop strategies to popularize these trades.

Develop a replicable model for non-traditional courses for females at the ITIs

DGT has introduced some very good engineering related courses for females which have market demand, but due to lack of awareness and trainee orientation and counselling, the seats largely remain underutilized. The challenge is especially acute when it comes to popularizing these courses among females

For instance, NSTI, Panipat has introduced two new trades this year namely smart phone technician cum application tester and geoinformatics assistant. However, very few students took up the course which is due to lack awareness about the opportunities it offers, as shared by the Principal NSTI in Panipat, Haryana.

This would require multi stakeholder engagement to identify and address the barriers at each stage; to create awareness using different platforms; mentoring of the students to make them employment ready and linkages with the industry to create employment opportunities for them. There is a need to break gender stereotyping in the choice of trades by females across the ITIs. NSTIs can demonstrate it and develop the capacities of the ITIs to replicate in their institutes to have a ripple effect.

Chapter 9: Recommendations

9 Recommendations

The study has revealed several barriers for females to access vocational training in the country. It has also helped in understanding some existing gaps in the eco system of imparting vocational training through the ITIs. This section of the report makes some actionable recommendations which may be considered for implementation by the Ministry of Skill Development and Entrepreneurship (MSDE) Directorate General of Training (DGT) and the ITIs to address the challenges :

9.1 Ministry of Skill Development and Entrepreneurship

Review of policies and guidelines related to ITIs and apprenticeship from a gender perspective

While the National Policy on Skill Development mentions about inclusion of females in skill development, its operationalization can be done more effectively if this principle flows through the existing guidelines and manuals. These documents maybe reviewed from the gender perspective. For instance, there are elaborate guidelines in the Affiliation Norms for ITIs (2018), related to dimensions, equipment of the labs and the staff to ensure quality of training at the ITIs. These guidelines may also include gender perspective even before the ITI is set up. For example, selection of an accessible location, availability of transportation, provision of space for females at the institute, having female instructors and safety guidelines are important parameters which could be included in the guidelines as a first step towards making the ITIs gender friendly.

Incentives to MSMEs to engage female apprentices and employees

Apprenticeship training has been recognized as a very important step in bringing the trainees up to the speed to the requirements of the industry and making them job ready. It has been observed that there is a general reluctance within the industry, especially the MSMEs, to take up female apprentices. In addition to the mindset that females cannot do certain types of jobs, they sometimes face genuine problems in terms of non-availability of funds for additional provisions to ensure safety and security of females. It is also seen that they find the online registration process cumbersome and lack time and resources for arranging examinations for the apprentices.

MSDE can engage with Ministry of SME and work together to having a policy to offer incentives to the MSMEs and make the processes simpler to enable them to offer apprenticeship to females in larger numbers. MSMEs are important for the success of this scheme since these are more accessible to females because of their numbers and spread across geographies. Females who are reluctant to travel long distances or relocate themselves to become an apprentice will benefit if the local MSMEs offer the apprenticeship opportunities.

Creation of a needs-based fund for the ITIs to support gender friendly programs and activities

India being a vast country with variations not just across regions but also within a state, makes it challenging to have a common framework for more than 14,000 ITIs. Therefore, MSDE may consider setting up of a fund which can be accessed by the ITI for specific activities. For instance, the ITI may feel the need to provide hostel facilities to females, especially in tribal areas, or buy a vehicle to facilitate their travel. Having an option to get funds to fulfil their specific requirements can help in addressing such ITI specific issues.

Scholarships for females to overcome financial barrier and incentives for those pursuing engineering related trades

The fee for pursuing a course at the ITI is minimal and affordable for the students. However, there are additional expenses that need to be incurred towards travel, boarding and lodging and purchase of learning material. Incentives in the form of scholarship to females can help in removing the economic burden that acts as a barrier. In addition, instituting rewards for meritorious students especially those excelling in engineering trades would encourage females to pursue trades considered non-traditional for them.

Redefine the role of NSTIs (W) as hubs to promote gender diversity in the ITIs

NSTIs for women can be in the vanguard to address the issue of gender disparities across ITIs. Their existing mandate maybe redefined by MSDE to enable them take up relevant functions that would support the ITIs to become more gender friendly. In addition to implementing direct programs for females, which they are currently doing, these institutes may be supported to become hubs for advocacy, forging collaborations with different stakeholders, especially the industry and capacity development of the staff. The existing infrastructure at the NSTIs can be optimally utilized to conduct research, collect evidence, support, monitor and become resource agencies to promote gender diversity in the respective states.

Collaboration with other ministries and resource agencies to leverage support

Addressing the barriers for females at the ITIs as well as at workplace is a mammoth task where a number of areas warrant attention. It may not be possible for the ministry to address all these barriers. Liaison with other ministries and resource organizations may help to increase the pace of bridging the gender divide that exists. Some examples towards this are:

- Collaboration with the Ministry of Women and Child Development to set up or make use of existing hostels for females to provide safe space for the students as well as female workers
- Collaboration with resource agencies such as UN Women to plan and execute gender sensitization programs for the staff
- Introducing information about the ITIs in the existing guidance and counseling programs of Ministry of HRD

9.2 Directorate General of Training

Support state directorates to create awareness about the ITIs using different media

There is an urgent need to give more visibility to the ITIs and create awareness about – what they have to offer, how to take admission and more importantly what are the available opportunities after completion of the course. Currently most of the awareness is created through word of mouth or by disparate initiatives taken by the staff at an individual level. It will be useful if these efforts could be institutionalized by developing or making use of existing IEC material, social media to create awareness, having budgetary allocation to organize related activities and developing linkages with the secondary schools and local industry to let them know about the trades offered at the ITI. DGT may consider supporting the states to plan for such activities with greater vigor.

Strengthen counseling services for females at all stages

Strengthening of counseling services in the ITIs was identified as an important area of improvement in this study. This is a very important step to help females make informed decisions about the trade they choose to pursue at the ITI and the career path they wish to chart for themselves after completion of the course. This may be done by firstly ensuring that there is a TCPO at every ITI. Even after the TCPO is appointed, specialized training should be given that focuses not just on placement after completion of the course but also on conducting aptitude tests, guidance to potential students. This needs to be supported by making relevant material available to them and developing their capacity to use Massive Open Online Courses (MOOC). The job description for the TCPOs may include forming linkages with the education department and the local industries and associations such that there is flow of information and joint efforts to increase the access of females in the institutes as well as the workplace.

Safety and security of females to be prioritized

Safety and security have emerged as important concerns for females attending the ITIs. The existing safety and security guidelines provided by DGT pertain largely to the use of equipment, hazardous situations like incidents of fire in the building. However, there needs to be clear guidelines for safety and security of females within the premises, having a grievance redressal system in case of sexual harassment and creating awareness about it among students.

It is known that females face harassment while traveling to the ITI. While the ITI leadership would have a limited role in mitigating that challenge since it is beyond their control, yet, it may be addressed in some ways by making reasonable accommodation for female trainees. This may be done by giving them flexibility about timings, setting up creches, if required and collaboration with other agencies working to address this issue. DGT may also consider enhancing the location guidelines of the ITIs, to ensure that ITIs are set up at well-connected locations with attention being paid to the establishments that exist in its vicinity.

Leadership training for the principals of the ITIs and gender sensitization for the faculty and students

Given the numbers of the ITIs across the country, despite having the best policies and planning process, its success can only be ensured if there is vibrant leadership at the institutional level to ensure the translation of these policies into actions. Principals are the key to bringing about a change into the system. The principals of the ITIs could also be supported in this area by offering them leadership training. They need to recognize their role as change agents to be able to keep pace with the developments around them and in meeting the local challenges. In addition, it will be useful if a gender sensitization program is included in the curriculum of the students and in-service training of the staff.

Include parameters related to gender friendliness in the grading system

Grading of the ITIs is a good tool to monitor progress and identify areas of improvement. It may be useful to introduce parameters related to gender friendliness as part of all grading and ITI evaluation exercises. This also incentivizes the ITIs to improve their performance on the gender parameters along with other indicators that are necessary for an ITI to get a good grade. A few performance indicators from the gender perspective are given below:

Table 27: sample indicators for evaluating ITI's gender friendliness

S.no.	Performance indicators	Performance range		
		Good	Average	Needs improvement
1	Gender disaggregated data for all activities organized at the ITI (applicable for co-ed institutes only)	All records maintained	Some records maintained	No data collected
2	Recruitment of female staff including instructors, administration and support staff	50% of total staff strength are female	Less than 50% female staff	No female staff at the ITI
3	Availability of safe space for females	A separate common room and medical room available for females	No separate room but some space available to rest	No separate space available
4	Availability of functional toilets for females	Hygienic and well-maintained toilets available for females	Separate toilets for females available but not hygienic	No separate toilets for females
5	Availability of sanitary pads	Always available	Irregular supply	Not available
6	Active sexual harassment committee and grievance redressal system	Available, actively working	Available, but does not work / meet regularly	Not available
7	Awareness among students about policy against sexual harassment and redressal system	Students aware of the policy and redressal mechanism	Policy available but students are not aware of it or of the redressal system	No policy or redressal system at the ITI
8	Gender sensitization sessions organized for faculty and students	Module administered to both students and faculty – annually for students	Module administered but not annually for students or only administered to students not the faculty	Never conducted
9	Outreach program to encourage females to join ITIs	Outreach programs for schools, community and industry carried out on a regular basis each year	Outreach program conducted but not on a regular basis	Never conducted

S.no.	Performance indicators	Performance range		
		Good	Average	Needs improvement
10	Proportion of females joining engineering related trades	All seats reserved for females in engineering trades filled up	Less than 50% seats reserved for females in engineering trades filled up	No female student in engineering trade
11	Of which, SC/ ST females	All seats reserved for SC/ST women in engineering trades filled up	Less than 50% seats reserved for SC/ST women in engineering trades filled up	No SC/ST female student in engineering trade
12	Interactions with female trainees to address challenges they face	Regular meetings of committees formed at ITIs to identify issues females face	Meetings of committees formed at ITIs to identify issues females face organized but not regularly	Never carried out

Improved MIS for the ITIs, NSTIs and apprenticeship program

The importance of having a robust MIS cannot be undermined. Having robust data and making use of this data for planning can be a very effective monitoring tool. There is an existing MIS which can be made more effective by using it as a planning tool. U-DISE is a very good example to emulate where collation of data related to infrastructure, teachers and students from 1.5 million schools is being collected and collated at district and state levels. A school report card is also available for each school. This information is available in public domain for anyone to access bringing in greater transparency and accountability at all levels. Going a step further there is an index around few parameters which are used to rank each state, thereby, propelling them to improve their ranking. A similar arrangement maybe considered by DGT for the ITIs as well as the apprentices.

Introduce a flexi approach to popularize the apprenticeship program among students and MSMEs

Many students and apprentices shared that they find the online registration requirement for registration very cumbersome and difficult to access. The online system was introduced to streamline the registration process and making it more transparent, which it has succeeded to do. However, offering it as the only way to register maybe relooked. The reason for this is the unfamiliarity with the use of online system and limited access to internet in the rural areas. While this is seen as a barrier by the students, the MSME were also found to be not comfortable with this arrangement. MSMEs have an additional concern. As per the directions from DGT, the industries are required to assess the apprentices on completion of their training. The MSMEs find it difficult to follow this for lack of time and resources. This may not be a concern for the bigger industries but the MSMEs are struggling to deal with this. DGT may consider assigning this task to the pre-approved basic training providers, so that the MSMEs do not consider it as a hurdle to offering apprenticeship to trainees including females.

9.3 Recommendations for the ITIs

Dedicated ITI level communication plan to create awareness about the ITIs

The study shows that awareness about the CTS needs to be done in a more focused manner to encourage females to join the institutes. The ITIs are generally considered to offer courses that are suited to males. There is a need to dispel this perception so that more females consider skill development through ITIs as an option for them. Many principals and faculty members make efforts to reach out to potential students in an informal way. The process needs to be formalized to get the desired results. Making an ITI level communication strategy and a plan around it is likely to be more effective since there will be greater ownership. Each ITI can propose a specific communication plan based on its experience. This may be done by mapping the stakeholders relevant for the ITI, identify what specific messaging needs to be communicated, source or develop the communication material, identify different platforms through which information can be disseminated and identify means of communication – print, visual, social media or personal interactions.

Social mobilization plan for better engagement with the community

It is seen that more female trainees can take admission and complete the course if they get support from their families as well as the communities where they reside. Students reported that the most common form of communication about the ITIs and the apprenticeship program are family members, friends and relatives. They form important stakeholders who can support efforts to overcome the barriers for females to access the ITIs and participate in apprenticeship program thereafter. A social mobilization plan can guide the ITIs to work towards bringing about behavioral change against the existing public perception people have about the institutes and gender stereotyping in the choice of trades. This may be done by organizing parent teacher meetings and open days when parents can come and visit classrooms to experience the environment where their wards receive training. Some local community stakeholders can also be made part of the mobilization plan.

Effective career guidance

Counselling at different stages of student life at the ITI is one of the most critical factors and warrants attention. It is essential to have full-time personnel responsible to take up all the functions related to career guidance such as

- Liaison with local secondary schools especially for females only and co-educational schools, to provide information about different trades offered at the ITIs and related career options
- Conduct aptitude test for aspirants to help them make a choice of trade
- Mapping the local industries and organizing job fairs where relevant industries are invited to offer placements to students
- Regular interaction with the industry to gauge their expectations from the students
- Guide the trainees to join the apprenticeship program
- Organize alumni meet to ascertain what career path they are following post completion of the course
- Orient the students to make use of job search engines and networking platforms such as LinkedIn
- Create a vibrant resource center within the ITI that has a repository of material related to different career options and self-development
- Organize talks for the students by representatives from the industry, resource persons, professionals and entrepreneurs
- Conduct workshops for students to guide them how to write their resume, how to appear for an interview and making them job ready
- Strengthen soft skill training for students
- Soft skills training is a much-needed input for students to make them industry ready. Most skill gap studies indicate that communication skills are found wanting in majority of employees they recruit. While this is applicable for all job seekers not just from ITIs, greater focus on these skills is likely to give them an edge over others. Therefore, the ITIs can strengthen the soft skill training aspect in their respective institutes. Some common areas where soft skills can be imparted are:
  - Communication in English both written and spoken
  - Basic IT skills to help them overcome their hesitation to make use of IT
  - Confidence building

Several courses are already available which can be used to conduct the career guidance sessions. There are several app based English speaking courses which give flexibility to students to pursue these self- learning courses at their own pace. Professional support maybe sought to carry out modules related to personality development. A program should be made part of the curriculum with close monitoring to ascertain its efficacy.

Safety of female trainees within the ITI

Female trainees have safety concerns both within the ITI and outside which act as a barrier for them. ITIs should have a specific plan to address these, especially within the institute. While creating awareness among them, females should be encouraged to speak up if they face any injustice rather than suffer in silence. There are some aspects which should be non-negotiable such as having a policy against sexual harassment and a well-defined redressal system. Students need be made aware of the policy and the redressal mechanism. The faculty members dealing with such issues should receive an orientation on how to handle it with sensitivity and maintaining confidentiality.

- Students should also be made aware of cybercrimes which are on the rise. Lack of information about these issues can make the trainees vulnerable, especially females
- Addressing safety issues outside the premises of the ITI would require collaboration with other stakeholders to find local solutions such as sharing of transport, creating awareness about police helplines, organizing classes on self-defense

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ANNEXURE I: Tables and graphs

ANNEXURE I: Tables and graphs

A. Stratification of 8155 ITIs as per affiliation, geographical location and student mix

States	Government						Government total	Private						Private total	Grand total
	Others		Others total	Women only		Women only total		Others		Others total	Women only		Women only total		
	Rural	Urban		Rural	Urban			Rural	Urban		Rural	Urban			
Assam	7	12	19	2	1	3	22	3	1	4	0	0	0	4	26
Chhattisgarh	69	6	75	5	3	8	83	68	28	96	0	0	0	96	179
Haryana	31	35	66	6	22	28	94	157	55	212	1	3	4	216	310
Himachal Pradesh	71	4	75	7	2	9	84	111	9	120	5	1	6	126	210
Jharkhand	12	0	12	2	0	2	14	197	29	226	0	1	1	227	241
Karnataka	86	58	144	0	0	0	144	785	382	1167	5	5	10	1177	1321
Kerala	61	11	72	3	2	5	77	248	29	277	3	1	4	281	358
Maharashtra	366	30	396	4	15	19	415	406	26	432	2	0	2	434	849
Rajasthan	93	23	116	7	1	8	124	1175	268	1443	2	0	2	1445	1569
Tamil Nadu	45	11	56	4	2	6	62	337	32	369	5	0	5	374	436
Uttar Pradesh	79	24	103	8	8	16	119	2006	300	2306	8	2	10	2316	2435
West Bengal	94	21	115	4		4	119	41	60	101	0	1	1	102	221
Grand total	**1014**	**235**	**1249**	**52**	**56**	**108**	**1357**	**5534**	**1219**	**6753**	**31**	**14**	**45**	**6798**	**8155**

B. Stratification of 2287 ITIs as per affiliation, geographical location and student mix

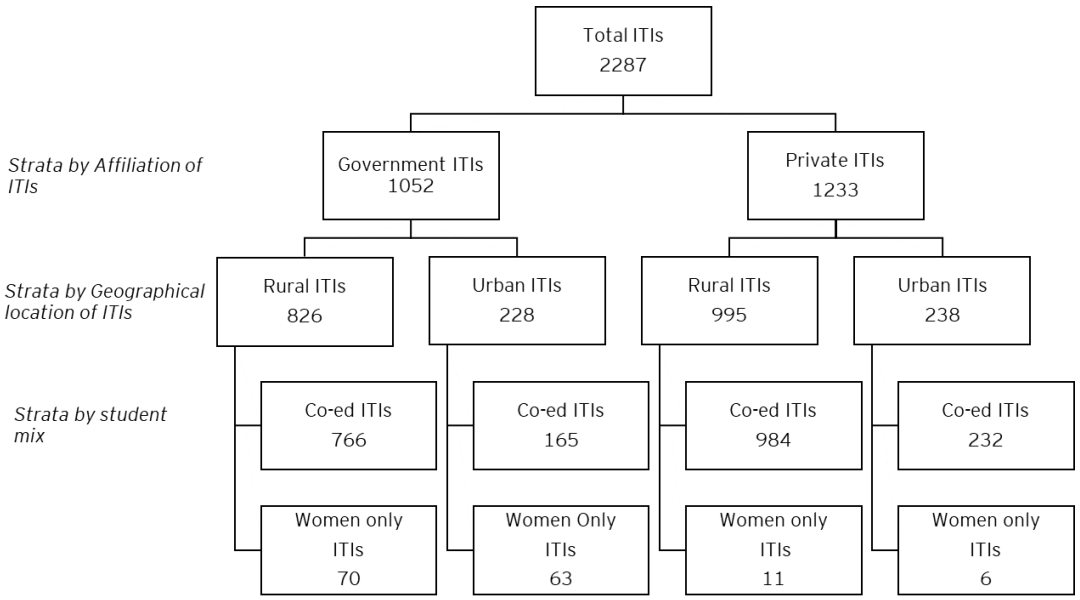


Table shows the distribution of ITIs in every state in appropriate proportion and a 65% coverage of government ITIs and 35percent coverage of private ITIs.

C. Stratification of 367 ITIs as per affiliation, geographical location and student mix

States	Government				Private				State total
	Others		Women only		Others		Women only		
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
Assam	1	2	1	1	0	0	0	0	5
Chhattisgarh	11	1	1	1	4	3	0	0	20
Haryana	7	5	1	4	10	6	1	1	34
Himachal Pradesh	9	1	1	1	2	1	1	0	16
Jharkhand	1	0	1	0	4	1	0	0	7
Karnataka	4	2	1	1	3	3	1	0	15
Kerala	13	1	1	1	10	2	0	0	27
Maharashtra	45	4	1	2	10	1	1	0	65
Rajasthan	28	3	1	1	12	6	1	0	53
Tamil Nadu	6	1	1	1	7	1	0	0	17
Uttar Pradesh	48	4	1	1	15	11	1	1	82
West Bengal	13	3	1	0	4	4	0	1	27
Grand Total	186	27	12	14	80	38	6	3	367

D. Stratification of 64 ITIs as per affiliation, geographical location and student mix

States	Government			Private			State total
	Others		Women only	Others		Women only	
	Rural	Urban	Rural/Urban	Rural	Urban	Rural/Urban	
Assam	1	1	1	0	0	0	3
Chhattisgarh	1	1	1	1	1	0	5
Haryana	1	1	1	1	1	1	6
Himachal Pradesh	1	1	1	1	1	1	6
Jharkhand	1	0	1	1	1	0	4
Karnataka	1	1	1	1	1	1	6
Kerala	1	1	1	1	1	0	5
Maharashtra	1	1	1	1	1	1	6
Rajasthan	1	1	1	1	1	1	6
Tamil Nadu	1	1	1	1	1	0	5
Uttar Pradesh	1	1	1	1	1	1	6
West Bengal	1	1	1	1	1	1	6
Grand Total	12	11	12	11	11	7	64

E. List of ITIs chosen for field visit

State	ITI Code	ITI name	Date of visit
Assam	GR18000011	Govt Industrial Training Institute, Tinsukia	24-Jun-19
	GU18000003	Govt Industrial Training Institute Jorhat	28-Jun-19
	GU18000022	Govt Industrial Training Institute for Women, Guwahati	27-Jun-19
Chhattisgarh	GR22000163	Govt Industrial Training Institute, Jagdalpur, Dist-Bastar	24-Jun-19
	GU22000002	Govt Industrial Training Institute for Women, Bhilai, Dist-Durg	20-Jun-19
	GU22000021	Goverment Industrial Training Institute, Raipur, Dist-Raipur	21-Jun-19
	PR22000060	Leprosy Mission Chhattisgarh V. Trg. ITC, Janjgir-Champa	26-Jun-19
	PU22000149	Samrat Ashoka ITC Kawardha	27-Jun-19
Haryana	GR06000030	Govt. Industrial Training Institute (Women) Charkhi Dadri	18-Jul-19
	GR06000064	Govt. Industrial Training Institute Kund Manethi	14-Jun-19

State	ITI Code	ITI name	Date of visit
	GU06000025	Govt. Industrial Training Institute Faridabad	18-Jun-19
	PR06000139	D.S. Memorial Pvt. Industrial Training Institute, Vill. Paniwal Mota, Teh.& Dist. Sirsa	19-Jul-19
	PU06000042	Women League Girls Pvt. Industrial Centre Nehru Park, Model Town, Yamuna Nagar	27-Jun-19
	PU06000124	Saraswati Pvt. Industrial Training Institute, KDV, (VIP) Road Near Petrol Pump, Kurukshetra	28-Jun-19
Himachal Pradesh	GR02000033	Govt Industrial Training Institute for Women Nalagarh	19-Jun-19
	GR02000133	Govt Industrial Training Institute for Persons with Disabilities Sunder Nagar	10-Jun-19
	GU02000080	Govt Industrial Training Institute Shimla	13-Jun-19
	PR02000054	P.C.S Memorial Industrial Training Centre Sansarpur	21-Jun-19
	PR02000140	Mata Parvati Pvt. Industrial Training Institute, Nurpur	24-Jun-19
	PU02000078	Bhuvneshwari (Pvt.) Industrial Training Institute Bahot	11-Jun-19
Jharkhand	GR20000011	Industrial Training Institute (Welfare), Ranchi	10-Jun-19
	GR20000040	Govt Industrial Training Centre for Women Jameshedpur	12-Jun-19
	PR20000213	Sanskar Pvt. ITI, Mihijam, Jamtara	14-Jun-19
	PU20000219	CMCE Private ITI	14-Jun-19
Karnataka	GR29000055	Govt Industrial Training Institute, Madikeri	13-Jun-19
	GU29000053	Government Industrial Training Institute , N R Mohalla Mysore	12-Jun-19
	GU29000255	Govt Industrial Training Institute for Women, Mangalore	10-Jun-19
	PR29000587	Adarsha ITI Shivanagi, Bijapur	11-Jul-19
	PU29000120	Anjuman ITI Sindagi, Bijapur	10-Jul-19
	PU29000256	Dr.Ambedkar Shikshan Sam ITI, Nekar Nagar Hubli	09-Jul-19
Kerala	GR32000238	Government Industrial Training Institute Kozhikode	04-Jul-19
	GU32000242	Government Industrial Training Institute Kalamassery, Kochi	25-Jun-19
	GU32000310	Government Industrial Training Institute for Women Kollam	26-Jun-19
	PR32000597	Ideal Private Industrial Training Institute Cherppilaseri	24-Jun-19
	PU32000411	Mannam Institute Of Computer Technology Private Industrial Training Institute, Kottayam	25-Jun-19

State	ITI Code	ITI name	Date of visit
Maharashtra	GR27000701	Government Industrial Training Institute (Adivasi), Deola, Dist: Nashik	
	GU27000018	Government Industrial Training Institute, Satara, Dist: Satara	
	GU27000221	Government Industrial Training Institute (Woman), Jalgaon, Dist: Jalgaon	
	PR27000144	Shri Chhatrapati Shahu Private Industrial Training Institute, Beed.	23-Jul-19
	PR27000179	Bharti Vidyapithachi Girl'S Industrial Training Center, Kadegaon, (W) Dist-Sangli	
	PU27000846	Kutemates Pvt.ITI, Chandrapur	22-Jul-19
Rajasthan	GR08000971	Government Women Industrial Training Institute Udyog Marg DCM Road, Kota	13-Jun-19
	GR08000985	Government Industrial Training Institute Balotra	17-Jun-19
	GU08000941	Government Industrial Training Institute, Udaipur	19-Jun-19
	PR08000009	Mewar Girls Private Industrial Training Institute Sec-5 Gandhi Nagar, Chitorgarh	20-Jun-19
	PR08001191	Keshav Private Industrial Training Institute, Hanumangarh	15-Jun-19
	PU08001733	Mewar Private ITI, Bhilwara	06-Jun-19
Tamil Nadu	GR33000047	Goverment Industrial Training Institute,Vellore	20-Jun-19
	GU33000058	Government Industrial Training Institute, Coimbatore	24-Jun-19
	GU33000207	Government Industrial Training Institute(Women), Salem	25-Jun-19
	PR33000591	Freudenberg Private Industrial Training Institute, Nagapattinam	18-Jun-19
	PU33000619	TNPL Private Industrial Training Institute, Kagidhapuram, Karur	25-Jun-19
Uttar Pradesh	GR09001468	Government ITI, Bijnor	13-Jun-19
	GU09001561	Government ITI, Jhansi	15-Jun-19
	GU09001581	Government ITI, World Bank Mahila, Varanasi	24-06-2019 25-06-2019
	PR09000446	Smt. Fulehra Smarak Private ITC - Ballia	26-06-2019 27-06-2019
	PR09001121	Government ITI, Kasba Anupshahr, Bulandshahr	14-Jun-19
	PU09001607	Lok Sewa Private ITC - Balrampur	

State	ITI Code	ITI name	Date of visit
West Bengal	GR19000008	Govt Industrial Training Institute for Women, Siliguri	12-Jun-19
	GR19000027	Govt Industrial Training Institute Durgapur Muchipara	10-Jun-19
	GU19000168	Halisahar Government ITI College, North Twenty-Four Parganas	17-Jun-19
	PR19000232	Kharagpur Private ITI	07-Jun-19
	PU19000059	Bishop Morrow Private ITI, Nadia	13-Jun-19
	PU19000061	Institute of Instrumentation and Metrology- ITC, Belgharia	14-Jun-19

F. List of 10 NSTIs visited

State	NSTI name	Date of visit
Haryana	NSTI(W) Panipat	17-Jul-19
Himachal Pradesh	NSTI(W) Shimla	17-Jun-19
Jharkhand	NSTI Jamshedpur	01-Aug-19
Karnataka	NSTI(W) Bengaluru	17-Jul-19
Kerala	NSTI(W) Trivandrum	26-Jun-19
Maharashtra	NSTI(W) Mumbai	03-Aug-19
Rajasthan	NSTI(W) Jaipur	07-Jun-19
Tamil Nadu	NSTI(W) Trichy	17-Jun-19
Uttar Pradesh	NSTI(W) Allahabad	24-Jun-19
West Bengal	NSTI(W) Kolkata	19-Jun-19

G. List of industries visited

State	Name of organization/institute	Type	Size	Date of visit
Assam	Indian Oil Corporation Limited, Digboi	PSU	Large	25-Jun-19
	Assam Gas Duliajan	PSU	Large	25-Jun-19
	Oil India Limited, Duliajan	PSU	Large	26-Jun-19
	NRL, Numaligarh	PSU	Large	01-Jul-19
	ITC Guwahati	Private	Large	06-Jul-19
	Kadamba Tea Garden,	Private	MSME	18-Jul-19
Chhattisgarh	Brand Factory, Future Group, Raipur	Private	Large	18-Jun-19
	Life Care Diagnostics, Durg	Private	MSME	19-Jun-19
	PVR Cinemas, Bhilai	Private	Large	19-Jun-19
	Iraa, Raipur	Private	MSME	22-Jun-19
	Jhitku Mitki, Kondagaon	SHG	MSME	24-Jun-19
Haryana	Pee Empro Exports Pvt Ltd	Private	MSME	19-Jun-19
	Kanodia Global Pvt Ltd	Private	MSME	17-Jul-19
	Hero Motor Comp	Private	MSME	14-Jun-19
	Kapoor Industries Ltd.	Private	Large	17-Jul-19
	Haryana State Industrial Infrastructure Corporation	PSU	Large	07-Aug-19
Himachal Pradesh	Electricity Board of Himachal Pradesh, Division Mandi	SPSU	Large	11-Jun-19
	Central Research Institute, Kasauli, Solan	PSU	Large	12-Jun-19
	Himtech, Shimla	Private	Small	13-Jun-19
	HPTDC (Marketing Office)	SPSU	Large	14-Jun-19
	HRTC, Divisional Workshop, Tara Devi, Shimla	SPSU	Large	18-Jun-19
	Gini & Jony, Solan	Private	Large	20-Jun-19
	P&G, Solan	Private	Large	20-Jun-19
Jharkhand	Bihar Milk Cooperative Society - Ranchi Unit (Sudha Dairy)	Govt	MSME	11-Jun-19
	Tata Cummins Private Limited, Jamshedpur	Private	Large	12-Jun-19

State	Name of organization/institute	Type	Size	Date of visit
	Jindal Steel and Power Limited, Patratu	Private	Large	13-Jun-19
	Metallurgical and Engineering Consultant Limited, Ranchi	PSU	Large	20-Jul-19
	Heavy Engineering Corporation Limited, Ranchi	PSU	Large	07-Aug-19
Karnataka	Kudremukh Iron Ore Company Limited (KIOCL), Mangalore	Govt	Large	11-Jun-19
	Kaynes Technology India Private Limited, Mysore	Private	MSME	12-Jun-19
	Charnock Equipment Pvt. Ltd., Bangalore	Private	MSME	20-Jul-19
	Big Basket	Private	Large	13-Aug-19
	Saara International Pvt.	Private	MSME	17-Aug-19
Kerala	YOUMEARE Enterprises	Private	MSME	29-Jun-19
	Sizcom	Private	MSME	04-Jul-19
	I Tell	Private	MSME	04-Jul-19
	Synthite Industries (P) Ltd	Private	MSME	16-Aug-19
	VKC Footwear	Private	MSME	16-Aug-19
Maharashtra	South East Central Railways, Nagpur	PSU	Large	23-Jul-19
	JSW Steel, Nagpur	Private	Large	23-Jul-19
	Shree Mayuresh Garments, Jalgaon	Private	MSME	25-Jul-19
	Divya Marathi Newspaper, Jalagon	Private	Small	25-Jul-19
	Dhoot Transmission, Aurangabad	Private	Large	26-Jul-19
	Vijeta Switchgear, Sangli	Private	MSME	26-Jul-19
	Sula Vineyards Private Limited	Private	Large	30-Jul-19
	Government of India Press, Nashik	PSU	Large	30-Jul-19
Rajasthan	Kota Thermal Power Plant	PSU	Large	14-Jun-19
	Shri Ganganagar Co - op Dairy, Hanumangarh	Private	Large	16-Jun-19
	Atul Palm Dates, Jodhpur	Private	MSME	18-Jun-19
	RSRTC Depot	Govt	Large	20-Jun-19

State	Name of organization/institute	Type	Size	Date of visit
	North-Western Railway Carriage, Jodhpur	PSU	Large	22-Jun-19
Tamil Nadu	Carborental Universal LTD, Muragappa Group, Vellore	Private	Large	20-Jun-19
	Sree Saradhambal Automobiles Pvt Ltd. (Maruti Retailer)- K.B Simbon, Coimbatore	Private	MSME	24-Jun-19
	Aquasaub Engineering - T. Narendran (Finance & Admin), Coimbatore	Private	Large	24-Jun-19
	Mohib Shoes Private Ltd, B Unit	Private	MSME	17-Aug-19
	Contemporary Leather Pvt Ltd.	Private	MSME	17-Aug-19
Uttar Pradesh	Ultra Tech Cement	Private	Large	18-Jun-19
	Natraj Mobiles Private Limited	Private	MSME	17-Jun-19
	Haidelberg Cement India Limited	Private	Large	17-Jun-19
	Tirupati Vehicles Private Limited (Mahindra Dealers)	Private	MSME	13-Jun-19
	Mohit Paper Mills Limited	Private	MSME	13-Jun-19
	ME Manufacturers	Private	MSME	12-Aug-19
West Bengal	South Eastern Railway Workshop, Kharagpur	PSU	Large	08-Jun-19
	DSP-SAIL, Durgapur	PSU	Large	10-Jun-19
	EMC, Kolkata	Private	MSME	18-Jun-19
	HUL, Garden Reach	Private	Large	19-Jun-19
	Garuda Power Ltd., Siliguri	Private	Large	21-Jun-19

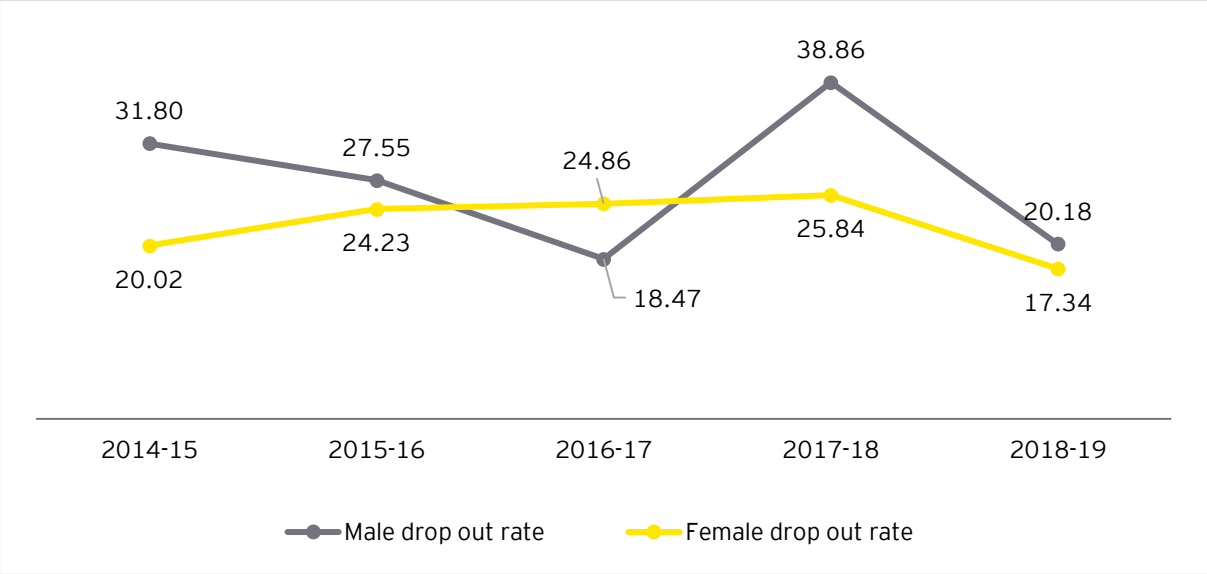
H. Mapping of respondents

Stakeholders	Respondent type	Female	Male	Total
NSTI administration	NSTI Principal	5	5	10
ITI administration	ITI Principal	9	55	64
	ITI Instructor	53	45	98
	ITI TCPO	3	36	39
	ITI Trainees (in FGD excluding Interviewee)	803	308	1111

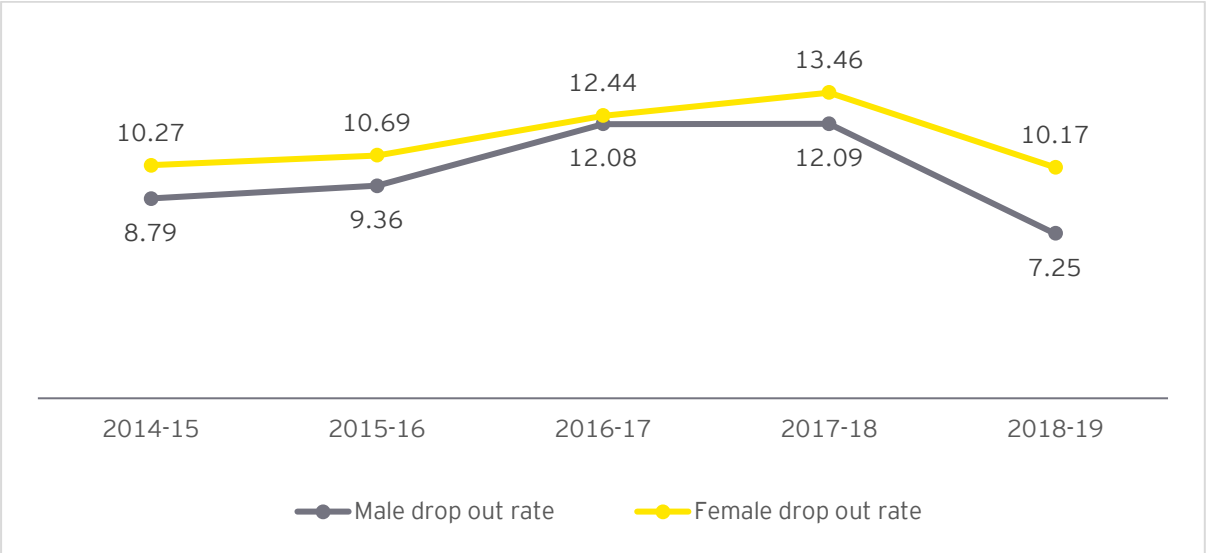
Stakeholders	Respondent type	Female	Male	Total
Trainees (Enrolled/Dropout/ Graduated)	ITI Enrolled Trainee (Interviewee)	87	5	92
	ITI Dropout Trainee (Interviewee)	13	4	17
	ITI Graduated Trainee (Interviewee)	54	5	59
Industry	Employers (Head/ HR /Personnel)	12	58	70
	Female Employees (Interviewee)	14	0	14
	Employees (in FGD excluding Interviewee)	32	0	32
Apprenticeship	ITI Apprentices (Interviewee)	47	3	50
	Fresher & Diploma Apprentices (Interviewee)	31	0	31
	Apprentices (in FGD excluding Interviewee)	67	0	67
Other stakeholders	Key Informants	26	27	53
Grand total		1256	551	1807

I. Drop-out rates among female students according to type of institute and geographic location

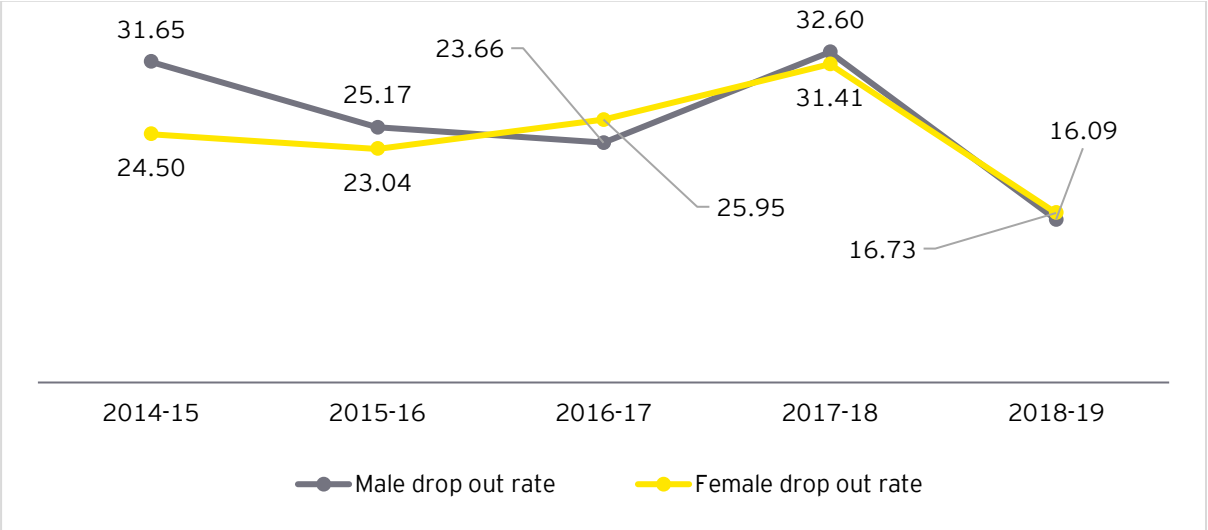
Gender wise percentage of dropout among students: Government ITIs



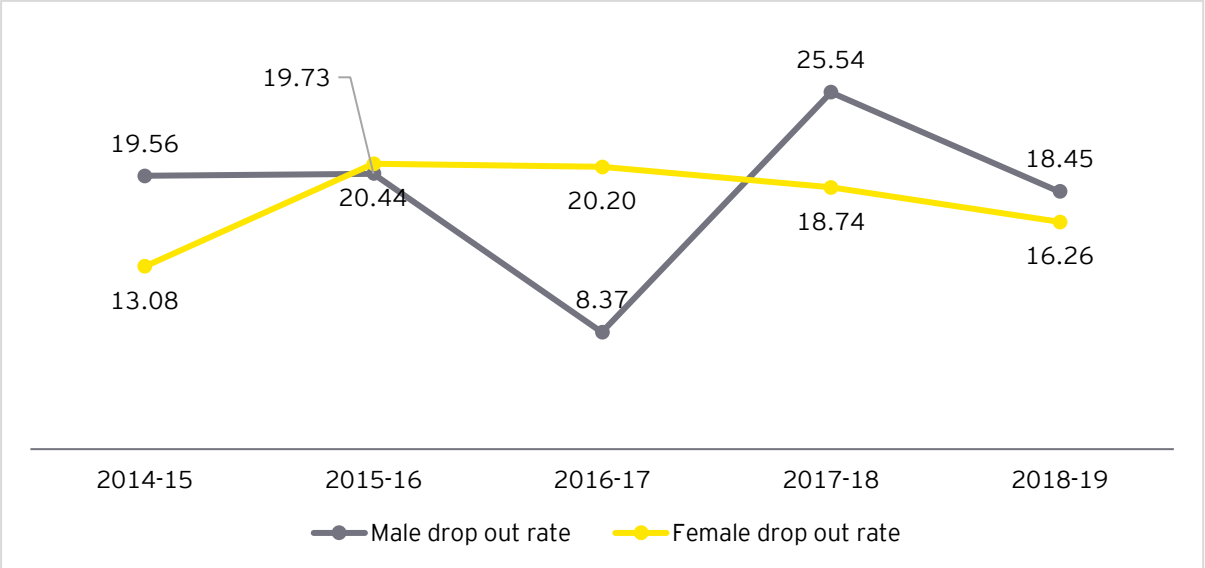
Gender wise percentage of dropout among students: Private ITIs



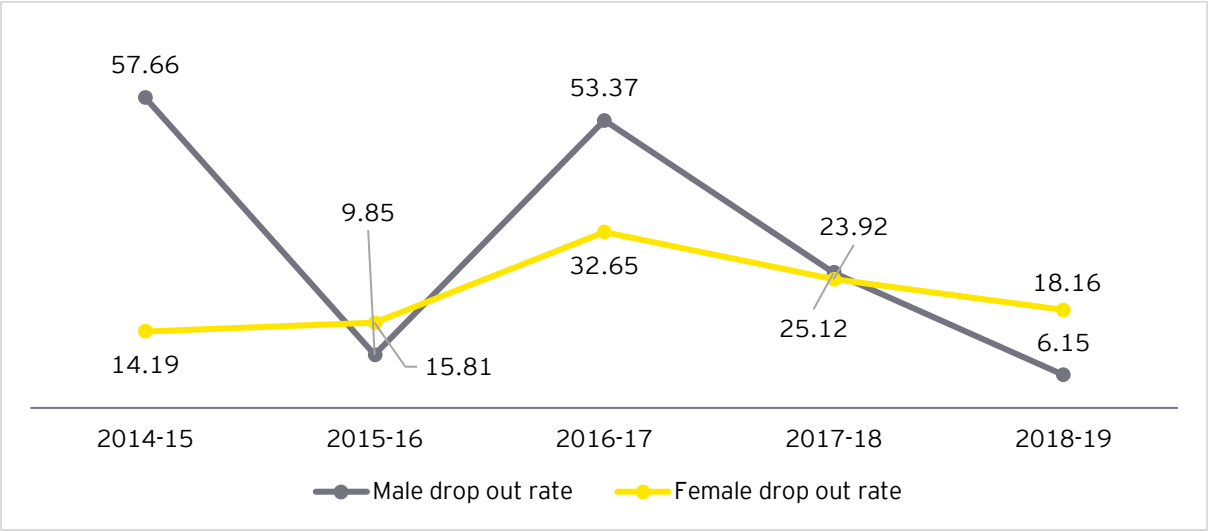
Gender wise percentage of dropout among students: ITIs in rural areas



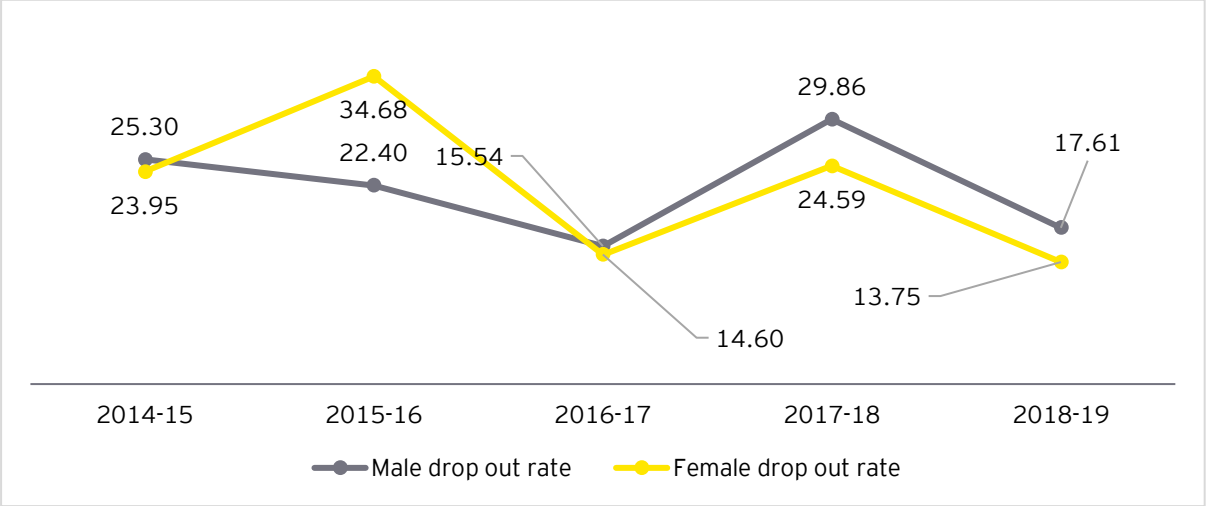
Gender wise percentage of dropout among students: ITIs in urban areas



Gender wise percentage of dropout among students: Women only ITIs



Gender wise percentage of dropout among students: Co-ed ITIs



J. Mapping gender friendliness of the ITIs

Scoring criteria

Parameters	Poor (-1)	Average (0)	Good (1)
ITI location	Remotely located with no or very poor transportation system available	Not centrally located but public transportation available at fairly good intervals)	Located at a well-connected location with both private and public transportation available
Availability of female faculty	No female faculty or guest lecturers available	Less than 50% female faculty members	More than 50% faculty members
Availability of separate toilet for females	Common toilet available only	Separate females' toilet available but not functional due to lack of cleaning staff, water shortage issues, no door or broken Doors found	Separate females' toilet available which were functional and in clean condition

Parameters	Poor (-1)	Average (0)	Good (1)
Safety and security measures	None of these- CCTV, guards, grievance redressal system in case of harassment available	At least one of these- CCTV in working condition, adequate guards, grievance redressal system in case of harassment available	At least two of these- CCTV in working condition, adequate guards, grievance redressal system in case of harassment available
Availability of residential facilities for females	No residential facility for females available	No hostel facilities but either some residential arrangements available or girls' hostel under construction	Hostel for females operational
Transportation facilities for females	No transport facilities for females arranged by ITIs	No own facilities but informal arrangement with public/private transport like bus/train student concession pass made available	ITI runs own bus or have formal arrangement with private/public bus facility
Outreach program for females	No special program or campaigns, /drives undertaken to enroll females	No outreach program undertaken by ITI but faculty members have taken up initiatives on their own like to counsel aspirants, spread awareness regarding opportunity for women	Well defined outreach program undertaken by ITIs to enroll females like awareness campaigns or visit in around girls' school, distribute pamphlets, put up hoardings for advertisement, or spreading awareness, participation in fairs, etc.

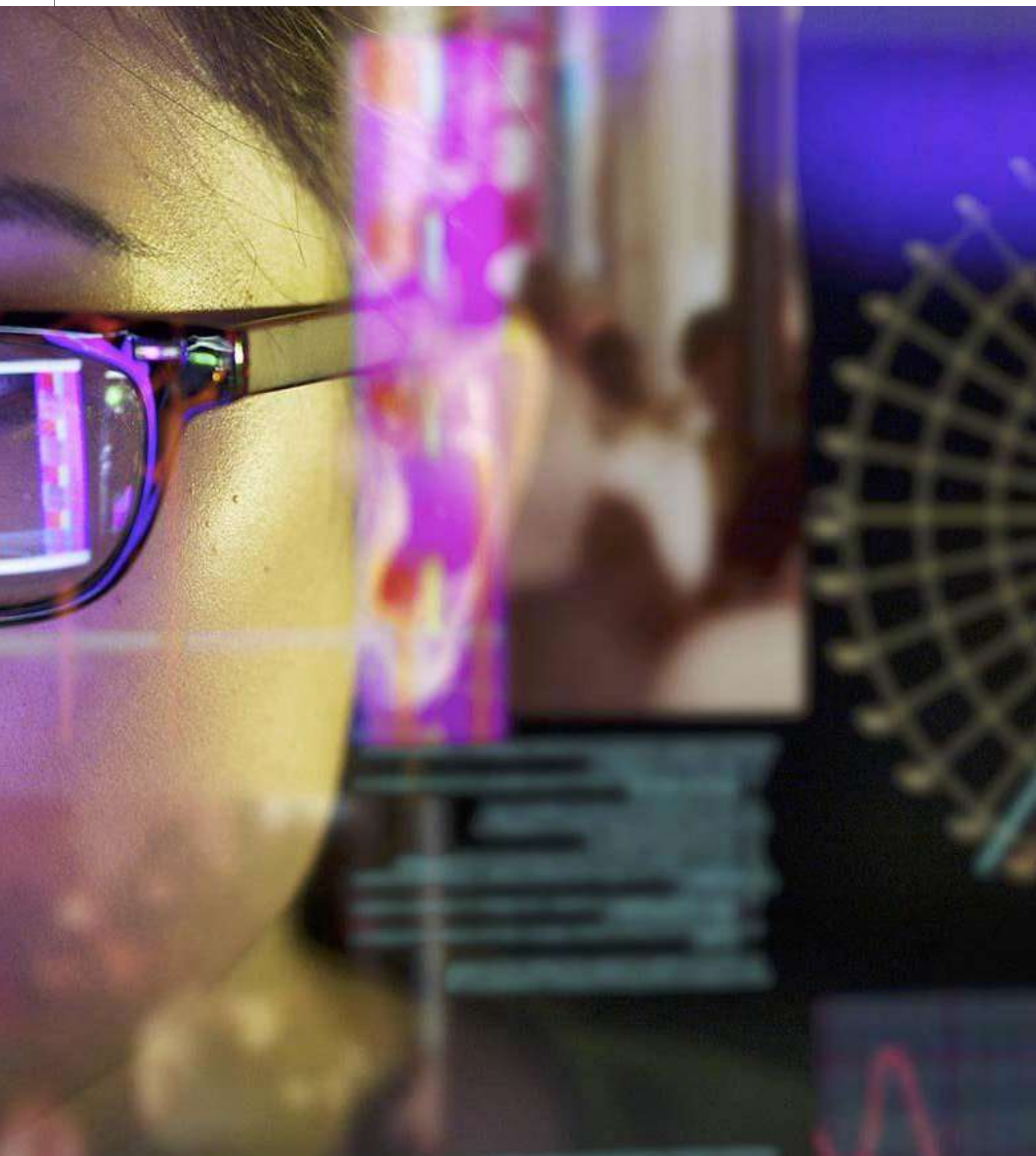
K. State wise detailed scorecard

The values were based on availability of each indicator in each ITI. State wise scorecard have been prepared using composite count categorized across good, average and poor based on the 64 ITIs we visited.

Detailed scorecard

State	Location			Female faculty			Availability of toilets			Safety measures			Residential facilities for females			Transportation facilities for females			Outreach program for females		
	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good
Assam	0	1	2	0	3	0	0	2	1	0	1	2	1	1	1	3	0	0	0	1	2
Chhattisgarh	2	2	1	0	4	1	0	3	2	0	4	1	4	0	1	4	0	1	4	1	0
Haryana	1	2	3	1	4	1	0	4	2	1	5	0	4	0	2	6	0	0	4	2	0
Himachal Pradesh	1	2	3	1	0	5	0	4	2	1	1	4	6	0	0	4	2	0	1	2	3
Jharkhand	0	0	4	1	3	0	0	1	3	1	2	1	3	1	0	4	0	0	3	0	1
Karnataka	3	2	1	0	5	1	1	3	2	3	0	3	3	3	0	6	0	0	4	2	0
Kerala	0	1	4	0	2	3	0	1	4	1	1	3	3	2	0	3	0	2	2	1	2
Maharashtra	2	0	4	1	4	1	0	4	2	1	3	2	3	1	2	4	2	0	1	2	3
Rajasthan	2	2	2	0	5	1	1	1	4	2	1	3	5	0	1	4	0	2	1	3	2
Tamil Nadu	2	2	1	0	4	1	0	2	3	1	3	1	4	1	0	3	1	1	1	4	0
Uttar Pradesh	2	4	0	1	4	1	1	3	2	6	0	0	6	0	0	6	0	0	5	1	0
West Bengal	2	2	2	0	4	2	0	1	5	1	1	4	5	0	1	6	0	0	0	3	3

ANNEXURE II: Research tools



ANNEXURE II: Research tools

1. ITI related tools

A. ITI fact sheet

1. General details

Name of ITI	
ITI Code	
Grading of the ITI	
Website	
Address	
Type of ITI (Urban/Rural)	
Type of ITI (Women/Private/Government)	
Year of Establishment	
Total capacity (seats including supernumerary)	

2. Teaching and administrative resources

A) Principal details

Name of Principal	
Email of Principal	
Contact Number of Principal	

B) Staff and faculty details

ITI Staffing Details	Required	Available	Regular	Contractual	Total (F)	Total (M)
Vice Principal						
Group Instructors						
Trade Instructors						
Certified GI						
Certified TI						
Admin Staff						

3. ITI Trade Offering

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
No. of engineering trades NCVT					
No. non - engineering. trades under NCVT					
No. engineering trades under SCVT					
No. non - engineering. trades under SCVT					
Total number of trades					
Number of units for NCVT trades					
Number of units for SCVT trades					

4. Admission process

A) Awareness of ITI and its offerings

What is your total budget allocation for conducting awareness activities about ITI?	
How many such activities are planned in an academic year?	
What is your total expenditure on student mobilization activities?	
Has the ITI taken any specific awareness initiatives aimed at increasing female participation in ITIs?	
If yes, what percent of awareness budget is spent on such activities- else write NA	

B) Application process

Applications received across various trades (M/F)	
Has the ITI defined cut-off scores in the qualifying exams for admissions?	
Are these criteria relaxed for female candidates?	

C) Admission fees

Fee structure	INR
Admission Fees	INR
Semester Fees- Engineering. Trades	INR
Semester Fees- Non-Engineering. Trades	INR

D) Do you have any special scholarship schemes for female trainees?	

5. Status of student performance at the ITI

A) Number of trainees enrolled in trades (M/F)

Particulars	Male	Female
General		
OBC		
ST		
SC		
People with disability		
Transgender		
Single (Marital status)		
Married		
Mothers		

B) Data for drop-outs training completed during the academic year

Dropout	2014-15		2015-16		2016-17		2017-18		2018-19	
	F	M	F	M	F	M	F	M	F	M
Drop out within one month of Enrollment										
Drop out within 3 Months										
Drop out within 6 months										
Drop out within 12 months										
Drop out before final exams										

C) Final assessment details (M/F) (2014-2019)

Trade Name	2014-15						2015-16						2016-17						2017-18						2018-19					
	Enrolled		Appeared		Passed		Enrolled		Appeared		Passed		Enrolled		Appeared		Passed		Enrolled		Appeared		Passed		Enrolled		Appeared		Passed	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M

D) List out details for students who passed the final exam and opted for placement date (2014-2019)

Trade Name	2014-15								2015-16								2016-17								2017-18								2018-19							
	Passed		Opted for Placement		Got Placement Offer		Accepted Employment		Passed		Opted for Placement		Got Placement Offer		Accepted Employment		Passed		Opted for Placement		Got Placement Offer		Accepted Employment		Passed		Opted for Placement		Got Placement Offer		Accepted Employment		Passed		Opted for Placement		Got Placement Offer		Accepted Employment	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M

E) List details for students who passed the final exam and opted for apprenticeship (2014-2019) --- (M/F)

Trade Name	2016-17								2017-18								2018-19							
	Passed		Opted for Apprenticeship		Got Offer		Accepted Employment		Passed		Opted for Apprenticeship		Got Offer		Accepted Employment		Passed		Opted for Apprenticeship		Got Offer		Accepted Employment	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M

6. How many job fairs has your ITI organized in the last 5 years? (2014-2019)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
No. of Job Fairs					
No. of employers attended					
No. of Total trainees(participants)					
No. of female trainee(participant)					
No. of jobs offered					
No. of jobs offered to female candidates					
No. of apprenticeship offered					
No. of female apprenticeship offered					

7. Is the ITI maintaining an alumni tracking register? (2014-2019)

Status of alumni tracking report (ATR)	2014-15	2015-16	2016-17	2017-18	2018-19
Number of students passed out					
Number of students tracked in ATR					
Number of female students tracked in ATR					
Number of students found employed					
Number of female students found employed					

8. Gender friendliness of the ITI

A) Is there any scholarship scheme specifically for female students?	
B) What is the proportion of female trainees in the engineering courses offered at the ITI?	
C) Residential arrangements	
Availability	
D) Hostel facility for students	Yes/No
E) Hostel availability for female students	Yes/No
F) Transport facilities for students	Yes/No
G) Specific transport facilities for female students?	Yes/No

H) Are there separate toilets available for female students at the ITI?	Yes/No
I) Does the ITI have any guidelines to ensure safety of female trainees at the Institute?	Yes/No
J) Is there a grievance cell in ITI to deal with sexual harassment cases coming from female?	Yes/No
K) If yes, how many staff are there?	Yes/No
L) How many such cases are reported every month?	Yes/No
M) Does the ITI organize any special program to encourage females to join the institute?	Yes/No
N) Pre-admission career counselling for females and their families at the ITI	Yes/No
O) Interaction with alumni who have taken employment	Yes/No
P) Interaction with the local industry	Yes/No
Any other	

B. Interview schedule for principal of the ITI

Name of Respondent:

Contact Information:

Name of ITI:

ITI Code:

Location of ITI (Rural/Urban):

Women-only ITI (Yes/No):

Gender (M/F):

Educational Qualifications:

Total years of experience:

Years of experience at the ITI:

Trends in Enrollments at the ITIs

1. What have you observed regarding the trend of female enrolment in ITIs over the last 5 years? (Probe: higher or lower enrolment in ITIs overall; reasons that impact this trend; awareness regarding ITI ecosystem; types of courses females are enrolling in- engineering/non-engineering)
2. What motivates trainees to join the ITIs in comparison to a college or a university?
   - ☐ More industry-oriented courses offered at ITIs
   - ☐ Courses at ITIs are more affordable than college/University
   - ☐ Higher chances of recruitment for government jobs
   - ☐ Government certification after completing course
   - ☐ More job opportunities in the Industry after completing the course
   - ☐ Any other
3. What encourages parents in sending their female wards to ITI for training?
   - ☐ Job placements ☐ Financial Independence ☐ Government certification
   - ☐ Increased marriage prospects ☐ Better career prospects ☐ Any Other
4. In the last 5 years, have you observed an increase of female trainee enrolment in trades perceived to be non-traditional in your ITI? (Probe: engineering courses considered non-traditional for women)
5. If so, what do you think are the factors that impact this trend? (Select the predominant factor)
   - ☐ Scholarships
   - ☐ Greater awareness among females and their parents regarding the ITI ecosystem
   - ☐ Changing mindset
   - ☐ Initiatives taken by the ITIs
   - ☐ Female faculty
   - ☐ Greater job opportunities
   - ☐ Any other
6. If no, what do you think are the barriers and which do you think are the predominant factors?
   - ☐ Social norms that define choice of careers for females
   - ☐ Distance to the ITI
   - ☐ Safety issues
   - ☐ Discomfort because the class comprises predominantly of boys
   - ☐ Any other
7. What is your opinion of women-only ITIs and the kind of trades they offer? (Probe: introduction of non-traditional trades and its impact on female enrolment and participation)

Admission

8. Does your ITI undertake any pre-admission counselling for students especially for female trainees?
9. Many courses have entry level eligibility criteria of class 10 and 12. Those females who drop out before reaching these levels would not be eligible to join. Besides, those females who do not opt for science subjects in schools would also not be eligible to join many courses.

   In your opinion, do you think it is important to work closely with the Education Department to create greater awareness about ITIs among females?

   If yes, please suggest ways in which ITIs can collaborate with the Education Department. (Probe: *flexibility to include such awareness programs- flexibility in terms of resource capacity; are awareness programs pre-defined)*
10. In your experience, can the admission process be made simpler to encourage more females to join the ITI? If yes, could you give examples of how this could be done?

Addressing specific requirements of female trainees

11. According to you, is availability of transportation one of the factors that determines whether female trainees get enrolled in the Institute? If yes, then what can be done to offer these facilities to them? Can you give some examples of different commuting arrangements made by students?
12. Do you think the provision of residential facilities such as hostels for females will encourage more female trainees to enroll?
13. Do female trainees cite safety as an issue for completion of their course? What measures can be taken to ensure safety for them while coming to the ITI and during their stay? *(Probe: what kind of safety concerns- during travel, within the ITI,)*

Training

14. In your experience, what are some key issues which female trainees face while pursuing their course at the ITI?
15. In your view, is it important to have more female faculty to encourage more females to join the ITI? If yes, then what are the challenges you face in recruiting female faculty members to the Institute?
16. Not all females who take admission in the ITI complete their training. What could be the main reasons for their dropping out?

    ☐ Find it difficult to cope with the course ☐ They get married in the middle of the course

    ☐ They are discouraged by family members ☐ Commuting every day to the ITI is difficult

    ☐ Any other
17. Are there any married females enrolled in the Institute? Does the marital status pose any additional barriers for them to complete their course? If yes, what can be done to remove this barrier? Can some flexibility be given to these candidates to overcome the gap they encounter on account of missing their classes?
18. Has any young mother taken admission in your Institute in the past? If yes, do they have any additional requirements which the Institute provides/provided to ensure that they complete their course?
19. Employers frequently list teamwork, collaboration, and oral and written communication skills as highly valuable yet hard-to-find qualities in potential new hires. What kind of soft skill trainings are provided to trainees at ITIs? What improvements are required in that area?
20. Is on the job training compulsory for all trainees in all the trades at ITI? If yes, do female trainees face any specific challenges in taking up such training positions? (Probe: safety; low stipend; unavailability of direct transportation routes; ease of transport; unavailability of proper infrastructure at workplace)

Industry Engagement

21. In your experience, to what extent are the prospective employers in the industry sensitive to the specific concerns of female candidates? (Probe: safety issues; social norms that impact females; infrastructure- separate toilets for women, crèche, common rooms for female employees, etc.)
22. At job fairs organized at ITIs, have you observed a bias against or preference towards employing females? Could you give some examples?
23. What are your views regarding apprenticeship opportunities for female candidates? Are there any specific reasons for low participation of women in an apprenticeship program? (Probe reasons: limited *choice of trades for women to choose from; engineering related trades, timing, stipend, location of industry)*

Post placement support

24. Does the Institute provide any post-placement counselling to trainees to help them overcome challenges they face such as relocation to another place for jobs, negotiating with the employer for job conditions?
25. Does the alumni network play a role at this stage? Could you give some examples where they have played a constructive role? If not, what could be the reasons for the same?
26. Do most female trainees go on to take up jobs after completion of the course? If not, what could be the reasons for their decision?
27. In your experience, what is the proportion of female trainees who show an inclination towards becoming self-employed or becoming entrepreneurs? In your view to what extent has the ITI been able to support them in this endeavor?

Suggestions

28. From your experience, could you give at least 3 suggestions, which if applied, will encourage more females to join the ITI?
29. Policy level (State, Industry) ☐ ITI level ☐ Any other
    a. Please suggest ways in which the counselling provided to trainees could be improved. *(Probe: career counselling, pre- admissions counselling, post-placement counselling*)

C. Interview schedule: instructor

Name of Respondent:

Contact Information:

Name of ITI:

Trade Taught:

Gender (M/F):

Educational Qualifications:

1. What course(s) do you teach at the ITI?
2. For how long have you been working at the Institute? During this period, have you noticed any change in trend of females joining the ITIs? If yes, what are these changes?
3. In your opinion, are females better suited to train in any specific trades or they can be trained in any trade?
4. Are there any specific courses which females prefer to pursue? What are these courses? And what do you think are the reasons for this?
5. Do you observe fewer females pursuing engineering-related courses? What could the reasons for this decision?
6. In the classroom, do you observe a difference between the academic performance of boys and females? If yes, what are these differences and what could be the reasons for these differences?
7. Do you get instructors from the industry to take classes as guest trainers? Does it help in students, especially females, get a better understanding of working conditions in the industry?
8. What maybe the reasons for females dropping out before completion of a course they take admission in?
9. In your opinion, to what extent are the counselling services helpful in encouraging more females to join a course and take up jobs thereafter? What can be done to make these services more effective?
10. What is your opinion about on the job trainings which females have to undergo? Does the institute take care to ensure that the working conditions are friendly for females to complete the trainings?
11. To what extent are you involved in organizing apprenticeship for females? What are your observations about the efficacy of apprenticeship programs? Are there any specific concerns related to females which need to be addressed?
12. Do some students come back to the Institute and share their concerns after they are placed in jobs? What are these concerns? Is it possible for the Institute to address some of these concerns?
13. In your opinion, do you think more females would be encouraged to join the Institute if there were more female instructors? Does the institute face any difficulties in engaging female instructors?
14. Out of a batch of trainees, what is the percentage of trainees, that opt for entrepreneurship? Among these students do you find and difference in the aspiration levels between male and female trainees? If yes, what could be the reasons?
15. If females choose to become self-employed or entrepreneurs, what support would they require? (*Probe – Bank, access to government scheme through ITI etc.)*
16. Do you think it is important for the ITI to keep in close touch with parents of the students to create awareness and understand their concerns so that these can be addressed? If yes, to what extent do you think the ITI is able to achieve this?
17. What suggestions would you like to give to make vocational education and training more attractive to females?

D. Interview schedule: TCP officer

Name of Respondent:

Contact Information:

Name of ITI:

Trade Taught:

Gender (M/F):

Educational Qualifications:

1. As a TCP Officer, what is your role in counselling students at the following stages:
   - ☐ Before joining the ITI
   - ☐ Post admission
   - ☐ Post completion of the course
2. What are the activities organized at each of these stages?

	Activities organized
Pre-admission	
During the course	
Post completion of the course	

Pre-admission

3. In the last 5 years, have you noticed any changes in admission trends (increase or decrease) with females choosing to pursue training at ITIs post their school education? What could the reasons for your saying so?
4. What are the key challenges female aspirants face in joining the course at the ITI? (Probe – eligibility, family constraints, social norms, lack of awareness, unfamiliarity about the industry). Can you give examples?
5. From your experience, which stakeholders do you find most effective as influencers to encourage women to join the ITI?
6. Since there is a strong link between school education and vocational education, do you engage with the Education Department to organize join programs of career guidance?
7. What additional steps can be taken by the ITI to encourage females to join the courses at the ITI?

During the course

8. Some female students may find it difficult to cope with course at the ITI. Do you think it is crucial to support them at this stage? If yes, in what way do you do that?
9. From your experience, do you think the activities at the ITIs are organized in a manner to encourage women to pursue vocational education and training at the Institute? What can be done to improve it further?

Post completion of the course

10. What is the response of the industry in hiring female ITI graduates? Are they open to offering apprenticeship to women? Do you find it easier/more difficult to find apprenticeship opportunities for female candidates?
11. What are the trades which female trainees prefer to join after completion of the course? What could their reasons for these preferences? *(Probe – job hours, salary, proximity to their homes, availability of facilities like transportation, accommodation)*

Sector	Trade	Reason
Primary		
Secondary		
Tertiary		

12. While organizing interactions between the industry and the students, do you see a gender bias towards hiring of boys by the industry? Do you find it harder to find jobs for women? If yes, what could be the reasons for the same?
13. Are there any industries which show preference in hiring female trainees? Could you list some of these? What are their reasons for preferring to hire female candidates?
14. A register is maintained to track the alumni for a period of 3 years. What have been your observations in this regard? What are the factors that encourage female trainees to continue with their jobs and vice versa?
15. Do you maintain an alumni register? What is the level of involvement of the alumni to act as ambassadors to encourage women to take up vocational training?
16. What are the main reasons for women to leave their jobs? (Probe – family compulsions, reluctance to relocate, salaries offered, difference in expectations and actual work, working conditions)
17. What percentage of female trainees show their inclination to become:
    - ☐ Self employed
    - ☐ Entrepreneurs
18. What support would they require if they wish to become self-employed/entrepreneurs? (*Probe: mentoring; access to finance through banks, schemes)*

Suggestions

19. From your experience how can the TCP program be strengthened to encourage females trainees to take up vocational training and enter the labor force? Please give at least 3 suggestions.

E. Focus group discussion

[Participants: Student trainees from both the years; wherever the institute is a co-educational one there will be participants both boys and females; those who took admission but did not join; those who joined but dropped out; those who completed the course and are working.]

Before joining

1. What was most predominant reason why you wanted to join the ITI?

   [Probe – what are the most significant factors - self-awareness; career guidance in school; relatives; information through website; guidance by NGO]

2. What are the factors that you considered while deciding which course to pursue?

   [Probe – job opportunities; relatives; interest; interaction with alumni of the institute; did not have much choice; counselling at ITI, counselling, awareness of sectors/industries related to trade]

3. Was it easy to take admission in the Institute?

   [Probe – convincing family members; easy/difficult admission procedures- waiting for long hours in lines, online admission etc.]

4. In your view why are some students, especially females, keen to pursue the course not able to join?

   [Probe – the course fee is high; difficult to commute every day; not supported/discouraged by the family]

While pursuing the course

5. Do you think pursuing a course at an ITI is better than doing a graduate course in a college/University)? Give your reasons for the same.

   [Probe – these courses are more job oriented; we are taught skills which can be lifelong; note the difference in responses between boys and females]

6. In your view, why is it that very few females pursue engineering related courses?

   [Probe – are not eligible since they do not take up science subjects in school; did not complete secondary schooling; family does not want them to work in factories; they themselves would not feel comfortable working in a factory]

7. Do you face any problem while pursuing the course?

   [Probe – finding the course difficult; discomfort in travelling everyday – tiring, unsafe; nobody they can go to clear their doubts; not happy with the quality of teaching; feel uneasy studying with boys; long hours; no/insufficient female faculty]

8. Some students are not able to complete the course they joined. What are the reasons that compel them to drop out before completion of the course? Are there any specific reasons for females dropping out?

   [Probe – family related factors; did not find the course interesting/useful; find the course difficult]

Post completion of the course

9. What is your opinion about the counselling services offered at the ITI?

   [Probe – do they find these useful; how can these be improved to suit the requirements of students; see if there are any differences in responses between boys and females; their access to information from different sources]

10. Would you like to become self-employed or entrepreneurs on completion of the course? What kind of support would you require?

    [Probe – business ideas; financing; mentoring; support from stakeholders- ITI, government, Banks, etc.; problems faced by females in setting up their own businesses; observe difference in responses between boys and females]

Suggestions

11. What suggestions would they like to give to encourage more females to join vocational education and training?

    [Probe – information; incentives; guidance; mentoring; facilities; scholarships]

Questions only for females in Co-ed ITIs

12. This ITI has both boys and females studying together. Have you observed any instances where females in this institute are harassed by boys in the institute or while coming to the institute?

    [Probe: lewd remarks, making fun, physical touch] If such instances have taken place, does the institute have any mechanism to address the issue? [Probe – policy against sexual harassment; what is the process in place; is it robust]

13. Have you or your friends faced any pressure from the family to get married while you are pursuing this course? Some of your friends may already be married. Is that a barrier in completion of the course?

    [Probe: whether parents and relatives give value to them completing the course or look at it as a step to find a good match; support given to married students at home to pursue the course]

14. What would you like to advise other females who may like to join an engineering course in an ITI which is co-educational? [Probe – do they think it is alright to study in a co ed ITI and pursue a course perceived to be non-traditional for females (engineering related)]

15. Do females face any additional challenges while working in an industry?

    [Probe – working conditions; differential salaries between male and female workers; safety issues; convincing the family]

    [While conducting the FGD, identify respondents who are more vocal and have something unique to offer. These could be your respondents for conducting Trainee interviews]

F. Interview schedule: enrolled trainee

Name of Respondent: **Trade Enrolled In:**

Age: **Contact Information:**

Name of ITI: **Code of the ITI:**

Background information

1. What is your marital status?
   - ☐ Single ☐ Married
2. What are your educational qualifications?
   - ☐ 8th Pass ☐ 10th Pass ☐ 12th Pass
3. If it is class 12, what subject stream were you following – Science, Commerce or Humanities?
4. How did you get to know about the courses offered at the ITI?
   - ☐ In school career guidance program Relatives/ Family Members Friends
   - ☐ On my own ☐ Newspaper ☐ Digital Media ☐ Any Other
5. How far do you stay from the institute?
6. How do you commute to the institute?
   - ☐ By public transport ☐ on foot ☐ Drive on scooty/car ☐ Shared Auto
   - ☐ Ride on bicycle ☐ N/A- Live in hostel on campus
7. Tell us something about your family. What is the occupation of your family?
   - ☐ Self-employed ☐ Salaried Job ☐ Daily wage worker ☐ Farming
   - ☐ Any Other
8. What would your annual family income approximately?
   - ☐ Less than 1 Lakh ☐ 1-5 Lakhs ☐ 5-10 Lakhs ☐ More than 10 Lakhs
9. What was the reaction of the family when they got to know that you have got admission in this institute?
   - ☐ They were very happy and supportive
   - ☐ They were not happy and tried to dissuade me from joining
   - ☐ They were worried as to how I would manage
   - ☐ They were indifferent

ITI related information

10. Which course are you pursuing at the ITI?
    - ☐ Engineering ☐ Non-engineering
11. How did you get to know about this course? (multiple responses)
    - ☐ Through School ☐ Relative/Family Member ☐ Friend ☐ Found out myself
    - ☐ Newspaper Advertisement/Pamphlet ☐ ITI Website ☐ Online Advertisement
    - ☐ Gram Sabha ☐ Other
12. Why did you choose to enroll in an ITI over a college or university?
13. What is the total amount you spend to pursue the course?
    - ☐ Course fee ☐ Purchase of books and stationery ☐ Travel Expenses
    - ☐ Hostel Charges, if applicable

14. Do you find these expenses affordable? ☐ Yes ☐ No

15. Did you or your family have to take any loan to meet the expenses? ☐ Yes ☐ No

16. How many trainees are there in your class?

    Total Number of Trainees _____

    Total Number of Female Trainees _____

Perception about the course

17. How do you find the course you are pursuing?

    ☐ Excellent ☐ Very Good ☐ Good ☐ Average ☐ Poor

18. If your response is Average/Poor what are the reasons for it

    ☐ The course is difficult. I do not get guidance from anywhere

    ☐ Am uncertain of getting a job after I complete the course

    ☐ I do not find the course interesting

    ☐ Instructors are not very helpful

19. Are you satisfied with the infrastructure of the ITI? Give your response on the basis of your observation about the toilets, availability of common room for females, etc.

    ☐ Very Satisfied ☐ Satisfied ☐ Not Satisfied

Aspirations post completion of the course

20. What would you like to do after you complete the course?

    ☐ Take up a job ☐ Get a government job ☐ become self-employed

    ☐ Become an entrepreneur ☐ higher Education ☐ Not Sure

21. Do you have clarity on the nature of job you may get after you graduate from here?

    ☐ Yes ☐ No

22. Which is the most important source of information in this regard?

    ☐ TCPO ☐ Alumni ☐ Instructor(s) ☐ Friends ☐ R elatives/Family Members

Other challenges

23. In order of priority, please mention which one of these are a matter of concern for you while pursuing the course.

    ☐ Safety issues

    ☐ Conditions at the ITI (availability of clean toilet, a common room)

    ☐ Uncertainty about getting a job

    ☐ May not be allowed to take up a job after completing the course

    ☐ Ability to afford the course

    ☐ May not perform well academically

    ☐ May have to relocate

24. In your opinion why do females not join ITIs to pursue courses offered or drop out without completion of the course? (Multiple responses)

    ☐ They are not very aware about the courses offered

    ☐ The courses offered at ITI are considered more suitable for boys

- ☐ The faculty members are mostly male
- ☐ They do not feel very safe joining the courses
- ☐ Parents object to studying in co-educational institutes because there are very few females
- ☐ There is uncertainty about getting jobs
- ☐ Any other

25. Which of the following, if offered to females, will encourage them to join the ITI? (Multiple responses)

☐ Scholarship ☐ Hostel Facilities ☐ Transport Arrangements ☐ Any Other

Suggestions

26. Many females get married while pursuing the course. In your opinion what can be done to encourage them to complete their course?
27. What measures can be taken to support students to perform better? (Multiple responses)

☐ Remedial Classes ☐ Peer group teaching ☐ Soft Skills ☐ Any Other

28. What suggestions you would like to give to improve the following: (Multiple responses)

☐ NCVT/SCVT Course ☐ Apprenticeship Program

☐ OJT Training ☐ Placement of Trainees

G. Interview schedule: graduated trainee

Name of Respondent: **Trade Graduated in:**

Age: **Contact Information:**

Name of ITI Attended: **Code of the ITI:**

Background information

1. What is your marital status?

   ☐ Single ☐ Married

2. Tell us something about your family. What is the occupation of your family?

   ☐ Self-employed ☐ Salaried Job ☐ Daily wage worker ☐ Farming ☐ Any Other

3. What is your annual family income approximately?

   ☐ Less than 1 Lakh ☐ 1-5 Lakhs ☐ 5-10 Lakhs ☐ More than 10 Lakhs

4. What was the reaction of the family when they got to know that you have got admission in this institute?

   ☐ They were very happy and supportive

   ☐ They were not happy and tried to dissuade me from joining

   ☐ They were worried as to how I would manage

   ☐ They were indifferent

ITI related information

5. Which course did you pursuing at the ITI? ☐ Engineering ☐ Non-engineering

6. How did you get to know about this course?

   ☐ Through School ☐ Relative/Family Member ☐ Friend ☐ Found out myself

7. Why did you choose to enroll in an ITI over a university or a college?

   ☐ Take up a job in a big company ☐ Get a government job

   ☐ Become self-employed ☐ Become an entrepreneur ☐ Any other

Perception about the course

8. How would you rate the trade you pursued at your ITI?

   ☐ Excellent ☐ Very Good ☐ Good ☐ Average ☐ Poor

9. If your response is Average/Poor, what are the reasons for it

   ☐ The course was difficult. I do not get guidance from anywhere

   ☐ I did not find the course interesting

   ☐ Instructors were not very helpful

10. Were you satisfied with the infrastructure of the ITI? Give your response on the basis of your observation about the toilets, availability of common room for females, etc.

    ☐ Very Satisfied ☐ Satisfied ☐ Not Satisfied

Preparation for labor market

11. What activities did your ITI undertake prepare you for working in the labor market? (multiple responses)

    ☐ Soft-skills training ☐ Information of sector/industry of employment ☐ Job fairs

    ☐ Information about company culture ☐ Apprenticeship ☐ OJT Training ☐ Any other

12. Were you satisfied with these activities- did you find them helpful? ☐ Yes ☐ No

13. Did you have clarity on the nature of job you may get after you graduate from the ITI?

    ☐ Yes ☐ No

14. Which was the most important source of information in this regard?

    ☐ TCPO ☐ Alumni ☐ Instructor(s) ☐ Friends

    ☐ Relatives/Family Members

Employment post completion of the course

15. What is your current status of employment?

    ☐ Salaried job ☐ Wage Worker ☐ Entrepreneur ☐ Self-Employed

    ☐ Unemployed ☐ Did not want to work professionally

16. Which sector do you currently work in?

    ☐ Primary/Fishing/Farming, etc. ☐ Secondary/Manufacturing ☐ Tertiary/ Service

17. In case you are not working, what was the reason for it? (multiple responses)

    ☐ Job role activities were not related to ITI course

    ☐ Salary was below expectation

    ☐ Job placement required migration to a different city/state/district

    ☐ Unavailability of direct and safe transportation routes from employee's house to office location

    ☐ Poor career advancement prospects

    ☐ Poor local job prospects

    ☐ Office environment was not inclusive of female employees

    ☐ Studying, not looking for a job

    ☐ Preparing to start my own business

    ☐ Poor support from family for my choice of working professionally

    ☐ Currently undergoing apprenticeship

    ☐ Any other

18. You mentioned that you are working. How difficult was it for you to get a job?

    ☐ Easy ☐ Average ☐ Hard

19. If the third option is selected could you explain why it was hard to get a job?

20. What have you observed about employers- are they ready to hire female ITI graduates?

21. If yes, what kind of job roles do women usually get hired for?

    ☐ Office work/secretarial roles ☐ Desk/Back-end Jobs ☐ Field work

    ☐ Factory/Manufacturing/Shop-floor work ☐ Any other

22. Do you think that increased use of technology in the labor market has created more jobs that women could work in? Give some examples.

Challenges women face working in the labor market

23. What could be some of the challenges women are likely to face when they get employed?
    - ☐ Work environment is not inclusive/supportive towards female employees
    - ☐ Unavailability of direct and safe transportation routes to office location
    - ☐ Poor support from family members for women's choice to work professionally
    - ☐ Unequal division of labor in domestic work at home
    - ☐ Poor career advancement opportunities at organization
    - ☐ Unavailability/ poor condition of infrastructure at workplace (toilets, crèche facilities, etc.)
    - ☐ Working office hours are not compatible to female employee's schedule
    - ☐ Wage disparity between male and female employees
    - ☐ Any Other
24. For those of you who are entrepreneurs or self-employed, what are some of the challenges you have faced?
    - ☐ Banks are hesitant to lend to female business owners
    - ☐ Poor support from relatives/family members
    - ☐ Weak support network for females to approach while setting up their own businesses
    - ☐ Any Other

Suggestions

25. How can more female ITI graduates be encouraged to set up their own businesses?

H. Interview schedule: dropped-out trainee

Name of Respondent: **Trade Enrolled In:**

Age: **Contact Information:**

Name of ITI Attended:

Background information

1. What is your marital status?

   ☐ Single ☐ Married

2. Tell us something about your family.

   a. What is the occupation of your family?

   ☐ Self-employed ☐ Salaried Job ☐ Daily wage worker ☐ Farming ☐ Any Other

   b. What is your annual family income approximately?

   ☐ Less than 1 Lakh ☐ 1-5 Lakhs ☐ 5-10 Lakhs ☐ More than 10 Lakhs

   c. What was the reaction of the family when they got to know that you have got admission in this institute?

   ☐ They were very happy and supportive

   ☐ they were not happy and tried to dissuade me from joining

   ☐ they were worried as to how I would manage

   ☐ they were indifferent

3. For those of you whose family was apprehensive, what do you think made them feel that way?

ITI related information

4. Which course did you get enrolled in at the ITI? ☐ Engineering ☐ Non-engineering

5. How did you get to know about this course?

   ☐ Through School ☐ Relative/Family Member ☐ Friend ☐ Found out myself

6. Why did you choose to enroll in an ITI over a university or a college?

   ☐ Take up a job in a big company ☐ Get a government job

   ☐ Become self-employed ☐ Become an entrepreneur ☐ any other

Perception about the course

7. How would you rate the course you pursued at your ITI?

   ☐ Excellent ☐ Very Good ☐ Good ☐ Average ☐ Poor

8. If your response is Average/Poor, what are the reasons for it

   ☐ The course was difficult. I do not get guidance from anywhere

   ☐ I did not find the course interesting

   ☐ Instructors were not very helpful

   ☐ Any Other

9. Why did you choose to enroll in an ITI over a college or university? (Probe if she was happy about joining the ITI or regretted after joining)

Withdrawal from the course

10. When did you withdraw from your ITI course?

    ☐ 1-3 Months ☐ 3-6 Months ☐ 6-9 Months ☐ before Exam

11. What factors made you withdraw from your ITI course? (Probe – family pressure, unfriendly environment at ITI, found the course difficult)

12. What were your expenses while you pursued your ITI course?

    ☐ Course fee ☐ Purchase of books and stationery ☐ Travel Expenses

    ☐ Hostel Charges, if applicable

13. Do you find these expenses affordable? ☐ Yes ☐ No

14. How many female trainees were there in your class? (Probe whether the reason for dropping out was that there were no females in the class)

15. When you took a decision to leave the institute, do you think if you had been given some support at that time, you would have changed your decision to leave the Institute? If yes, what kind of support would have helped?

Suggestions

16. What measures do you think should be taken to reduce the number of female dropouts from ITIs?

NSTI related tools

A. NSTI fact sheet

1. General details

Name of NSTI	
Website Address	
Address	
Type of NSTI(Urban/Rural)	
Year of Establishment	
CTS: Total capacity (seats including supernumerary for both years)	
CITS: Total capacity (seats including supernumerary for both years)	

2. Teaching and administrative resources

A) Principal Details

Name of Respondent		
Gender(M/F)		
Email Address		
Contact Number	Landline	
	Mobile	
Current Status (Permanent/Additional Charge)		
Total years of Industrial Experience		
Highest Educational Qualification		
Tenure in current NSTI		

B) Staff and faculty details

For Academic Year 2018-19 please indicate the required vs. available numbers as per NCVT affiliation details.

Posts	Required	Available	Regular	Regular	Contractual	Total(F)	Total(M)
Vice - Principal							
Group Instructors							
Trade Instructors							
Certified GI							
Certified TI							
Admin Staff							

3. NSTI trade offering

A) Long Term course details of academic year 2018-19 - Please indicate total seats as per affiliation (inclusive of supernumerary seats).

Course Name	Eng./Non-Eng. Trades	Duration (In Years)	Total Capacity	Enrolled			
				Total(F)	Total(M)	Total(F)	Total(M)

B) Short term course details for the Academic Year 2018-19 - Please indicate total seats as per affiliation (inclusive of supernumerary seats).

Course Name	Eng./Non-Eng. Trade	Batch Capacity		Batch Duration (weeks)	Total Applicant		Total Enrolled	
		Total (M)	Total (M)		Total (M)	Total (M)	Total (M)	Total (M)

C) Summary of trades offered by NSTI.

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
No. of engineering trades NCVT					
No. non - Eng. trades under NCVT					
No. engineering trades under SCVT					
No. non - egg. trades under SCVT					
Total number of trades					

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
No. of Long-term Course Batches					
No. of Short-term Course Batches					

D) Number of trainees enrolled in trades (M/F) in current year.

Particulars	Male	Female
General		
OBC		
ST		
SC		
People with disability		
Transgender		
Single (Marital status)		
Married		
Mothers		

E) Please indicate in the table below the new trades that have been added in the NSTI in the last five academic years.

Academic Year	Trade Name	Total Seats
2014-15		
2015-16		
2016-17		
2017-18		
2018-19		

F) Has the NSTI added any specific trade to attract female candidates? Please indicate in the table below.

Academic Year	Trade Name	Total Seats
2014-15		
2015-16		
2016-17		

Academic Year	Trade Name	Total Seats
2017-18		
2018-19		

G) Please indicate in the table below the dropout data for candidates for current academic year.

Particulars	Female	Male
Drop out within one month of admission		
Drop out within 3 months of admission		
Drop out within 6 months		
Drop out within 1 year		
Drop out before final exam		

H) Please provide data on enrolled trainees and trainee instructor in the table below for the current academic year 2018-19.

Trade Name	Units	Total Capacity		Under CTS		Under CITS	
		Female	Male	Female	Male	Female	Male

4. Infrastructure related detail

A) Civic infrastructure

Ownership Status	Owned	Leased	Rented	Any Other Specific
Total Land Area				
Covered Land				

B) Availability of other facilities offered at NSTI Campus

Land & Building Infrastructure	Availability	Sitting Capacity	Total No. of Facility available
Reception Area	Yes/No		
Principal Office	Yes/No		
Staff Room	Yes/No		
Common Assembly Hall	Yes/No		
Multipurpose Hall	Yes/No		
Lab Facility (trade based)	Yes/No		
IT Lab Facility	Yes/No		
Library	Yes/No		
Hostel	Yes/No		
Canteen	Yes/No		
Conference Hall	Yes/No		
TCPC Room	Yes/No		
Counselling Room	Yes/No		
Meeting Room	Yes/No		
Playground	Yes/No		
Recreation Hall	Yes/No		
Any Other (Specify)	Yes/No		
Civic Amenities	Availability	Total Number	
Transportation facility (Buses)	Yes/No		
Security Surveillance System	Yes/No		
Separate Toilets	Yes/No		
Drinking Water facility	Yes/No		
Crèches for Childcare	Yes/No		
Internet/Wi-Fi Facility	Yes/No		
Any Other (Specify)	Yes/No		

Other Amenities	Availability	Total Number	
TLMs	Yes/No		
Photocopier	Yes/No		
Notice Boards	Yes/No		
Printer	Yes/No		
Any Other (Specify)	Yes/No		

C) Data on Classroom Facility

Trade Name	2014-15			2015-16			2016-17			2017-18			2018-19		
	Classroom Capacity	Total Enrolled		Classroom Capacity	Total Enrolled		Classroom Capacity	Total Enrolled		Classroom Capacity	Total Enrolled		Classroom Capacity	Total Enrolled	
		F	M		F	M		F	M		F	M		F	M

5. Hostel facility

A) Does the NSTI provide separate hostel facility for men and women? (Yes/No)		
B) What are the hostel fees? (in INR)	**Male**	
	Female	

C) If the NSTI offers hostel facility for Candidates please provide related data in table below based on type.

Particulars	Women Hostel	Men Hostel	Family Hostel
Year of Operation started in			
Warden available	Yes/No	Yes/No	Yes/No
Warden	Yes/No	Yes/No	Yes/No
Security Guards Availability	Yes/No	Yes/No	Yes/No

D) Data on hostel accommodation.

	2014-15				2015-16				2016-17				2017-18				2018-19			
	Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Women's Hostel																				
Total no. of rooms																				
Total Number of Beds per room																				

	2014-15				2015-16				2016-17				2017-18				2018-19			
	Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Men's Hostel																				
Total no. of rooms																				
Total Number of Beds per room																				

	2014-15				2015-16				2016-17				2017-18				2018-19			
	Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized		Total Capacity		Capacity Utilized	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Family Hostel																				
Total no. of rooms																				
Total Number of Beds per room																				

E) Does the NSTI offer subsidized canteen facility for its students? (Yes/No)	

6. Transportation facility

A) Does the NSTI provide transportation facility for students? (Yes/No)	
B) Does the NSTI provide separate transportation facility to only female students? (Yes/No)	
C) Does the NSTI provide any subsidy for public transport? (Yes/No)	

D) List out Data on Transportation facility during the academic year 2014-19 in the table below.

Academic Year	Total Bus available				Total Seat Capacity	Average No. of Seats occupied			
	Only Women Buses		Others			Female Occupant		Male Occupant	
2014-15									
2015-16									
2016-17									
2017-18									
2018-19									

7. Student engagement activity

Indicate student engagement activities organized at the institute over the last 5 academic years, including literary competitions, sports day, annual function, and inter /intra institute skill competitions.

S. No.	Activity Name	Date	Activity Description	Activity Type (Inter-NSTI / Intra NSTI)	Total number of students participated

B. Interview schedule: NSTI principal

Name of Respondent: **Gender:**

Contact Information:

Name of Institution: **NSTI Woman (Y/N):**

Awareness

1. Do you think there is an awareness among people regarding the ITI ecosystem and their prospects after completing their CTS (craftsmen training scheme) courses?
2. Do you engage in awareness-raising activities to encourage more aspirants to undertake courses at your institute? (Probe: information disclosed during such activities- financial assistance, state/central governmental schemes, facilities, benefits trainees can avail, etc.) If so, what medium do you use?
   - ☐ Print Media (newspaper advertisements, pamphlets, etc.)
   - ☐ Digital Media (websites, online adverts, etc.)
   - ☐ Awareness drives
   - ☐ School Workshops
   - ☐ Gram Sabha
   - ☐ Any other
3. Do you have any specific awareness drives for female candidates?
4. Do you have a provision in your overall administrative budget for these awareness-raising activities?
5. In your opinion, what motivates an aspirant to join an NSTI/NVTI over a college or a university?
   - ☐ More industry-oriented courses
   - ☐ Courses are more affordable than college/university
   - ☐ More job opportunities in the industry after completing an NSTI course
   - ☐ Government certification
   - ☐ Recruitment for Government jobs
   - ☐ Any other
6. Do you think that measures such as women-only institutions (NSTI/NVTI) has helped encourage more female aspirants to enroll in CITS courses? ☐ Yes ☐ No

Course-related

7. At your institution, what are the proportion of female candidates enrolling for engineering trades?

   (Probe: higher course fees for engineering trades acts as a deterrent against female Enrollment, Enrollment criteria, national and regional social and cultural factors that influence female Enrollment and participation, etc.)
8. Do you think that the kind of courses and/or their structure offered in this institute needs to be changed?

   (Probe: introduction of new courses; change in curriculum content; industry engagement/involvement in the designing of courses; exposure to industry through OJT, apprenticeship, etc.; specific suggestions)

Drop-outs

9. What have you observed about the trend of absenteeism at your institute?

   (Probe: gender disparity, time period, reasons for absenteeism)

10. In your opinion, are those instructor-trainees who miss more classes at higher risk of dropping-out of the course?

    (Probe: courses that see the highest drop-out rates, gender disparity of dropouts)

Infrastructure

11. In your opinion, how is the infrastructure present in NSTIs better than that provided at ITIs?
12. What kind of support in terms of infrastructure is provided to the instructor-trainees at your institution?

    (Probe: hostel; transport- bus services, bus passes, etc.; sanitation- clean & hygienic bathrooms; well-equipped labs, machinery that is up to date with industry standards, crèche/day care, etc.)
13. What are the instructor: trainee and equipment: trainee ratios at your institute? What measures do you take to ensure these ratios?

Industry engagement

14. Does your institution provide any entrepreneurship or self-employment support to your instructor-trainees? If so, what kind of support do you provide them with?

Suggestions

15. Now that the trades under CTS will no longer be run at NSTIs, can you suggest ways in which the existing infrastructure can be utilized?

Gender friendliness of the NSTI

16. What is the proportion of women faculty to the total number of staff employed at NSTI?
    a. Permanent
    b. Part-time
17. Is there any scholarship scheme specifically for female students?
18. What is the proportion of female trainees in the engineering courses offered at the NSTI?
19. Facilities and arrangements:
    a. Residential Available ☐ Yes ☐ No
    b. Hostel availability for female students ☐ Yes ☐ No
    c. Transport facilities for students ☐ Yes ☐ No
        a. If yes, is there any specific transport facility for female students?
    d. Are there separate toilets available for female students at NSTI?

    ☐ Yes ☐ No
20. Does NSTI have any guidelines to ensure safety of female trainees at the institute?

    ☐ Yes ☐ No
21. In the last one year, has any gender sensitization program been carried out for the staff at NSTI?

    ☐ Yes ☐ No
22. Does NSTI organize any special program to encourage females to join the institute?

    ☐ Pre-admission career counselling for females and their families at NSTI

    ☐ Interaction with alumni who have taken employment

    ☐ Interaction with the local industry

    ☐ Any other

23. What is the joining ratio of students in ITI as an instructor after they graduate from NSTI?
24. How many female students join as an instructor/staff in ITIs after they graduate from NSTI?
25. How many Engineering and Non-engineering short-term courses are there in the institute?
26. What is the duration of Engineering and Non-engineering short-term courses?
27. What is the Enrollment in Engineering and Non-engineering short-term courses?
28. What is the drop-out in Engineering and Non-engineering short-term courses?

Employer related tools

A. Employer fact sheet

1. Company Profile

- Name of the Organization:
- Website Address:
- Organization Address:
- District:
- State:
- Year of Establishment:
- Type of Industry: ☐ Government ☐ Private
- Industry type by size: ☐ Large ☐ Medium ☐ Small ☐ Micro
  ☐ Any Other (Please Specify)

2. Respondent Information

- Name of the Respondent:
- Gender (M/F/Other):
- Email address:
- Contact Number: Landline _____ _____
  Mobile _____
- Designation:
- Current Status (Permanent/Temporary):
- Years of total experience:
- Highest Educational Qualification:

3. Employee Data

A. Total number of employees in the organization

2014-15						2015-16						2016-17						2017-18						2018-19					
Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual	
		F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M

B. **Total number of attrition of employees in the organization**

2014-15						2015-16						2016-17						2017-18						2018-19					
Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual	
		F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M

C. **Total number of apprenticeships in the organization**

2014-15						2015-16						2016-17						2017-18						2018-19					
Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual		Dept.	Job Role	Permanent		Contractual	
		F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M			F	M	F	M

D. **Total number of employees in the organization**

Department	Job Role	Shift 1		Shift 2		Shift 3	
		Male	Female	Male	Female	Male	Female

4. **Sourcing of ITI graduates**

   a. Number of ITI graduates hired in a year

   b. Number of female graduates hired in a year

   c. List of ITIs from where graduates are sourced

   d. Distance of sourcing from
   ☐ 0-50 km ☐ 50-100 km ☐ 100-200 km ☐ 200-350 km ☐ 350 km and above

5. **Knowledge partnership**

   a. Number of staff members who visit an ITI as a guest faculty in an academic year, if any?

   b. Number of company visits arranged for ITI trainees, in a year for practical learning, if any?

6. **Infrastructure details**

   - Civil infrastructure

     a. How many toilets are there in the company working premises? (in nos.)

     b. How many toilets are equipped with western commode? (in nos.)

     c. Do you have separate toilets for men and women? (Yes/No)

     d. Do you provide accommodation to your employees? (Yes/No)

e. Does the company provide any transport facility to its distant employees? (Yes/No)

f. If yes, how many buses run that provide transport services?

- Support infrastructure

a. Is there a dispensary facility with a regular doctor visit? (Yes/No)

b. Is there a crèche facility for the employees? (Yes/No)

A. Interview schedule: employer for female employees

Name of Respondent: **Professional Designation:**

Contact Information:

Name of Organization:

Size of the organization (No. of employees)

Recruitment of female employees

1. Do you think it is important to have women employees in an industry? Could you elaborate on the reasons for your response? (Probe: Does the respondent think there is any benefit of having female employees or it creates more problems and additional work)
2. Does your company have a policy to encourage diversity among employees? If yes, could you please elaborate on the same? (*Probe: any company policy to engage women, persons with disability as employees)*
3. Does your company engage with the local ITIs? If so, could you please elaborate on the nature of engagement? (Probe: public private partnerships, IMCs, machine donations, guest faculty/lecturers, field visits, apprenticeships, OJT, etc.)
4. Does your company go to ITIs for campus recruitment or take some other measures to recruit ITI graduates?
5. Does your company take proactive measures to reach out to female ITI graduates to encourage them to join your organization or would you rather recruit male ITI graduates? Please give reason for your response. *(Probe: quality of skill, geographical distance of sourcing, social and cultural factors such as marriage and childcare, job roles recruited for, etc.)*

Workplace related

6. In your experience do women face any challenges to work in an industry which is male dominated? If you think they do, could you please elaborate on this.
7. More specifically, do you need to make any additional provisions for women at workplace? (Probe: sanitation in terms of separate toilets for men and women, clean toilers, sanitary product dispensers; crèche facilities; safety infrastructure, transportation, flexi working hours etc.)
8. Does the company face any challenges to have female employees- for example, ensure safety of women, ensure no sexual harassment takes place? (Probe: more absenteeism, lack of female supervisors etc.)
9. Does the company have a policy of giving equal wages to men and women for the same amount of work done or is there a difference? If no, what is the reason for it?

Opportunities for women in the industry

10. Do you observe a change in trend with regard to women seeking employment in the industry? Please elaborate on the reason for your response. (Probe: is the number increasing or decreasing or no change)
11. With advances being made in the technical/digital space there are some new potential areas for which women can be imparted training? Could you mention some of these areas? (Probe this aspect)
12. Are there some job roles for which you think women are more suited, but you find it hard to find skilled women? Could you please specify?

Suggestions:

13. What specific measures can employers take in creating an environment which encourages diversity?

B. Interview schedule: employer for female apprentices

Name of Respondent: **Professional Designation:**

Contact Information:

Name of Organization:

Size of the organization (No. of employees)

Recruitment of female apprentices

1. Do you think it is important to have women apprentices in the industry? Could you elaborate on the reasons for your response? (Probe: Does the respondent think there is any benefit of having female apprentices or it creates more problems and additional work)
2. Does your company have an obligation to provide opportunities for apprenticeship? What is the process followed to take apprentices?
3. Does your company take proactive measures to reach out to potential female apprentices? If so, could you elaborate on this?
4. In your experience do women apprentices face any challenges to work in an industry which is male dominated? If you think they do, could you please elaborate on this.
5. More specifically, do you need to make any additional provisions for women apprentices at the workplace? (Probe: sanitation in terms of separate toilets for men and women, clean toilers, sanitary product dispensers; crèche facilities; safety infrastructure, transportation, flexi working hours etc.)
6. Does the company face any challenges to have female apprentices - e.g. ensure safety of women, ensure no sexual harassment takes place? (Probe – more absenteeism since they have additional responsibilities at home, reluctance to do physically strenuous work etc.)
7. Does the company have a policy of giving equal stipend to men and women apprentices for the same amount of work done or is there a difference? If no, what is the reason for it?

Suggestions:

8. What specific measures can employers take in creating an environment which is inclusive of female apprentices?

C. Interview schedule: apprentices

Name of Respondent:

Fresher/Non-fresher apprentice:

Age:

Contact Information:

Name of Industry:

Size of the Industry (no. of workers):

Background information

Kindly share the following information with us:

1. Marital status

   ☐ Single ☐ Married

2. Social group

   ☐ General ☐ ST ☐ SC ☐ OBC

3. What is your highest educational qualification?

   ☐ 8th Pass ☐ 10th Pass ☐ 12th Pass ☐ ITI ☐ Polytechnic ☐ PMKVY/MES

   ☐ Other _____

4. If not attended ITI/PMKVY/MES, are you a fresher?

   ☐ Yes ☐ No

5. If it is class 12, what subject stream were you following:

   ☐ Science ☐ Commerce ☐ Humanities

6. Tell us something about your family. What is the occupation of your family? (Multiple Responses)

   ☐ Self-employed ☐ Salaried Job ☐ Daily wage worker ☐ Farming

   ☐ Other _____

7. What is your family's annual income approximately?

   ☐ Less than 1 Lakh ☐ 1-5 Lakhs ☐ 5-10 Lakhs ☐ More than 10 Lakhs

Accessing apprenticeship

8. How did you get to know about apprenticeship training? (Multiple responses)

   ☐ Through School

   ☐ ITI/Polytechnic

   ☐ Relative/Family Member/Friend

   ☐ Teacher/Instructor

   ☐ Newspaper Advertisement/Pamphlet

   ☐ NGO/ Social Enterprise

   ☐ Awareness campaign by the industry

   ☐ Online Advertisement

   ☐ Gram Sabha

   ☐ Other_____

9. Why did you choose to take up apprenticeship training? (Multiple responses)
   - ☐ Government Certificate (National Apprenticeship Certificate)
   - ☐ Soft Skills Acquisition
   - ☐ Industry Exposure
   - ☐ Higher Education
   - ☐ Part of existing course curriculum
   - ☐ Other _____
10. What was the reaction of the family when they got to know that you will be taking up apprenticeship training?
   - ☐ They were very happy and supportive
   - ☐ They were not happy and tried to dissuade me from taking up apprenticeship training
   - ☐ They were worried as to how I would manage working in an industry
   - ☐ They were indifferent
   - ☐ Other _____
11. How many women apprentices are there in the institution where you are pursuing your apprenticeship?
   - ☐ Total apprentices
   - ☐ Female apprentices
12. How many hours do you spend a week in the apprenticeship training?
13. Did you get any incentive/scholarship during your apprenticeship training? If yes, what was the amount?
14. Are you satisfied with the amount you receive as stipend?
15. Have you faced any problems in accessing apprenticeship training? (Multiple Responses)
   - ☐ Limited availability of apprenticeship training in sector/trade of choice
   - ☐ Unavailability of opportunities for ATS in local area
   - ☐ Apprenticeship training opportunities are more in engineering related occupations
   - ☐ Difficult to get complete information about ATS
   - ☐ Lack of guidance
   - ☐ Other_____
16. What kind of initiatives does your institution undertake to encourage female trainees to take up apprenticeship? (applicable for ITI graduate apprentices only)
17. In your opinion, how relevant is your current apprenticeship training to your previous training at ITI/Polytechnic/PMKVY? (Probe: trade curriculum, skills learned in institute/program and how they match with apprenticeship training, new skills learned during apprenticeship training, skill gaps, quality of previous training in context of apprenticeship training, problems faced with respect to skills and training during apprenticeship training)

18. As fresher apprenticeship48, what were the factors that influenced you while selecting your sector and trade for apprenticeship training? (multiple responses)

- ☐ Personal aspiration/ interest
- ☐ Employability- many jobs available in the specific sector in local area
- ☐ Recommendations from family/friends
- ☐ Reservation for SC/ST/OBC candidates for trades
- ☐ Wanted to start earning money
- ☐ Other _____

19. Do you find the apprenticeship training experience useful? (Probe: clarity about the competencies he/she will acquire after the training, will it help in getting a well-paying job or will they need to pursue an additional course)

Workplace related issues

20. Which one of these are a matter of concern for you while pursuing your apprenticeship training (Multiple responses).

- ☐ Low Stipend
- ☐ Lack of female supervisors
- ☐ Length of the apprenticeship training
- ☐ Conditions of infrastructure at the apprenticeship location (e.g. availability of clean toilet, a separate staff room for women)
- ☐ Safety issues at workplace
- ☐ Distance of Apprenticeship location from home
- ☐ Unavailability of direct and safe transportation routes
- ☐ Uncertainty about getting a job after training ends
- ☐ Having to move to a different location to undertake apprenticeship training
- ☐ Other _____

21. In your view, what specific (sic gender-related) problems females encounter during their apprenticeship training? (Multiple responses)

- ☐ Employer was hesitant to hire female apprentices for certain sectors/trades
- ☐ Apprentice's participation is impacted by personal problems (family support, marriage, childcare, etc.)
- ☐ Limited family support for apprentice's decision to undertake training due to local social and cultural norms
- ☐ Infrastructure at apprenticeship location is not gender inclusive (toilets, rest rooms)
- ☐ Commute to apprenticeship location is not safe (threat of harassment, etc.)
- ☐ Other _____

[48] Fresher are those apprentices who do not have the basic training or qualification in the trade they have applied to undergo apprenticeship training directly to the industry

22. Based on your apprenticeship training experience, what support is required from employers to increase female participation in apprenticeship? (Multiple responses)

- ☐ Increase the stipend amount
- ☐ Provide transportation to commute
- ☐ Provide residential facilities
- ☐ Take measures to ensure safety of women
- ☐ Offer flexi hours to women apprentices
- ☐ Ensure that the infrastructure at the apprenticeship location are gender friendly
- ☐ Provide a supportive environment for learning through female supervisors
- ☐ Other_____

Aspirations post apprenticeship training

23. What would you like to do after you complete your apprenticeship training? (Multiple responses)

- ☐ Get a job in a large, private company
- ☐ Get a government job
- ☐ Become self-employed
- ☐ Become an entrepreneur
- ☐ Higher Education
- ☐ Other _____

24. What support would you require in order to do so?

- ☐ Guidance about pursuing a job or higher education
- ☐ Information about availability of job and working terms and conditions
- ☐ Linkage with an institution from where I can get loan to become self-employed/ entrepreneur

25. Would you be open to taking up a job that is far off from where you reside?

- ☐ Yes
- ☐ No

26. Please give reason for the same (probe reasons – family related, security, sufficiency of wage, fear of the unknown)

Suggestions

27. What measures can be taken to encourage more females to undertake apprenticeship training in India?

- ☐ Diversification of sectors/trades in which apprenticeship training is offered to give more choice
- ☐ Increase availability of apprenticeship training in rural areas
- ☐ Increase the amount of stipend
- ☐ Encourage more apprenticeship training opportunities in MSMEs
- ☐ Increase awareness of ATS in educational institutions (schools, ITIs, etc.)
- ☐ Make the transition to the labor market easier for apprentices after they complete their training
- ☐ Any other _____

Interview schedule: key Informant

Name of Respondent: **Gender (Male/Female):**

Contact information:

Name of Organization (if applicable): **Location (Rural/ Urban):**

Societal Perception and Awareness of ITIs

1. There are several opportunities for men and women to enhance their levels of education and skill – through colleges, polytechnics and ITI s. What is your opinion about the ITI s as educational institutes? (P*robe: societal perceptions of ITI – whether they have a positive image of the ITI s*)
2. In your opinion, how suitable are the ITI s for women? Should women be encouraged to join ITIs? Please give reasons for your response. (*Probe – reasons for not joining ITI s;)*

Enrollment and Participation in ITIs

3. Do you think there is a difference in the kind of courses men and women enroll in ITIs for? If so, why do you think this difference exists?
4. What kind of subjects and courses do you think women might be interested in?

   (Probe: courses that are non-traditional, trades that are considered to be male-dominated, trades that are not offered by the ITI ecosystem but for which there is demand)
5. Data shows that many women take admission in ITI s and but drop out before completion of the course. What could be the reasons for this?

   (Probe: job placement, higher education, preparing for entrance exams, trainee's aspirations vs course structure/content, marriage, domestic/household responsibilities, ease of transport, family support, etc.)

Support required

6. Have you come across any women who enrolled themselves in ITI courses before? If so, in your view what kind of support they require in order to pursue their course? (multiple responses)

   ☐ Relaxation from household work ☐ providing transport to ITI Campus

   ☐ Financial Support ☐ Encouragement ☐ Other
7. Generally, what are the expectations from a girl once she completes her training? (multiple responses)

   ☐ Getting a job in a big company ☐ getting a government job

   ☐ Owning her own business ☐ Higher education

   ☐ Not working- marriage/ supporting her family ☐ other

Employability of Female ITI Graduates

8. What problems do you think women are likely to face when they work in the labor market (Factories)? (Probe – safety issues, harassment, difficulty to adjust when they get a job far away from their home; managing both home and work)
9. Do you think self-employment or entrepreneurship is more suitable for women after they complete their course at ITI? If yes, then what support should be given to them to get self-employed or become entrepreneur? *(Probe – support by family, access to finance, mentoring)*

Suggestions

10. Do you have any suggestions to increase female enrollment and participation in ITIs?

Notes

Notes