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Apprenticeships Development for
Universal Lifelong Learning and Training (ADULT)

▶ Good practices in apprenticeships in India: Challenges and opportunities



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Apprenticeships Development for
Universal Lifelong Learning and Training (ADULT)

▶ **Good practices in
apprenticeships in India:
Challenges and opportunities**

▶ Foreword

New technologies, demographic shifts, climate change, globalization and more recently the crisis such as global health pandemic are causing major disruptions to the world of work. Against this backdrop, it becomes ever more important to build an agile workforce capable of navigating the fast-changing labour market through appropriate and timely skilling, reskilling and upskilling. The use of apprenticeship models or dual training systems can be an effective solution in the context of the future of work, as it bridges the gap between education and training system and the world of work.

Although apprenticeship is a centuries-old system which enable young persons to acquire skills related to specific occupations, questions are increasingly being raised about its relevance for skilling, reskilling and upskilling in the context of the future of work and lifelong learning.

The ILO has therefore launched a research project – *Apprenticeship Development for Universal Lifelong Learning and Training (ADULT)*– which aims to generate new ideas and policy options to modernise apprenticeship systems. The project is funded by the Government of Flanders. The research aims to explore how apprenticeship systems are being modernised and transformed to promote and enable lifelong learning and decent work for youth, adults, and older workers (both employed and unemployed) and provide recommendations for modernizing the apprenticeships in the country. The research also covers other forms of work-based learning options for students in VET institutes.

The country-level report “*Good practices in apprenticeships in India: Challenges and opportunities*” has been produced by the ILO as part of the ADULT project. It provides the overview of the apprenticeship system in India and discuss in detail the various reforms undertaken to promote apprenticeship in the country. With the help of primary research conducted as part of the report, new ideas and policy options have been evolved which enables lifelong learning mainstreaming apprenticeship in the TVET system of the country.

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▶ List of acronyms

AAs	Apprenticeship Advisors
ACME	Auto Component Manufacturers Association
ADB	Asian Development Bank
ADULT	Apprenticeships Development for Universal Lifelong Learning and Training
AICTE	All-India Council of Technical Education
AITT	All India Trade Test
ASDC	Automotive Skill Development Council
ATS	Apprenticeship Training Scheme
B.Com	Bachelor’s in Commerce
B.Sc	Bachelor’s in Science
BA	Bachelor’s in Arts
BBA	Bachelor’s in Business Administration
BCA	Bachelor’s in Computer Application
BOATs	Boards of Apprenticeship Training

BTCs	Basic Training Centres
CAC	Central Apprenticeship Council
CAGR	Compounded Annual Growth Rate
CCEA	Cabinet Committee on Economic Affairs
CEO	Chief Executive Officer
CII	Confederation of Indian Industries
CMIE	Centre for Monitoring Indian Economy
CSTARI	Central Staff Training and Research Institute
CTS	Craftsmen Training Scheme
DDU-GKY	Deen Dayal Upadhyay Grameen Kaushal Yojna
DGE&T	Directorate General of Employment and Training
DGT	Directorate General of Training
DHE	Department of Higher Education, Ministry of Education
DSC	District Skill Committee
DST	Dual System of Training
DT	Designated trades
FPOs	Farmer Producer Organizations
FY	Financial Year
GDP	Gross Domestic Product
GoI	Government of India
IA	Industry Association
ITI	Industrial Training Institute
ILO	International Labour Organization
IMC	Institute Management Committees
IT/ITeS	Information Technology/Information Technology enabled services
LFPR	Labour Force Participation Rate
LMIS	Labour Market Information System
MAY	Gujarat's Mukhyamantri Apprenticeship Yojana
MHRD	Ministry of Human Resource and Development
MoE	Ministry of Education, Department of Higher Education
MoLE	Ministry of Labour and Employment
MoSPI	Ministry of Statistics and Programme Implementation
MoU	Memorandum of Understanding
MSDE	Ministry of Skill Development and Entrepreneurship

MSMEs	Micro, Small, and Medium enterprises
NAPS	National Apprenticeship Promotion Scheme
NASSCOM	National Association of Software and Services Companies.
NATS	National Apprenticeship Training Scheme
NCO	National Classification of Occupations
NCVET	National Council for Vocational Education and Training
NEEM	National Employability Enhancement Mission
NEET	Not in employment and education
NITI AAYOG	National Institute for Transforming India AAYOG
NOS	National Occupational Standards
NRLM	National Rural Literacy Mission
NSDC	National Skill Development Corporation
NSDP	National Skill Development policy
NSQF	National Skills Qualification Framework
NSTI	National Skills Training Institutes
NSTI-W	National Skills Training Institutes for Women
NTC	National Trade Certificate
OECD	Organisation for Economic Co-operation and Development
OJT	On the job training
OT	Optional trades
PLFS	Periodic Labour Force Survey
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PPP	Purchasing power parity
PSU	Public sector units
QP	Qualification Pack
RDAT	Regional Directorates of Apprenticeship Training
RPL	Recognition of Prior Learning
SAAAs	State Apprenticeship Advisers
SSCs	Sector Skill Councils
SME	Small and Medium Enterprises
STT	Short-Term Training
TPAs	Third-Party Aggregators
TVET	Technical Vocational education and training
UGC	University Grants Commission
UT	Union Territories
VET	Vocational Education and Training
WBL	Work-based Learning

Executive Summary

Technological advancements, demographic shifts, climate change, globalization and more recently, the coronavirus disease (COVID-19) pandemic are causing major disruptions in the world of work. Against this backdrop, the challenge of creating decent jobs for all remains a top priority in many countries. As these global megatrends cause the loss of some jobs while creating new ones, capitalizing the opportunities that are presented will depend on building an agile workforce capable of transitioning smoothly to newly created jobs through appropriate and timely skilling, reskilling and upskilling.

While there is no one-size-fits-all approach, apprenticeships are an indispensable component of any strategy designed to address future challenges in the world of work. However, apprenticeship systems need to be modernized and transformed to respond to these paradigm shifts.

The *Good practices in apprenticeships in India: Challenges and opportunities* has been developed by the International Labour Organization (ILO) as part of a global project titled “Apprenticeships Development for Universal Lifelong Learning and Training (ADULT)”. The research aims at generating ideas and policy options to modernize apprenticeship systems and to promote and enable lifelong learning and decent work for youth, adults and older workers (both employed and unemployed). The research also looks at other forms of work-based learning (WBL) options for students in vocational education and training (VET) institutes.

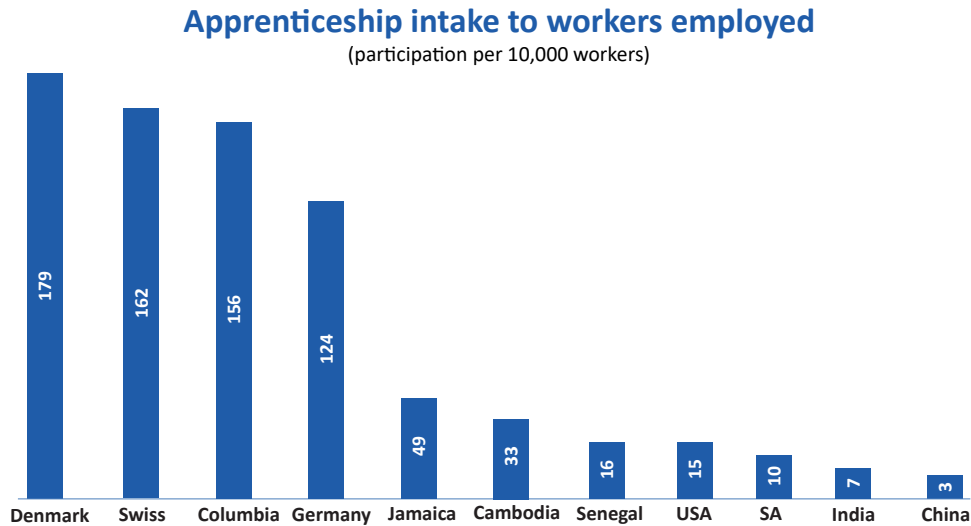
As the ADULT project is being implemented in close partnership with the Ministry of Skill Development and Entrepreneurship (MSDE) in India, the focus of the research has been the apprenticeship programme implemented by the MSDE. However, for a holistic view of the apprenticeship ecosystem, other apprenticeship and WBL programmes, such as the National Apprenticeship Training Scheme (NATS), the National Employability Enhancement Mission (NEEM), etc. have also been included where required.

In India, more than 90 per cent of registered apprentices complete the apprenticeship they undertake; 66 per cent get placed within 6 months and 81 per cent within 12 months of completing the course, which is much higher than any other form of skills training in the country. However, as noted by the MSDE, the proportion of young people in apprenticeships compared to technical vocational education and training (TVET) programmes is as low as 1:4. (or that apprentices are 25 per cent of the total yearly intake of industrial training institutes’ students).¹

An evaluation study of the NAPS carried out by the National Productivity Council (2021) states in its major findings that (a) the benefits of apprenticeship are beginning to be understood by establishments; (b) the youth find it an extremely useful programme for increasing their chances of employment; and (c) although the number of apprentices has been increasing year-on-year and has crossed 500,000 apprentices in March 2022, given the size of the workforce, the potential capacity of engaging apprentices in the country is almost 2–2.5 million contracts at any given point.

Per the Apprentices Act, 1961, for every 10,000 employed workers across establishments (of various sizes) in India, there should be 250–1,500 apprentices engaged by them. However, the apprentices’ intake per 10,000 workers in India is as low as 7 apprentices, which is much lower than Denmark, Switzerland, Columbia and Germany, and it is even lower than Cambodia, South Africa and Senegal (figure 1).

¹ This information was obtained from the MSDE’s responses to Questionnaire A of the ILO’s evaluation tool for apprenticeship training.

Figure 1: Apprenticeship intake per 1,000 workers employed

Source: Aggarwal (2022)

The MSDE, in its Draft Concept Note on Amendments in Apprentices Act, observed that implementation of the Act in India has not been very effective as many of the eligible establishments² are not implementing the Act (MSDE 2021).

The growing importance of apprenticeship and WBL in India is evident from the number of amendments in the Apprentices Act and in the Apprenticeship Rules, 1992 (hereafter Apprenticeship Rules). These have been introduced by the government to make apprenticeship aspirational for the youth and to promote the ease of undertaking apprenticeships in industry.

Though both employers and the Indian Government see apprenticeship as a preferred and productive route for skilling youth, the present utilization of apprenticeship positions reinforces the belief that apprenticeship in India needs to be reformed – there is clearly a need to increase the quality and number of apprentices in the labour market .

The primary research conducted as part of this report highlighted a number of challenges and areas that require reform. Based on consultations with the MSDE and other key stakeholders, five major themes were identified for detailed study and analysis in order to provide policy recommendations to modernizing apprenticeship. These themes include:

► **Mainstreaming apprenticeship in the technical-vocational education system and developing progression pathways**

Given the rapid changes in the modern labour markets and that an increasing number of people are pursuing higher education in India, apprenticeship can become aspirational if these programmes provide options for access to higher levels of skilling through both vertical and lateral mobility. This theme presents an example of the possible pathways for progression in the carpentry trade sector, proposing links between apprenticeship and craftsmen-training schemes.

² All establishments (units/employers) that have a workforce (regular employees and contract labour) of 30 or more workers are mandated to undertake apprenticeship programmes in a range from 2.5 per cent to 15 per cent of its workforce every year. For establishments that have a workforce between 4 and 29 workers, this is optional.

▶ **Formalizing informal skills through apprenticeship training**

Small enterprises provide employment to a large section of the rural and urban population and are learning grounds for the casual workforce in India. Much of the workforce who start working in the informal sector soon acquire technical skills and then enter the formal labour market. Informal apprenticeships, therefore, can be seen as an effective way to prepare the skilled workforce with the right proportion of hands-on skills and is, thus, the need of the hour.

This theme presents some of the existing practices that address informal apprenticeships. It provides recommendations on how to implement the cluster-based model for apprenticeships and how to use the recognition of prior learning (RPL) to provide apprenticeship opportunities to those who have learnt skills through informal apprenticeships.

▶ **Effective apprenticeship management through (a) minimizing multiplicity (b) target setting and advocacy and (c) awareness building and communication**

The MSDE has been given the ambitious target of registering 1 million apprentices by end of 2022, which is a 100 per cent increase from the current number. Achieving such targets requires a well-managed system. This theme suggests the implementation of a basic management system that can support the effective setting of apprenticeship targets, monitor and undertake corrective action, implement a communication strategy, conduct proper housekeeping through managing multiplicities, ensure effective coordination among the various departments and ministries implementing apprenticeships, etc. is essential to the value apprenticeships provide.

▶ **Convergence among various WBL schemes**

Apprenticeship and WBL programmes being offered to young people from different academic background are normally operated in silos. To make apprenticeships aspirational, there is a need to synergize these and the other such apprenticeship programmes and provide young people with a progression pathway and employers with a systematic training plan. To promote synergies in the apprenticeships being offered by different ministries, a suggestion has been made for setting up an autonomous body with the required leadership and decision-making power, which should coordinate and oversee the implementation of the converged model of apprenticeship and WBL.

▶ **Enhancing and strengthening the role of intermediaries in the apprenticeship system**

There is a need to expand and strengthen the role of intermediaries in promoting apprenticeships in India. To fully realize the potential of intermediaries (referred to as third-party aggregators (TPAs) in India) in supporting which micro, small and medium enterprises (MSMEs) implement apprenticeship programmes, there is a need to plan strategies in close cooperation with all key stakeholders: TPAs, sector skill councils (SSCs) and MSME/cluster associations (which include rural industry associations, handicraft and handloom clusters, etc.). The involvement of TPAs should be made equally available to both optional trades and designated trades. It is important for the enabling factors required for this to be reviewed and addressed.

In addition to these five themes, the research also pointed to the need to:

- ▶ Establish a coordinated approach among the key implementing ministries: Apprenticeship in India, under the Apprentices Act, is being implemented by two ministries, the MSDE and the MoE. While both ministries have their specific target groups, the overall structure of the apprenticeship training is similar as it falls under the guidelines in the Apprentices Act. Since most companies happen to engage apprentices who fall under the purview of both the MSDE and MoE, Indian industry finds it challenging to deal with the entirely different processes implemented by the two ministries. Hence, there is a felt need, as expressed by respondents of the primary research, to promote a coordinated approach for the apprenticeships offered by the MSDE and MoE.

- ▶ Undertake concurrent evaluation and studies on apprenticeship systems
- ▶ Build capacity of the stakeholders involved in apprenticeship implementation and management, especially for in-company trainers who play an important role in the training of apprentices.

The research report has been enriched by discussions that took place in a two-day innovation bootcamp titled “Apprenticeship in India: Country strategy” held from April 27–28, 2022. The bootcamp, jointly organized by the ILO with the MSDE, had three major objectives:

1. To deliberate the recommendations provided in the ADULT country research report on apprenticeships
2. To learn from the global good practices in apprenticeships, and
3. To contribute to shaping the national strategy for apprenticeship 2030.

The results of the discussions in the bootcamp are included in this report.

The structure of the report

This report is structured in four main chapters.

▶ Chapter 1: Introduction

This chapter sets the context, in terms of (i) the economy, (ii) the labour market and (iii) the status of apprenticeships and other forms of WBL in the country. This is done from the point of view of the ways in which the modernization of apprenticeship fits into the broader education and training system.

▶ Chapter 2. Research approach and methodology

This chapter presents the methodology used – the application of questionnaires, the type of stakeholders involved, as well as the analytical approach taken. It also presents the major findings of both the background report and the research-based questionnaire processes, and it concludes with the identification of the key thematic areas of interest to stakeholders and which have been further researched to provide policy recommendations.

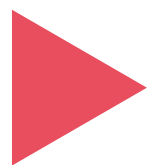
▶ Chapter 3: Recommendations

This section analyses the five key thematic areas identified in Chapter 2. Each of these has the following structure:

- ▶ Major constraints and challenges
- ▶ Ongoing policy initiatives
- ▶ National and international examples of good practice, and
- ▶ Recommendations.

▶ Chapter 4: Conclusion

This section consolidates the key recommendations arising from the research.



1

Introduction

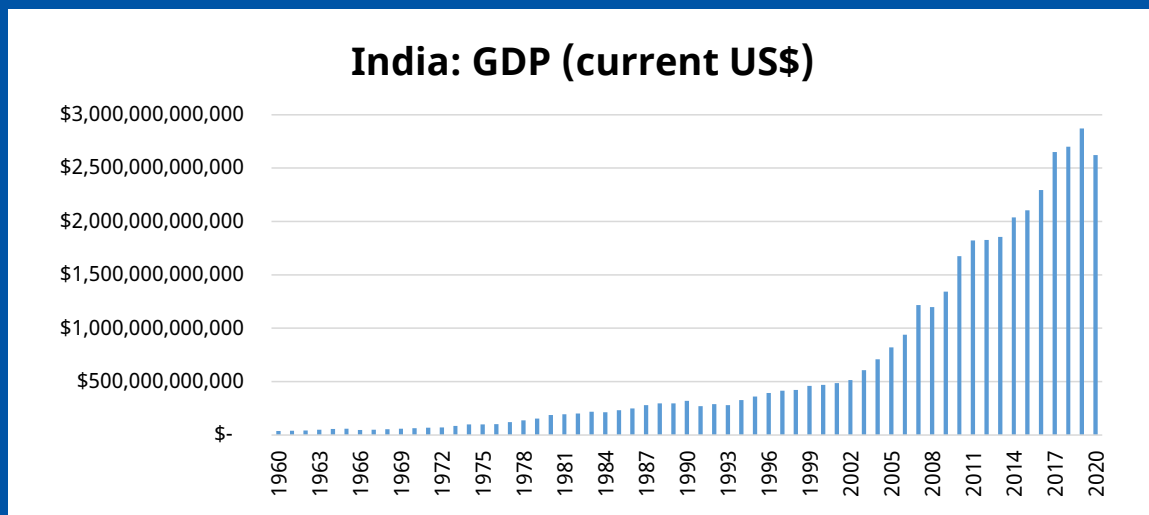
Introduction

This chapter sets the context, in terms of (i) India's economy (ii) the labour market situation with respect to the need for an apprenticeship programme, and (iii) the status of apprenticeships and other forms of WBL in the country and the ways in which the modernization of different practices fits into the broader education and training systems.

► 1.1 The economy of India

India is a developing nation and according to the World Bank, it lies in the lower-middle income group. Its economy is characterized as a middle-income, developing market economy. It is the world's sixth-largest economy by nominal gross domestic product (GDP) and the third largest by purchasing power parity (World Bank n.d.). India is also the world's largest democracy and the world's second-most populous nation.

Figure 3. India's GDP current price (in US dollars, millions)



Source: World Bank (n.d.)

Figure 3 shows the GDP of India in the last 60 years. The long-term growth perspective of the Indian economy remains positive due to its young population and corresponding low dependency ratio, healthy savings and investment rates, increasing globalization, and integration into the global economy. The economy slowed in 2017, due to the shocks of demonetisation in 2016 and the introduction of the Goods and Services Tax in 2017.



According to CIA Factbook,⁴ in 2017, the sector-wise composition of the Indian GDP was: agriculture (15.4 per cent), industry (23 per cent) and services (61.5 per cent). The agricultural sector's contribution to the Indian economy is much higher than the world average (6.4 per cent). The industry and services sector's contribution is lower than the world's average – 30 per cent for the industry sector and 63 per cent for the services sector.

According to the Confederation of Indian Industries (CII), the Indian manufacturing sector currently contributes 16-17 per cent to the national GDP and provides employment to around 12 per cent of the country's workforce (2014). Various studies have estimated that every job created in manufacturing has the multiplier effect of creating two to three jobs in the services sector. In a country like India, where employment generation is one of the most pressing policy issues, the role of the manufacturing sector is key in achieving inclusive growth. One of the main resources that can help achieve this growth is a pool of highly skilled workers. Boxes 3 and 4 show the pressing need that the Auto Component Manufacturers Association, and the information technology (IT) and IT-enabled services (ITeS) sectors face in terms of a shortage of skilled workers.

Box 1: Shortage of skilled workers in the Indian auto industry

The shortage of skilled labour is hurting production at India's auto component firms.

Deepak Jain, the president of the Auto Component Manufacturers Association, speaking at a webinar on the performance of the auto component industry in a post-COVID world said, "We are still struggling to get more labour – skilled manpower to be precise."

The auto components industry employs around 5 million people and accounts for 2.5 per cent of the country's GDP; 25 per cent of its manufacturing GDP and 4 per cent of exports. Jain said productivity has suffered due to social distancing norms, but the bigger concern is the shortage of labour.

Source: CRISIL (2021)

⁴ India GDP sector-wise 2021 - StatisticsTimes.com



Box 2. Shortage of skilled workers in the Indian IT industry

While reporting on the shortage of workers in the Indian IT sector, an editorial for the Skill Reporter stated that Amit Aggarwal, the CEO of NASSCOM expressed his concern about the skilled workforce shortage in the IT industry (February 2020). He also said that India will struggle to find skilled “techies” for 230,000 jobs in the Big Data and Artificial Intelligence domain in the future. By 2021, this shortage is likely to rise to 780,000 vacant job posts.

Source: Certif-D (2020).

According to a DW Asia story published in 2021, a report by World Economic Forum in January 2021 showed that investment in upskilling could potentially boost the global economy by US\$6.5 trillion (€5.45 trillion) and India’s economy by US\$570 billion by 2030.

► 1.2 The labour market scenario

India has a young demographic profile and is home to 500 million workers, the Indian labour force in 2019 was the world’s second largest. Young people (18–29 years) constitute 22 per cent of the country’s population, totalling 261 million people, which is more than the population of many countries in the world, other than Indonesia, the US and China (Worldometer n.d.).

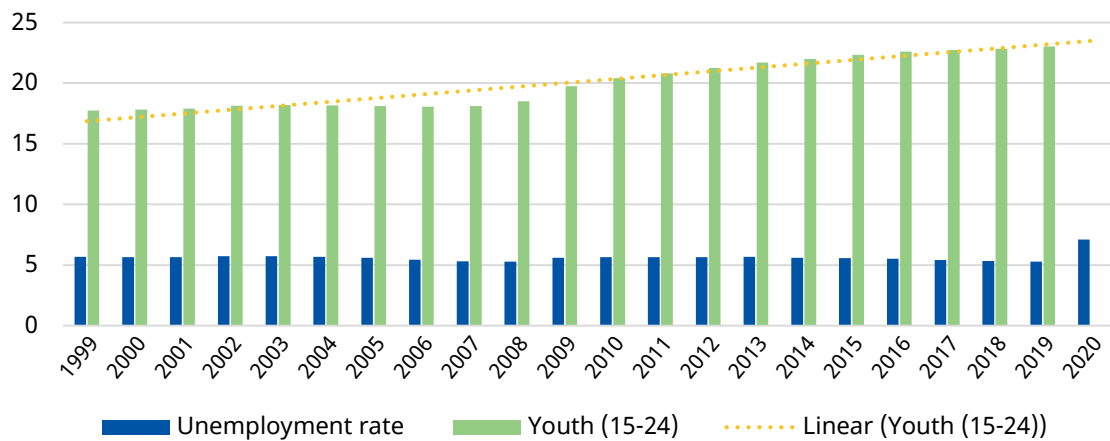
However, this advantage, often termed as a demographic dividend, will remain a numerical strength unless India proactively and consciously focuses on the overall development of its young people (Bang 2021), and beginning from 2021, India has only 10 years to hold on to this dividend. The Youth in India report published by the Ministry of Statistics and Programme Implementation (MoSPI) (2022) states that the median age of the Indian population was around 28 years in 2021 and would become 31 years by 2031.

1.2.1 Unemployment rate and labour force participation rate

India’s unemployment rates in general are not particularly high when compared to other countries (O’Neill 2022). Both India’s unemployment rate and youth unemployment rate are below their global

equivalents. A comparison between the youth unemployment rate (those in the workforce aged 15 to 24 years and without a job but actively seeking one) and the national unemployment rates shows that the youth unemployment rates are higher, which is a normal phenomenon across countries, and India is no exception. As a share of all unemployment, over 80 per cent of the unemployed are in 15-24 cohort. Figure 4 shows India’s unemployment rate over the last two decades (1999–2020).

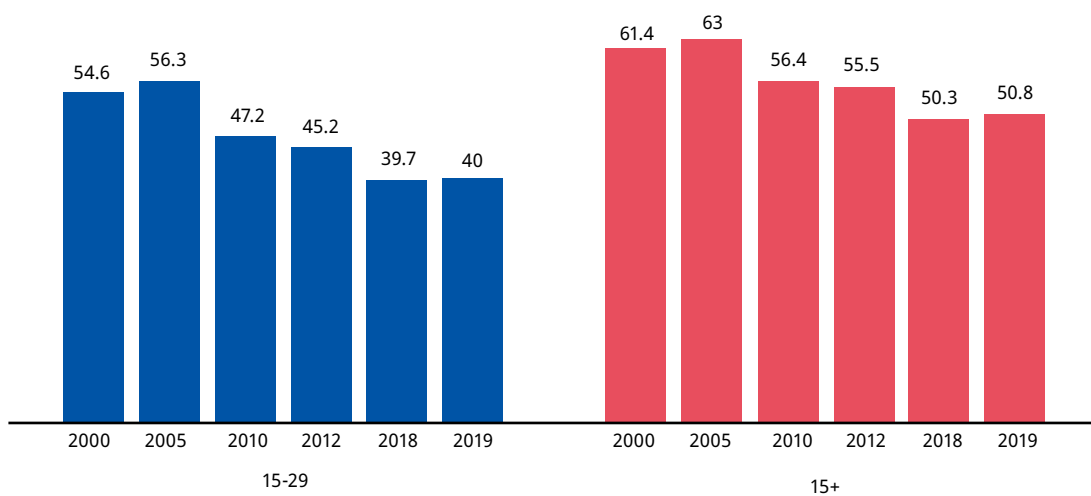
Figure 4: Unemployment rate in India (1999–2020)



Source: O’Neill (2022)

The labour force participation rate (LFPR) mapped from 2000 to 2019 in figure 5 shows a gradual decline, and it demonstrates that the decline is more prominent for young people (between the ages of 15–29 years) in comparison to the population in the labour force (which is 15 years and above) (Majid 2021).

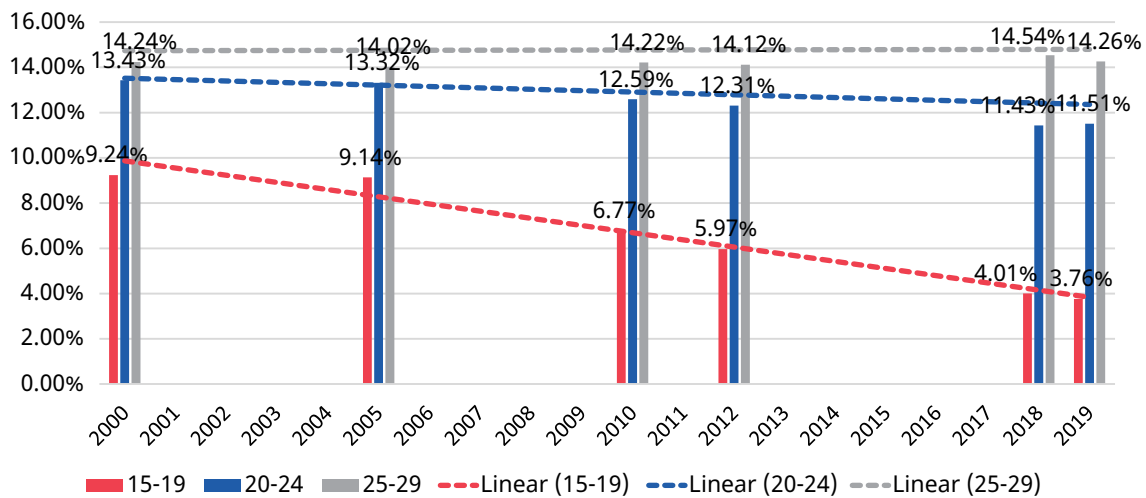
Figure 5: Labour force participation rate in India (2000–2019)



Source: Majid (2021).

Majid (2021) explains that part of the decline in the LFPR can be explained by the increase in the numbers of young people pursuing higher education. This can be seen as preparation to join the labour market later. However, a part of the decline may well be due to increased inactivity with some people simply withdrawing from the labour market.

Figure 6: Share of youth cohorts as a percentage of the labour force

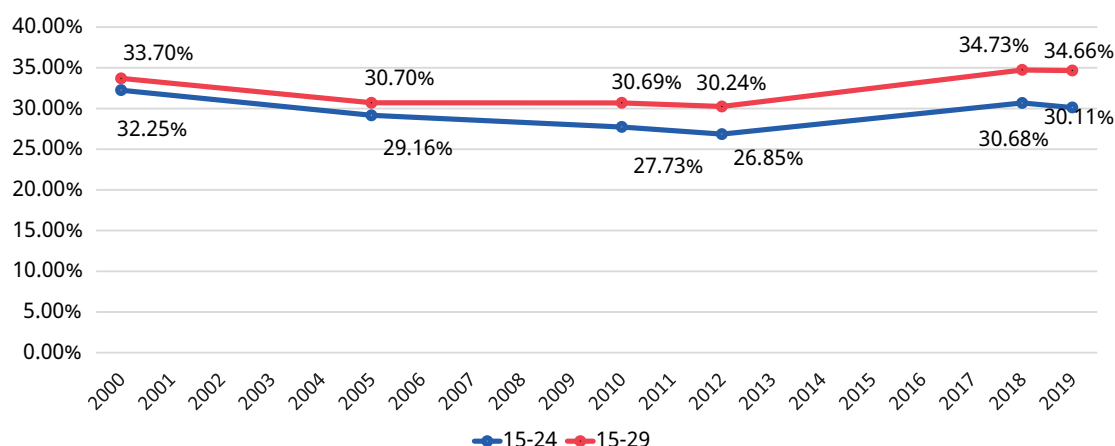


Source: Majid (2021).

The high rate of unemployment in the youth cohort is reflected in the high Not In Employment, Education Or Training (NEET) rates in India. Majid (2021) states that the share of the young population has shown a decline from 41.1 per cent in 2000 to 37.5 per cent in 2019 in the 15–29 age group; and from 28.5 per cent to 25.7 per cent in the 15–24 age group. As with the population of young people, the share of the youth cohort in the labour force has also declined over time. However, the decline in young persons' participation in the labour force, as seen in figure 5, is much higher than the decline in the young persons' population for the same age cohort. In 2019, 83.3 per cent of the total number of unemployed people in the country were in the 15–29 age cohort.

While the young people in the age cohort of 15–24 hold the major share in total unemployed populations (see figure 3), the share of the same age group in NEET is less than the population in the age cohort 15–29. The NEET rate for the 15–29 cohort was around 33.5 per cent in 2000 and 34.2 per cent in 2019. Though the trend shows that NEET rates in India declined from 2000 to 2012 for both age cohorts, these levels showed a gradual increase from 2012 and were at 34.66 per cent for the 15–29 age cohort and 30.11 per cent for the 15–24 age cohort, which are still high.

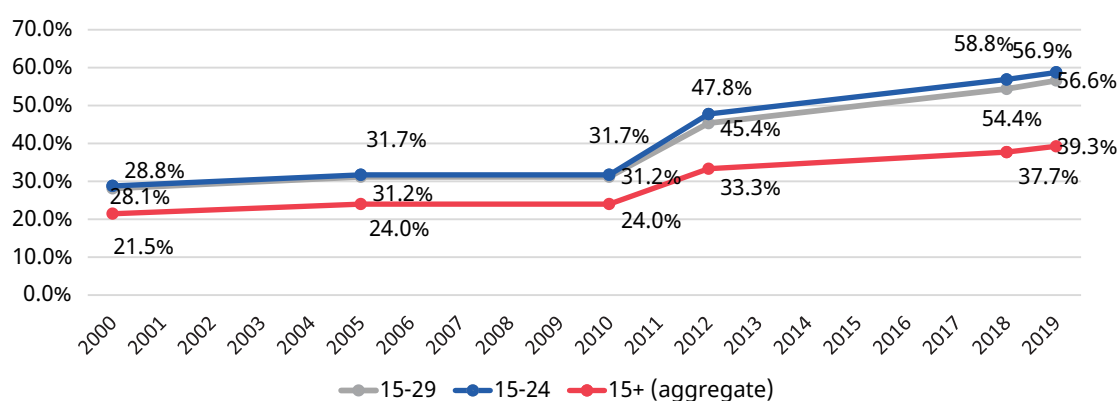
Figure 7. NEET rates across various age groups (2000-2019)



Source: Majid (2021).

The decline in the youth labour force shares seen in figure 5 can be linked to the increasing education levels seen in figure 8. Young people in India are increasingly enrolled in education. The youth cohorts were far more educated in 2019 than they were in 2000. The increase in the number of persons with secondary and tertiary education since the year 2000 and the decline in the share of illiterate people plus primary educated youth cohorts have been rapid.

Figure 8. Persons with more than secondary education as a percentage of population in cohort

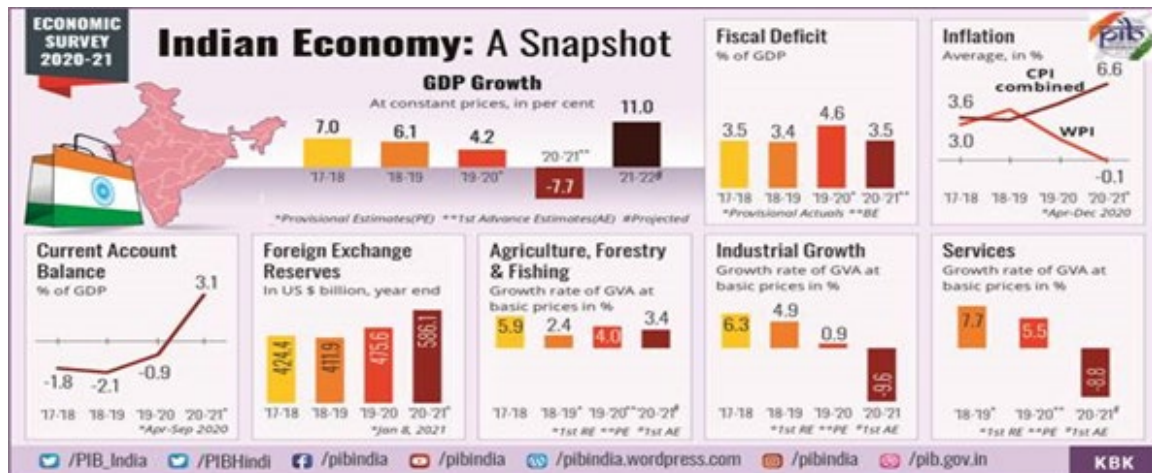


Source: Majid (2021).

1.2.2 Impact of COVID-19 on India's economy and employment

While India's economic growth since 2017 was already slowing down, the COVID-19 pandemic pushed it further to its lowest level in many years. As per a report by Ankit Mishra published in Forbes (2020), the coronavirus pandemic and its resultant lockdown measures plunged the Indian economy into a recession for the first time in nearly a quarter of a century. Based on the OECD's Economic Outlook (2021), the Indian economy contracted by 7.7 per cent in 2020 (as shown in figure 9) as domestic consumption declined. The second wave and new virus variants also posed an additional risk to growth (OECD 2021).

Figure 9. The Indian economy: A snapshot



Source: Press Bureau, India (PBI) (2021).

The Centre for Monitoring Indian Economy noted that “the employment rate was mostly over 37 per cent between July 2020 and March 2021 with an average that was close to 38 per cent. It fell to 36.8 per cent in April and then sharply to 35.3 per cent in May 2021. The first four weeks of June 2021 indicate a recovery that is still just short of 36 per cent. This is a worryingly low employment rate.” (Financial Express 2021).

Another setback has come in terms of increased poverty. Between 2006 and 2016, India lifted 271 million citizens out of poverty. However, in 2021, the Pew Research Center, using World Bank data, estimated that the number of poor people in India (with an income of US\$2 per day or less in purchasing power parity) had more than doubled to 134 million from 60 million in just a year due to the pandemic-induced recession. This means that India is back to being called a “country of mass poverty” after 45 years (Mahapatra 2021).

1.2.3 Vocational/technical training in India

Vocational technical training is one of the key policy focus areas in India.

Box 3. Excerpts from an ADB brief on enhancing competitiveness and productivity for MSMEs during pandemic recovery

According to the Asian Development Bank (ADB) brief entitled “Enhancing Competitiveness and Productivity of India’s Micro, Small, and Medium-Sized Enterprises during Pandemic Recovery” (2021):

- ▶ While India has one of the largest and youngest working-age populations in the world, only 13.9 per cent of the workforce (15–59 years) received either formal or non-formal vocational training in 2019/20.
- ▶ Only about 8.6 per cent of MSME workers are considered skilled (2016/17).
- ▶ India’s public vocational education and training systems require greater scale, better quality and more relevance to prepare young workers for the emerging skill demands.
- ▶ Mismatches between skilling curricula and industry requirements are due to:
 - obsolete technology and training methods,
 - short training programmes
 - minimal interaction with industry, and
 - inadequate training in soft skills (including spoken English) and digital literacy.

Source: ADB (2021).

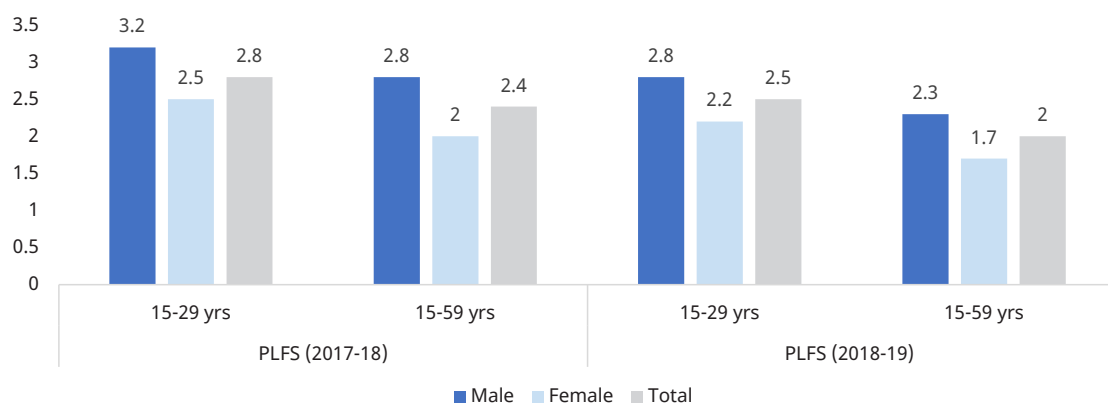


Formal vocational and technical training is acquired through institutions/organizations and is recognized by national certifying bodies. It is structured according to criteria such as curricula, qualifications, teaching/learning requirements and assessments. Formal training is intentional from the learner’s perspectives.

Data from the Periodic Labour Force Survey (PLFS) on formal vocational/technical training for persons aged 15—59 years over three years – 2017/18, 2018/19 and 2019/20 – shows a gradual increase in the percentage of young people with formal vocational/technical training (National Skill Development Corporation (NSDC) 2020).

Figure 10. Formal vocational/technical training for persons aged 12-59 years, 2017-20 (in per cent)

% of persons of age 15-29 years and 15-59 years who received formal vocational/technical training during PLFS (2017-18) and PLFS (2018-19).... all-India

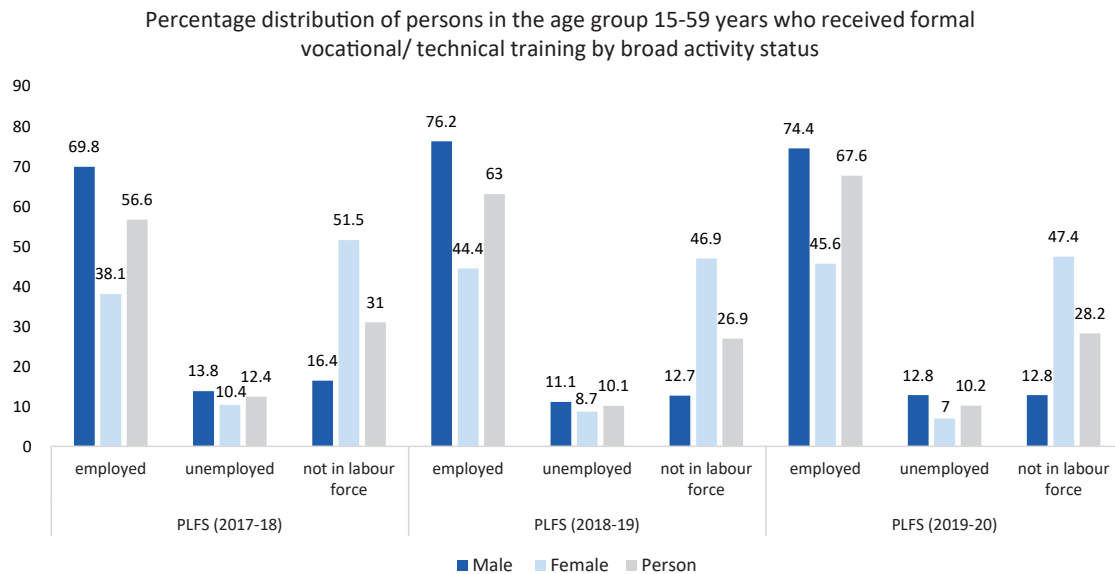


Source: NSDC (2020)⁵

⁵ The PLFS collects and compiles information on vocational/technical training for persons aged 12-59 years. The formal vocational/technical training data collected by the PLFS includes training acquired through institutions/ organizations and is recognized by national certifying bodies, leading to recognized diplomas/certificates or qualifications.

Figure 11 presents a comparison of the data of the employed, unemployed and not in the labour force persons in the age group 15–59 years in those who have received formal vocational/technical training.⁶

Figure 11. Distribution of persons in the 15–59 years age group who received formal vocational/technical training, 2017–20 (by broad activity status, in per cent)



Source: NSDC (2021)

As seen in figure 11, the percentage of employed persons in the 15–59 age group who received formal vocational/technical training showed an increase from 56.6 per cent in 2017–18 to 63 per cent in 2018–19 and to 67.6 per cent in 2019–20. At the same time, the percentage of the unemployed in the same cohort decreased from 12.4 per cent in 2017–18 to 10.1 per cent in 2018–19, but it increased marginally to 10.2 per cent in 2019–20. Also, the percentage of people in the 15–59 age group who received formal vocational/technical training but were not in the labour force decreased from 31.0 per cent in 2017–18 to 26.9 per cent in 2018–19. It increased marginally to 28.2 per cent in 2019–20. A crucial point arising from the PLFS data in figures 5 and 10 is that only a small section of young people received formal vocational/technical training and only about two third of these were employed.

Recognizing that industry-relevant vocational skills training is essential to enhancing the employability of young people, so that they are able to contribute to the economic development of the country, the allocation of a national budget to the Skill India initiative has been a favourable development. Reiterating the government's commitment to this initiative in her maiden budget speech in 2019, India's finance minister Nirmala Sitharaman claimed that the government was enabling millions to take up industry-relevant skill training, boosting their job prospects (2019).

⁶ http://mospi.nic.in/sITes/default/files/publication_reports/Annualpercent20Reportpercent2Cpercent20PLFSpercent202017-18_31052019.pdf?download=1

▶ 1.3 The apprenticeship system in India

The benefits of an apprenticeship programme over institution-based training are well known. Apprentices have the opportunity of undergoing training in real working conditions, working on advanced machines and equipment, being exposed to industry-specific best practices, and learning more about their sector. Apprentices become skilled workers once they have acquired the knowledge and skills in a trade or occupation, which help them obtain a wage or self-employment. In addition, apprentices receive a stipend according to the prescribed rates during their training.

1.3.1 The beginning of apprenticeship

The Craftsmen Training Scheme (CTS) implemented in industrial training institutes (ITIs) in India was introduced in 1950, by setting up 50 ITIs with the focus of providing long-term vocational training (12–24 months) in trades relevant for industry. However, the component of on-the-job training in institutional training was almost missing.

Acknowledging the fact that the institutional training imparted under the CTS was not enough for the acquisition of employable skills and needed to be supplemented by training in the workplace, the National Apprenticeship Scheme was launched in 1959 on a voluntary basis to develop skilled manpower for Indian industry.

However, the scheme did not achieve the expected results, and the National Apprenticeship Scheme was brought under the ambit of the Apprentices Act, which was implemented in 1962. It had two primary objectives:

- ▶ To regulate programmes for the training of apprentices in industry to ensure that they conform to the prescribed syllabi, period of training, etc., as laid down by the Central Apprenticeship Council (CAC).
- ▶ To fully utilize the facilities available in industry to impart practical training with a view to meeting the requirements of skilled manpower for industry.

Box 4 presents the concept of apprenticeship, as defined in India, and the key features of the Apprentices Act.

Box 4. Definition of apprenticeship

Apprenticeship in India is defined as “a course of training in any industry or establishment undergone in pursuance of a contract of apprenticeship and under prescribed terms and conditions which may be different for different categories of apprentices” (Ministry of Labour and Employment (MoLE), 1961).

As per the Apprentices Act, any individual, who has completed 14 years of age, is physically fit and has the minimum educational qualifications prescribed for a trade can undergo apprenticeship training. This training can be provided to apprentices both in designated and optional trades.

The Apprentices Act:

- ▶ Defines the various categories of apprentices in India.
- ▶ Lists the qualifications required to be an apprentice.
- ▶ Includes the details for contract generation and approval, regulation of trades, obligations of employers and apprentices.
- ▶ Provides details on the payment and health, safety and welfare of apprentices.

The CAC, a statutory body set up under the Apprentices Act, advises the government on the design of apprenticeship policies, standards and norms (see box 6). The joint secretary of the MSDE is the member secretary of the CAC. It is tripartite by constitution with members from government, both from central and the states/union territories, employers and trade unions. It advises the government on policies and prescribing norms and standards with respect to apprenticeship training.

Box 5. Central Apprenticeship Council

The CAC was set up as the apex statutory body under the Apprentices Act, 1961. It is tripartite by constitution with members from government, both from central and the states/union territories, employers and trade unions. It advises the government on policies and prescribing norms and standards with respect to apprenticeship training.

The Apprentices Act focused on ITI graduates from trades related to the manufacturing sector only. These graduates were then engaged as trade apprentices in the manufacturing sector. A complex machinery – that is, a combination of the central government, state governments and union territories (UTs) with the multiple authorities under them – was established to ensure that Act was implemented effectively. The Act also specified the legal status of apprentice as trainees and not workers (see box 6).

Till 2014, at the central level, the MoLE, through its Directorate General of Employment and Training (DGE&T) was mandated to implement India's apprenticeship programme. The DGE&T set up the six regional directorates of apprenticeship training (RDATs) to promote, monitor and manage apprenticeships in public sector units (PSUs) and in the establishments under central jurisdiction. At the level of the states, state apprenticeship advisers, with legislated powers, were responsible for the implementation of the Act in relation to trade apprentices in state government departments and private establishments.

Box 6. Legal status of apprenticeship

Definition of workers under the Apprentices Act (Para 18)

Apprentices are trainees and not workers:

- ▶ Every apprentice undergoing apprenticeship in a designated/optional trade in an establishment shall be a trainee and not a worker, and
- ▶ The provision of any law with respect to labour shall not apply to or in relation to such apprentices.

Source: MoLE (1961).



Expanding the scope of the Apprentices Act

In 1973, the Act was amended to bring the training of engineering graduates and diploma holders under its purview and to give them practical training under factory conditions, thereby improving their employability. These apprentices were described as graduate apprentices and technician apprentices, and the scheme was called the National Apprenticeship Training Scheme (NATS).

In 1986, with the introduction of vocationalization of secondary education (for students in class 9 and 10) and senior secondary education (for students in class 11 and 12) in schools, the Apprentice Act was further amended to cover the higher secondary vocational (technician) certificate holders. The objective was to provide adequate facilities to students in vocational streams to learn the practical aspects of a subject through field study and supplement institutional learning. The apprentices covered by this scheme were called technician (vocational) apprentices.

With these inclusions in the Act, the role of the MoE (then called the Ministry of Human Resource and Development (MHRD)) became formalized within the Act. The Department of Secondary and Higher Education in the MoE became responsible for the implementation of the Act with respect to graduate, technician and technician (vocational) apprentices across all establishments in the country. The then-MHRD set up its own governance structures and norms to implement the provisions of the Act. Four boards of apprenticeship training (BOATs), with offices located in Kanpur, Kolkata, Mumbai and Chennai, were set up to facilitate and monitor the implementation of degree, technician and vocational apprentices.

To differentiate from the apprenticeship scheme of the DGE&T, the apprenticeship scheme implemented by the then-MHRD was named the National Apprenticeship Training Scheme (NATS). The objective of the NATS was stated as: “To facilitate fresh Graduates and Diploma Holders in Engineering/ Technology/ Architecture/ Pharmacy/ Hotel Management & Catering Technology, and (10+2) level Vocational course Pass outs to acquire ‘on the job’ training in Industries/ Establishments and thus to make them more employable” (MoE 2017).

The implementation of the Graduate and Technician Apprenticeship Training Scheme (part of NATS), for engineering students was entrusted to regional boards of apprenticeship/practical training under the MoE.

To meet the growing need for skilled manpower, a few more WBL schemes were introduced by other departments. In 2013, the All-India Council of Technical Education (AICTE), a statutory body, and a national-level council for technical education, under the Department of Higher Education, MoE, introduced the National Employability Enhancement Scheme (NEEM). Though NEEM is not part of the Apprentices Act, it is a WBL scheme and is quite like apprenticeship.

While each of these schemes have their own implementation guidelines, both employers and young people (final beneficiaries of these schemes) find it extremely challenging to understand the specificities of each of these initiatives and to keep track of the developments/updates under each.

The primary survey conducted as part of the research (see Annexure 1 for detailed results) revealed that almost 75 per cent of the total respondents found these multiplicities very complex and cited it as one of the main reasons for private sector enterprises to refuse to participate in the apprenticeship programme.

1.3.2 Reforms in the apprenticeship system

The National Policy for Skill Development and Entrepreneurship, 2015, notes that, “Our country presently faces a dual challenge of paucity of highly trained workforce, as well as non-employability of large sections of the conventionally educated young people, who possess little or no job skills” (MSDE 2015). To address this challenge, the Policy placed a strong focus on apprenticeship and work-based-learning. Some of the references in this context are presented below (Box 7).

Box 7. Excerpts from the National Policy for Skill Development and Entrepreneurship, 2015

Para 4.1.6: ITIs interface with industry will be promoted to enhance apprenticeship opportunities, improve relevance of training, and increase employability of trainees. Industry is expected to take a lead role in running ITIs through Institute Management Committees (IMCs) which will be given autonomy to implement decisions in the interest of better training outcomes. Performance rating of ITIs will also be promoted based on outcome linked parameters and trainee/employer feedback.

Para 4.2.9: The apprenticeship opportunities in the country are presently insignificant when compared to the size of the economy. Government has carried out comprehensive reforms in the Apprentices Act to make it both industry and youth friendly. The Government will work together with industry including MSME sector, to create a positive environment for increased apprenticeship opportunities in the country. The services sector will also be brought under the ambit of apprenticeship. Apprenticeship will further be incentivised in the MSME sector through appropriate schemes for sharing of stipend etc. Government will target a tenfold increase in apprenticeship opportunities in the next five years.

Para 4.5.3: Industry houses including the MSMEs will be incentivized to make shop floor available for practical training of trainees and institutionalize paid apprenticeship. Workplace training will be promoted as part of overall skill curriculum aligned to National Skill Qualifications Framework (NSQF) and embedded in appropriate credit framework. Industry will also be encouraged to participate more actively in training of young people, so that the latter are able to get actual on-the-job and hands-on experience during training programmes.

Source: MSDE (2015)

In line with the National Policy for Skill Development and Entrepreneurship, 2015, the Apprentices Act has undergone several amendments to make it more attractive and adaptable to the changing requirements of both industry and young people. Also, parts of the CTS have been modified to promote WBL in ITIs. The major amendments undertaken between 2014 to 2021 and their impact is briefly discussed in the next section.

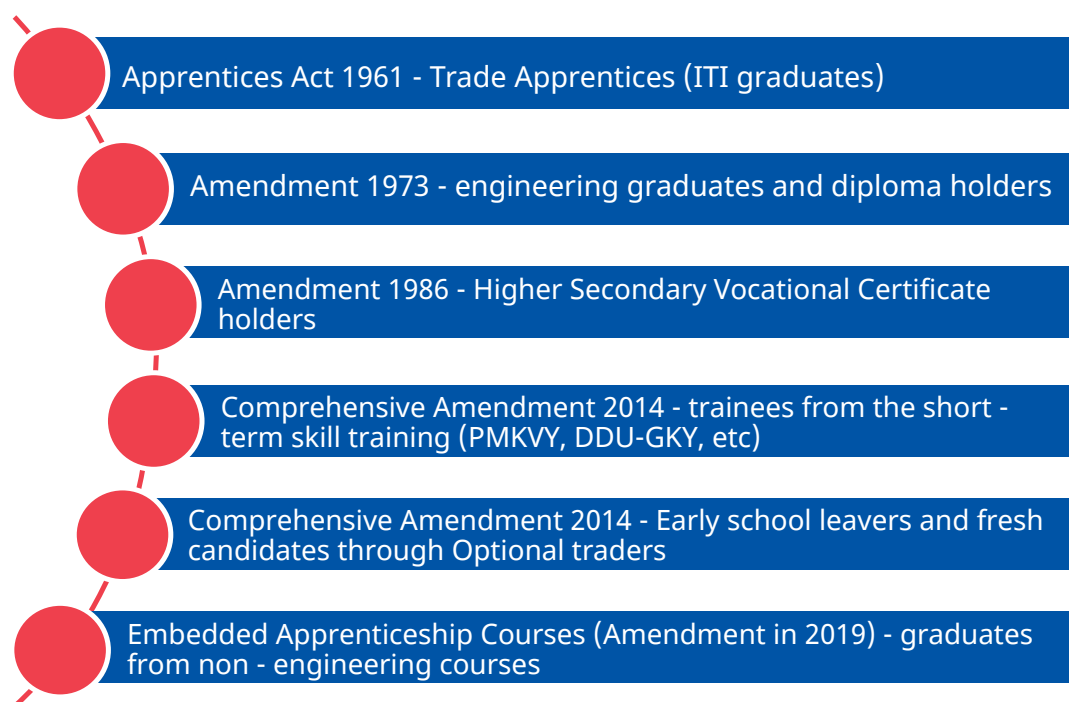
1.3.2.1 Making apprenticeship attractive to young persons

Extending the apprenticeship target group by including early school leavers as well as university graduates

The Apprentices Act, drawn up in 1961, focused on ITI graduates from manufacturing trades only. The first few reforms in the Act (see section 1.3.1) extended the apprenticeship possibilities to engineering graduates, diploma holders and Higher Secondary Vocational Certificate holders, providing them opportunities for in-company training and improving their employability.

Figure 12 summarizes the various reforms to the Act starting from the enactment of the Apprentices Act until 2019.

Figure 12. Amendments in Apprentices Act to include youth cohorts from different qualification bases



The comprehensive amendments to the Apprentices Act, which took place in 2014, extended opportunities for apprenticeship to a larger cohort of young persons, mainly the early school leavers by opening apprenticeship positions to (MoLE 2014):

- (i) young persons who have completed government-sponsored, short-term skill training programmes many of which are open to early school leavers. These include the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Deen Dayal Upadhyay Grameen Kaushal Yojna⁷ (DDU-GKY), National Rural Literacy Mission (NRLM), etc.;
- (ii) early school-leavers who had not undergone any skill training; and
- (iii) university graduates from any discipline.

Besides, The **government** in 2020 announced the introduction of apprenticeships embedded degree/diploma courses in about 150 higher education institutions in the country (Government of India 2020).

Distribution of apprenticeship responsibilities between the MSDE and MoE

To streamline the apprenticeship responsibilities between the MSDE and MoE, a clear demarcation of duties for implementing different categories of apprenticeship training was decided between the two ministries in mid-2021. As per this new agreement:

- ▶ apprenticeship training for young persons who have not completed a bachelor's degree or diploma would be the responsibility of the MSDE.
- ▶ apprenticeship training for young people who have acquired a bachelor's degree or diploma or more would be the responsibility of the MoE.

⁷ The name of this scheme is translated as Deen Dayal Upadhyay Skill Development Scheme.

According to this agreement, the vocational (technician) apprentices, who are trainees from vocational schooling, will fall under the purview of the MSDE.

Sector skills councils (SSCs) for various industries, such as logistics, media, etc., actively participated in these reforms and rolled out degree apprenticeship courses with embedded apprenticeships, including a BBA in logistics, B.Sc in visual communication, B.Voc in augmented and virtual reality design, BBA in retail operations and many more).

With these changes to the Apprentices Act, apprentices are now placed in six different categories based on their entry-level qualifications. These categories are presented in table 1.

Table 1. Categories of apprentices based on entry-level qualifications

	Target audience/entry qualification for apprenticeships	Trade	Category	Ministry responsible
1	Students pursuing graduation courses at a general university and skill university	Optional trade	Degree apprentices	MoE, Department of Higher Education
2	Engineering and non-engineering graduate	Designated trade	Graduate apprentices	
3	Diploma in engineering/non-engineering	Designated trade	Technician apprentices	
4	ITI graduates	Designated trade	Trade apprentices	MSDE
5	Higher secondary (10+2) vocational certificate holder		Technician (vocational) apprentices	
6	Fresher apprentices (including the early school-leavers from classes 5 to 12)		Fresher apprentices	
7	Graduates from short-term skilling courses (PMKVY, DDU-GKY)	Optional trade	Optional trade apprentices	
8	Other candidates found eligible as per the curricula decided by an employer			

Source: Author's compilation.

Irrespective of the categories, a young person applying for an apprenticeship has to fulfil the eligibility conditions, as laid down under:

- ▶ the Apprentices Act, and
- ▶ the course curricula for the specific apprenticeship programme s/he has applied for.

By including a larger number of youth categories in apprenticeship, the number of potential takers for apprenticeship has increased manifold, providing enterprises with opportunities to engage a young person with the required educational qualification.

Making apprenticeship attractive by increasing stipends

As per the Apprentices Act, the enterprise or the employer engaging apprentices is mandated to pay stipends to apprentices. Prior to 2014, the monthly stipend paid to trade apprentices (ITI trainees undergoing apprenticeship in designated trades) was (a) 2,100 Indian rupees or US\$ 26.88 during the first year of training, (b) 2,400 rupees or US\$ 30.72 during the second year, (c) 2,800 rupees or US\$ 35.84 during the third year, and (d) 3,100 rupees or US\$ 39.68⁸ during the fourth year.

As part of the reforms in 2014, two major provisions were made with regards to the stipend payments to the apprentices.

1. The payment of a stipend was made necessary for all registered apprenticeship contracts, which meant that all the categories of apprentices under the MSDE –optional trades, fresh apprentices, vocational apprentices, etc. – were covered. This made apprenticeship an attractive option for a larger cohort of young persons.
2. The rate of the stipend per month for trade apprentices was calculated at a percentage of the minimum wage of semi-skilled workers of the respective state or union territory which was (a) 70 per cent during the first year of training, (b) 80 per cent during the second year, and (c) 90 per cent during the third and the fourth years. (MoLE 2014).⁹

However, as the setting of minimum wages is a federal issue, the variation in minimum wages between different states created problems in engaging apprentices as the percentage of minimum wages to be paid as the stipend was to be same for each region.

Hence, in 2019, the Apprenticeship Rules were amended, which resulted in the prescription of fixed stipends for apprentices, which were linked not only to their educational and technical qualifications but also to the category of apprentice.

The minimum prescribed stipend per month as of May 2021 is described in table 2.

Table 2. Minimum prescribed stipend per month for apprentices

School graduates (class 5–9)	5 000 rupees
School graduates (class 10)	6 000 rupees
School graduates (class 12)/national or state certificate holder/ technician (vocational) apprentice or vocational certificate holder or sandwich course (students from diploma institutions)	7 000 rupees
Technician apprentices or diploma holder in any stream or sandwich course (students from degree institutions)	8 000 rupees
Graduate apprentices or degree apprentices or degree in any stream	9 000 rupees

Note:

- Skill certificate holders will get stipends as per his/her educational qualifications.
- There would be a 10 and 15 per cent hike in second and third year respectively for apprenticeship training
- Fresher apprentices would be paid 50 per cent of the stipend during basic training for a period up to 3 months.

Source: MSDE (2019)

⁸ Calculated as per prevailing exchange rates on 15 June 2022

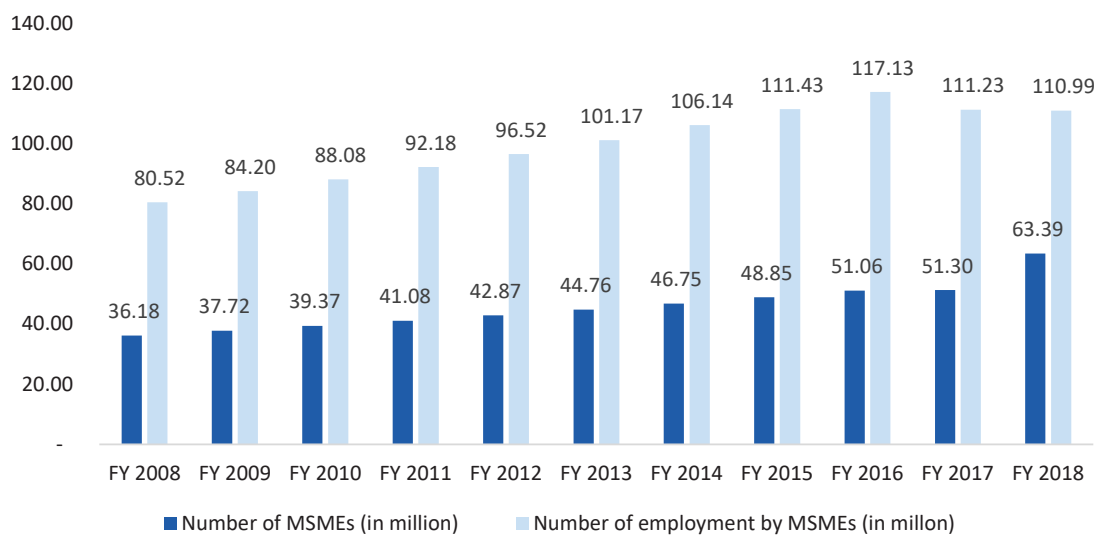
⁹ Ministry of Labour and Employment, through its Notification G.S.R. 680(E) dated September 22, 2014

1.3.2.2 Augmenting participation of industries in apprenticeship programmes

The economic reforms in the country in 1991 led to a significant increase in the investment in private sector, leading to the growth across all the industrial sectors. The MSME sector gained significance owing to its contribution to employment generation, contribution to exports and to the GDP.

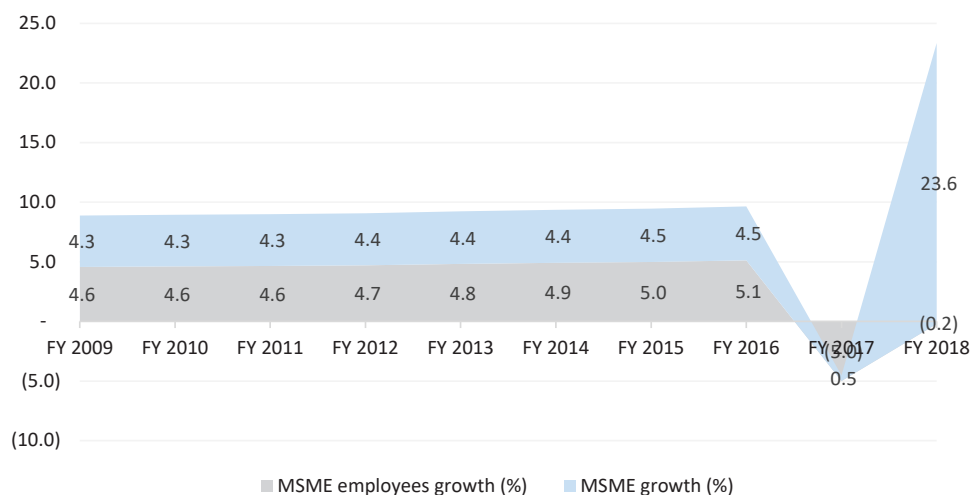
The 73rd National Sample Survey of the government estimated that MSMEs in India employed approximately 111 million people in FY 2017-18 (figure 13).

Figure 13. MSMEs and employment, 2008–2018 (in millions)



Source: ADB (2021)

Figure 14. Rate of growth of MSMEs and employment, 2008–2018 (in per cent)



Source: ADB (2021)

MSMEs in manufacturing accounted for 32.5 per cent of this total employment, trade employed 34.9 per cent, with the remaining 32.6 per cent employed by MSMEs in other services, such as food and land transport. The majority were employed in the micro-enterprise sector (107.6 million people or 96.9 per cent) in FY 2017–18. Small and medium-sized enterprises accounted for 2.9 per cent and 0.2 per cent of those employed (ADB 2021).

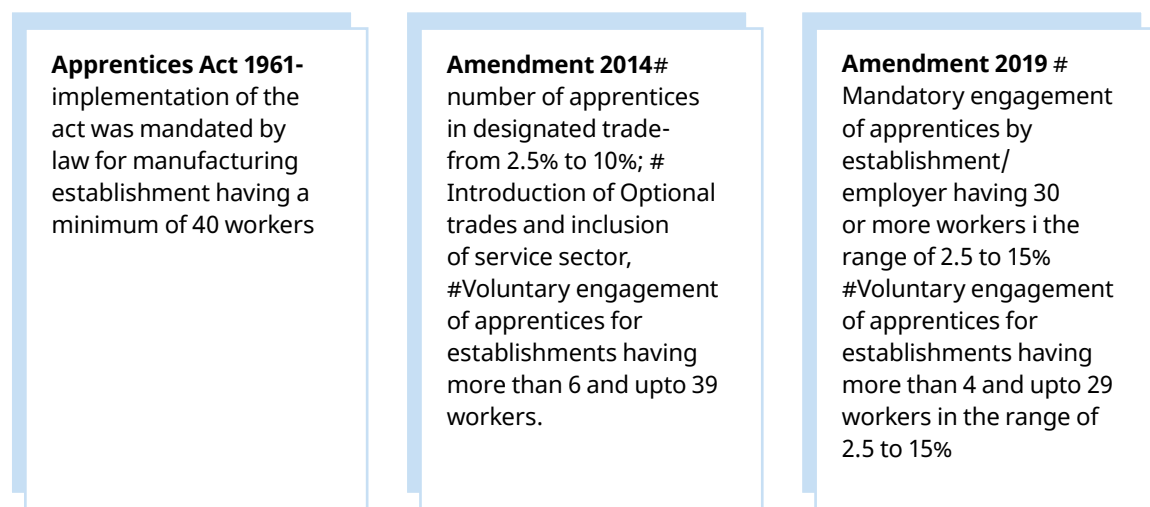
A number of reforms were focused on boosting the participation of MSMEs in apprenticeship training. Some of these include the following.

- **Extending the “mandatory” category and introducing “voluntary” participation in apprenticeship**

The Indian MSME sector has a huge untapped market for apprenticeships. Prior to the amendments to the Apprentices Act and Apprenticeship Rules, enterprises with more than 40 workers were mandated by law to engage apprentices up to 10 per cent of the total workers. The amendment of the Apprentices Act and the Apprenticeship Rules changed this limit to enterprises/establishments with 30 or more workers needing to engage apprentices in a band of 2.5 per cent to 15 per cent of the total manpower of the establishments including contractual staff. Besides, those establishments with between 4–29 workers can voluntarily engage apprentices in a band of 2.5 per cent to 15 per cent.

Figure 15. Expanding apprenticeship positions in enterprises

Expanding the scope of Apprentices Act 1961 by increasing the mandated establishments as well as apprenticeship positions



Source: Author’s compilation

With the lowering of the size of enterprises (based on number of workers engaged to 30 from 40), the number of units mandated by the law to engage apprentices has increased. The Sixth Economic Census estimates that there are 2.63 million MSMEs in the country with five or more workers (Government of India 2016). Enhancing the limit of apprentices’ engagement from 10 to 15 per cent in the MSME sector can create a minimum of 2.6 million new apprentices.

Besides, the definition of worker was broadened (by including contractual workers), leading to an amendment in the method of determining the number of apprentices to be appointed.¹⁰ These amendments provided employers the scope to engage a larger number of apprentices.

¹⁰ For more information, see [Press Information Bureau release](#) posted on 27 January 2017.

Incentivizing industry to participate in apprenticeship programmes

One of the main objectives of the NAPS introduced in 2016 was to promote the participation of enterprises/ establishments in apprenticeship and increase the number of apprentice places from 230,000 in 2016 to 5 million cumulatively by 2020. To achieve this, the NAPS included incentivizing industry by reimbursing part of the expenditure incurred for apprenticeships, which included:

- ▶ Reimbursing 25 per cent of prescribed stipend, subject to a maximum of 1,500 rupees (~US\$ 20.5) per month per apprentice to employers.
- ▶ Reimbursing up to 7,500 rupees (~US\$ 61.5) per apprentice for basic training of 500 hours (the amount reimbursed is based on the hours of training, the maximum of which is 500 hours).

- **Making apprenticeship relevant to employers through “optional trades”**

To allow enterprises meet their specific requirements through apprenticeship, the NAPS permitted enterprises (at the individual/collective level) to develop new trades, determine the qualifications required, the period of apprenticeship, undertake assessments and issue certificates. These trades fell under the category “optional trades” and the apprentices undertaking these were called “optional trade apprentices”.

As a quality measure, the implementation of optional trades aligned to the National Skill Qualification Framework (NSQF) are linked with financial incentives. Hence, to be eligible for financial incentives or reimbursements, the enterprise must necessarily have their trades aligned to the NSQF.

With the introduction of the optional trade category, after undergoing short-term skills training, candidates became eligible to join an apprenticeship and gain industry experience. Today, optional trades comprise more than 55 per cent of all apprenticeships in India (from a 7 per cent share in 2018). Because of its characteristic flexibility¹¹ and simplicity, optional trades have evolved into a benchmark programme, which is recognized and accepted by industries and employers. For instance, BIBA Apparels, Burger King, Danske, Spencer’s and Lemon Tree Hotels are some of the big companies that have hired apprentices as full-time employees after an apprenticeship in an optional trade.

These two reforms – the introduction of optional trades and reducing the size of the enterprise for the mandated and voluntary implementation of apprenticeships – helped bring the service sector under the ambit of the Apprentices Act. Hence, sectors like banking, retail, logistics also come under its purview, resulting in the creation of many more apprenticeship opportunities for Indian youth.

1.3.2.3 Administrative reforms: Ease of doing apprenticeships

Some of the major obstacles to the participation of Indian industry in apprenticeship have been the highly complex workflows and documentary compliance required to engage in apprenticeship. Based on a series of consultations with industry representatives, a number of reforms have been introduced. Figure 16 summarizes these reforms.

¹¹ Optional trades are designed by industry to meet specific skills requirements. The enterprise has the flexibility to lay down entry qualifications, duration of apprenticeship, curricula to be covered, etc. Besides, if the optional trades are not aligned to the NSQF, they are also assessed by the enterprise itself.

Figure 16. Administrative reforms in the Apprentices Act, 1961 (2015–2021)

<p>Formalising the role of intermediaries</p> <p>New stakeholders have been engaged into the apprenticeship ecosystem- the Third-Party Aggregators (TPA) and Sector Skill Councils (SSCs). They assist establishment for enrolment of apprentices and can work in clusters with both MSMEs and large industries.</p>	<p>Introduction of Optional Trades</p> <p>Trades, or occupations, or any subject field in engineering or non-engineering or technology or any vocational course as may be determined, by the employer. By the end of 2018, 230 optional trades were available for apprenticeship training. Giving power to employers/establishments to determine qualification, period of apprenticeship training, holding of test, grant of certification and other conditions relating to the apprentices engaged in optional trade category.</p>	<ul style="list-style-type: none"> • Allowing employers to formulate their own policies on requirement of apprentices. • Removing stringent penalty clauses like imprisonment by financial penalties only. • Allowing industries to out-source basic training to fresher candidates so that they are free from burden of creation of infrastructure for classroom training for apprentices.
<p>Digitalizing the Apprenticeship Management System - Use of portal</p> <p>The portal manages all the processes of the apprenticeship lifecycle covering registration of establishment and candidate, selection of establishment by apprentices and vice versa, all approval process and online reimbursement of fund under NAPS to establishment</p>	<p>Other reforms:</p> <ul style="list-style-type: none"> • The working hours of apprentices and over-time possibilities were made simpler; • jurisdiction of establishments which are operating in 4 and more states were changed to Central Government. This reform allowed these establishments to work with one Government instead of approaching to four different State governments. 	<p>Ease of doing business for Apprenticeship Training - move from Regulation to Self-Regulation. The establishments have been empowered to conduct examinations and issue certificates. Besides, the industry-led Sector Skill Councils are given regulatory powers to administer apprenticeships in their respective sectors.</p>

Source: Author’s analysis

Digitalizing the apprenticeship management system: Using a portal

For greater ease in participating in apprenticeship, the Indian government launched an online portal (www.apprenticeshipindia.org) as a digital platform to manage apprenticeship training and smoothen the administrative processes of the apprenticeship lifecycle. The portal enables seamless interaction between various stakeholders to ease the implementation of not only apprenticeship training but the NAPS as well. The portal manages all the processes of the apprenticeship lifecycle from the registration of the enterprises and candidates, selection of enterprises by potential apprentices and vice versa, approval processes and the online reimbursement of funds under the NAPS to the establishment.

The portal has helped the MSDE closely monitor the:

- ▶ number of establishments registered on the portal
- ▶ vacancies created by establishments for apprenticeship
- ▶ number of apprentices registered on the portal
- ▶ number of apprentices undergoing training in various enterprises
- ▶ examinations and certifications
- ▶ expenditure under the NAPS
- ▶ reimbursement of the part stipend (as per the financial incentives) to the enterprises

The All India Trade Tests (AITT) for designated trade apprentices were conducted twice each year by the Directorate General of Training (DGT) under the aegis of the MSDE. Since 2017, the AITT have been replaced by online examinations and e-certification on a pan-India basis to make the system faster, enable improved transparency, and overcome the pendency of certificates. Both the examination results (marksheets) and National Apprenticeship Certificate (NAC) are now issued through National Council for Vocational Training management information system (NCVT MIS) portal (see box 8).

Box 8. Digitalization of the apprenticeship management system

In India, since 2018, all the activity related to optional trade apprenticeships is being conducted on the national apprenticeship portal (<https://apprenticeshipindia.org/>). It is a powerful portal that houses the data of all the apprenticeship training in the country. Some salient features of the portal are listed here.

- ▶ **No submission of printed/paper copies:** From the registration of companies and candidates to posting vacancies to the selection process and generating apprenticeship contracts, assessments and certifications, all the processes are conducted electronically on the portal.
- ▶ **Electronic stipend payments:** To increase transparency and effectively monitor reimbursements under the government's financial incentive scheme to companies, the stipend is paid to apprentices through the portal. Not only does this offer the companies a provision to pay their apprentices electronically, but it also allows the government to verify that stipend payments have been made. The system is intelligent and automatically calculates the stipend reimbursement due to each company. This cuts down on all the documentation that companies had to submit as proof for stipend payments to receive the financial support.
- ▶ **Online approval of training centres:** In order to cut down on the physical inspection of each basic training centre (BTC; which conducts basic training/classroom training), the portal has a provision for an online verification module, in which the centre uploads pictures of all its infrastructure (as per guidelines). The centre is then deemed fit or not by the relevant authorities. As mentioned earlier, most enterprises outsource the basic training to well-established vocational training providers.
- ▶ **Submission and approval of industry constructed job roles:** Each company now has the flexibility to develop course curricula for a job role, which is customized to their requirements/technologies, etc. This is also submitted online for approval by sector experts.

One of the areas where digitalization has been slow to reach is the skilling programmes offered by government organizations or "training implementation". The use of e-learning modules, delivered by experts, can ensure quality lessons to trainees, irrespective of their location. However, this will require more efficient and effective learning tools and presentations.

For more information on how to use the portal, see: <https://www.youtube.com/channel/UCEdgh8fiXmD4aN0U4bui9iA/playlists>

For more information, see [MOOC on Quality Apprenticeship](#).

The digitalization of the apprenticeship management system has resulted in reducing the burden of compliance on establishments as all the information is filled on the portal itself and no separate information is required to be submitted.

The management of designated trades, which was being managed by the DGT of the MSDE through a combination of manual and digitalized functions, has been brought together on the common portal and all its requirements are being digitalized.

- **Formalizing the role of SSCs and third-party aggregators (intermediaries) in apprenticeship**

To provide more support to MSMEs to engage apprentices, a new set of stakeholders have been brought into the apprenticeship ecosystem: third-party aggregators (TPAs) and SSCs.

TPAs are generally private players from the skills ecosystem who act as a bridge between aspiring apprentices and enterprises. They assist the enterprise in enrolling apprentices and can work in clusters with both MSMEs and large industries. They are empowered to aggregate demand in the clusters, pool resources in the case of small and medium enterprises, mobilize potential apprentices, deliver basic training, facilitate an apprentice's data submissions as required by the government, and most importantly, educate stakeholders on the need for apprenticeship.

Industry-led SSCs are also empowered to administer apprenticeships in their respective sectors. The chief executive officers (CEOs) of SSCs have been appointed as joint apprenticeship advisers in order to implement and monitor apprenticeships effectively.

Other stakeholders recognized as having a crucial role in apprenticeship are industry chambers or associations. The industry associations are eligible to take on the role of TPAs, identify new courses needed by industry under the apprenticeship programme and participate in developing the same.

TPAs and SSCs do not get any financial payouts from the government to promote apprenticeship. As a special case in October 2019, the MSDE launched a pilot under which financial incentives were provided to both TPAs and SSCs to promote and advocate for apprenticeship by making special efforts to reach out to large number of MSMEs.

As per the pilot, each SSC received 500 rupees (~USD 6.9) for every new apprentice contract generated, while TPAs received 1,000 rupees (~USD 13.8) for each contract generated. To promote participation of women in apprenticeship, TPAs were given a higher incentive of 1,250 rupees (~USD 17.11) for each apprentice contract generated for a woman.

The pilot, which ended in March 2020 (after six months) provided inspiring results – two thirds of the year's total apprenticeship contracts were registered during this period, and two thirds of the year's total active enterprises were also registered on the apprenticeship portal in the same period. A case study on the same is attached as annexure 4.



▶ **Moving from regulation to self-regulation:** As part of enterprise/establishment-friendly reforms, the following were introduced:

- Establishments have been empowered to conduct examinations and issue certificates in the cases of optional trades that are not aligned with the NSQF.¹²
- For establishments to reach a larger number of potential apprentices and allow the youth the possibility of finding appropriate positions, state and regional boundaries were opened up, allowing establishments to recruit apprentices from anywhere in the country without having to obtain a no-objection certificate from the RDATs.
- The working hours of apprentices and overtime possibilities were made simpler.
- In order to ease the process of engaging apprentices, the jurisdiction of establishments operating in four and more states was transferred to the central government. This reform allowed these establishments to work with one institution instead of approaching four different state governments.
- The Apprentices Act included a provision to punish those enterprises/establishments who were eligible to engage apprentices (those with more than 40 employees) but who did not do so. The punishment included imprisonment and financial penalties. However, as part of the reforms, the clause of imprisonment was removed in 2014 to raise confidence amongst establishments and encourage them to participate in the apprenticeship programme.
- The punitive actions applied on establishments for not engaging apprentices was replaced by a show-cause notice. Defaulters are liable to a penalty of 5,000 rupees (~US\$ 68.5) per shortfall of apprenticeship per month for first three months and thereafter, 1,000 rupees (~US\$ 13.7) per month till the number of seats are filled up.

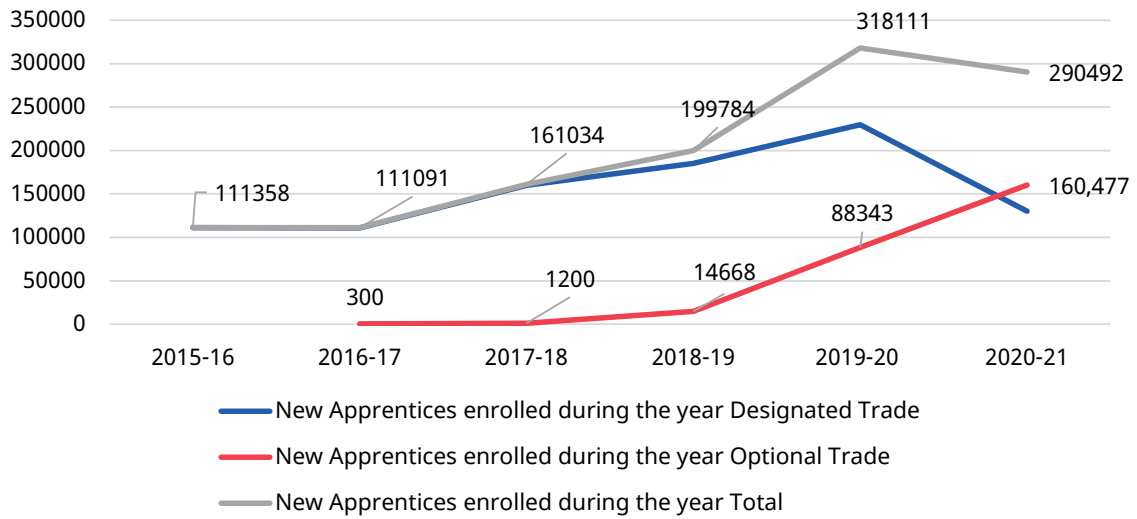
1.3.3 The apprenticeship scenario after reforms

Signs in apprenticeships in India, such as an increase in the number of apprentice places created and utilized and the number of enterprises registered on the apprenticeship portal after the introduction of the administrative reforms, have been quite inspiring.

The number of new apprentices enrolled increased from 111,000 apprentices in FY 2015-16 to 290,000 apprentices in FY 2020-21 and further reduced to 580,000 apprentices in FY 21-22. The cumulative count of engaged apprentices (designated trades and optional trades) had increased from 222,440 to 1.15 million by March 2022.

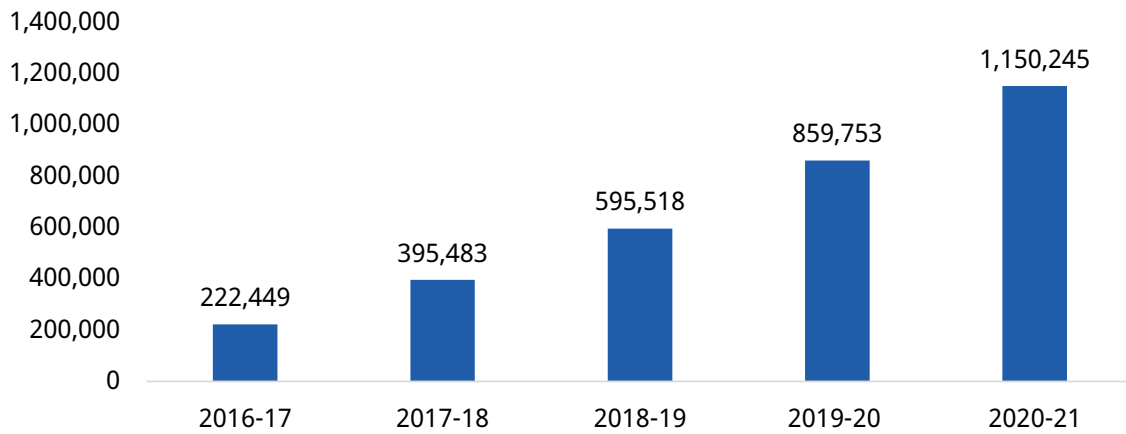
¹² It may be noted that apprentices enrolled for designated trades training must take the AITT organized by NCVET (as previously mentioned); those enrolled for NSQF-aligned optional trades must appear in examinations conducted by the respective SSCs. It is only for optional trade apprentices engaged in trades not aligned to the NSQF that the enterprises/establishments are empowered to conduct examinations and issue certificates.

Figure 17. New apprentices enrolled year-on-year, 2015-16 to 2020-21 (in thousands)



Source: Unpublished data provided to the author by the MSDE in April 2022.

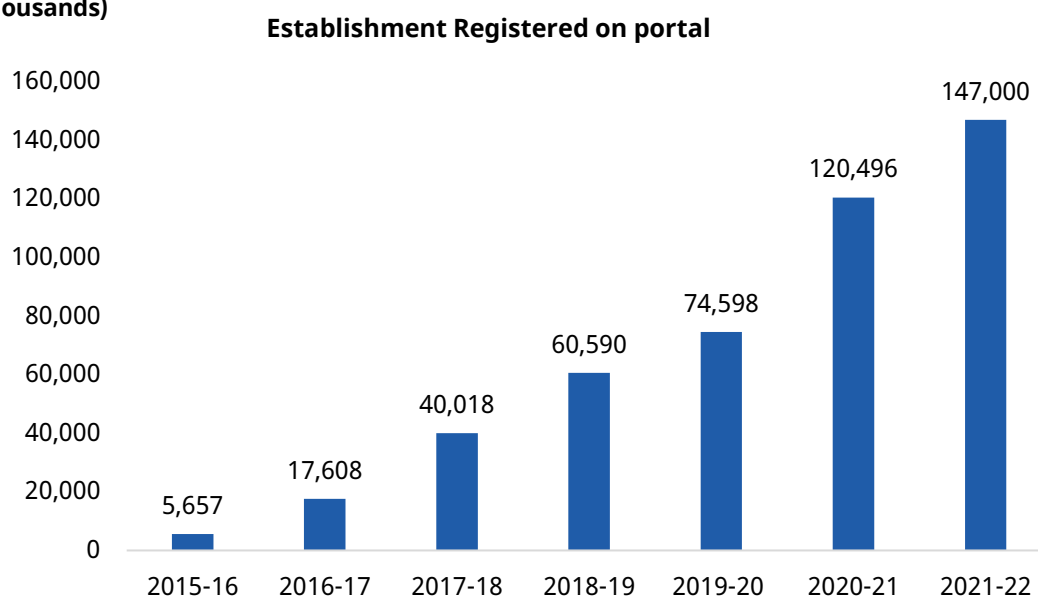
Figure 18. Cumulative increase in number of apprentices engaged (designated + optional trades), 2015-16 to 2020-21 (in thousands)



Source: Unpublished data provided to the author by the MSDE in April 2022.

The number of establishments on the apprenticeship portal increased from 5,657 in FY 2015–16 to 147,000 by FY 2021–22, making a cumulative total of 1,181,970 enterprises registered on the portal.

Figure 19. Establishments registered on the apprenticeship portal, 2015–16 to 2021–22 (in thousands)



Source: Unpublished data provided to the author by the MSDE in April 2022.

Another crucial impact of these reforms has been an increase in the participation of women in the apprenticeship programme. As per the data provided to the author by the MSDE, the percentage of women in apprenticeship training increased from 4 per cent in December 2016 to 19.5 per cent till FY 2021–22.

The participation of women apprentices in designated trades increased from 4 per cent in December 2016 to 11.5 per cent in March 2022; in optional trades, their participation was 25 per cent of the total apprentices engaged. As per the MSDE data provided to the author, a large percentage of this increase was observed in the IT/ITeS sector, where women apprentices were 43 per cent of the total apprentices engaged in IT sector trades.

Table 3. Percentage of women apprentices engaged (updated till FY 2021-22)

	Total	No. of apprentices in designated trades	No. of apprentices in optional trades
Apprentices registered on the new apprenticeship portal	389 015	205 786	183 229
Women apprentices	66 301	23 665	42 143
Percentage of women apprentices engaged	19.5	11.50	25

Source: Unpublished data provided to the author by the MSDE.

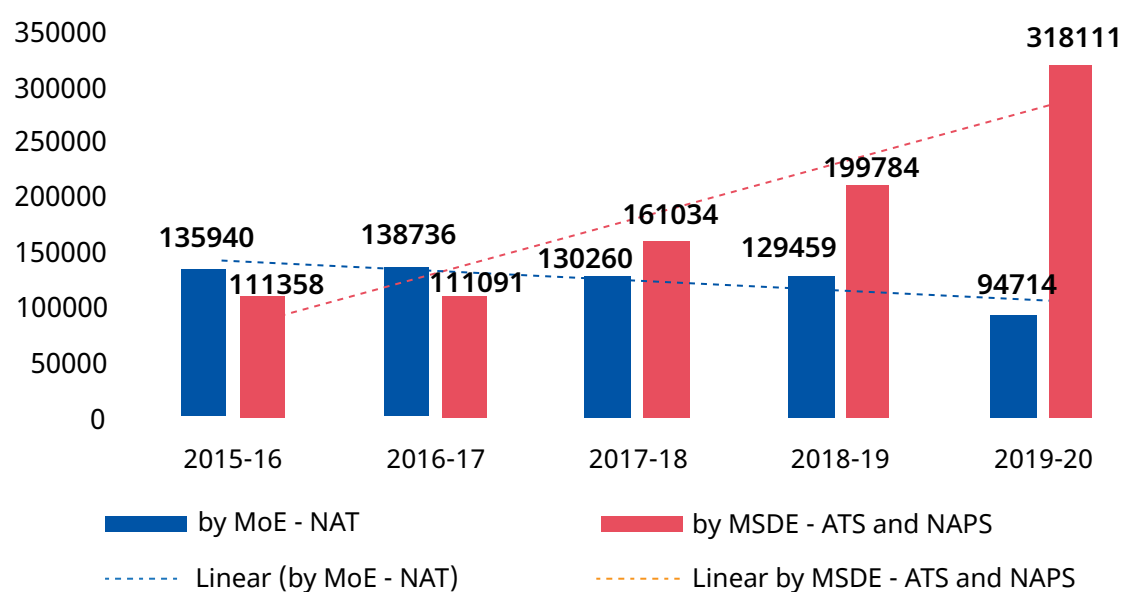
Table 4. Percentage of women apprentices engaged in specific sectors

	Total apprentices	No. of women apprentices in IT-ITeS sector	Percentage of women apprentices in IT-ITeS sector
Apprentices in the IT/ITeE sector	105 146	45 104	43
Apprentices in services sector	153 877	48 708	31

Source: Unpublished data provided to the author by the MSDE.

Figure 20 depicts the contribution of the Department of Higher Education (MoE) and the MSDE towards apprenticeships in the country from 2015–16 to 2021–22.

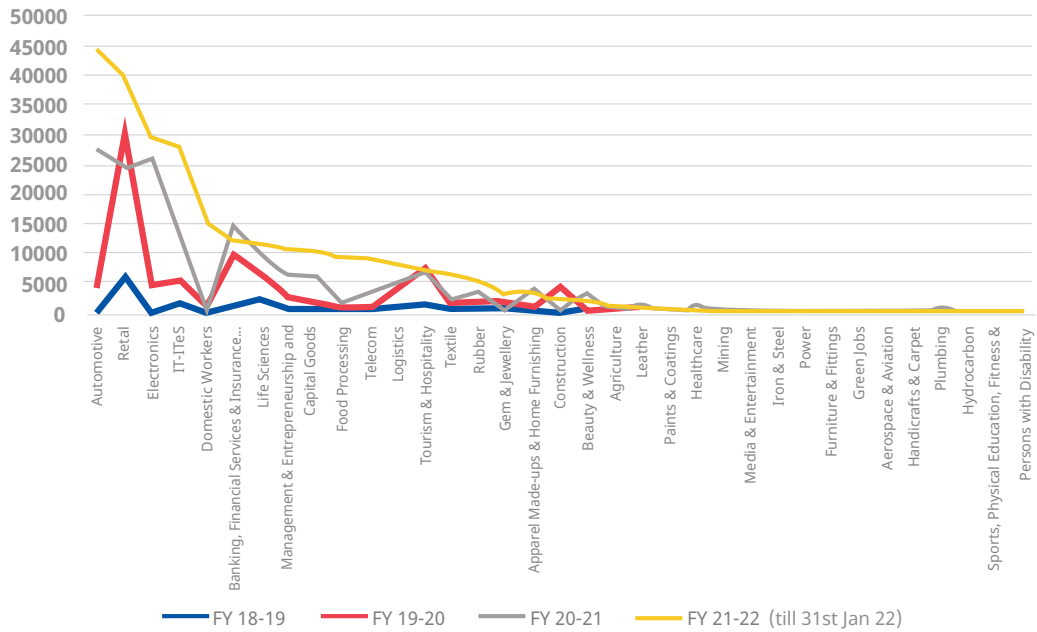
Figure 20. Apprentices enrolled year-on-year under the MoE and MSDE, 2015–16 to 2019–20 (in thousands)



Source: Unpublished data provided to the author by the MSDE.

As seen in figure 20, the number of apprentices under the MSDE grew exponentially after the reforms in the apprenticeship system, inclusion of optional trade apprentices, convergence of apprenticeship with short-term skilling, formal recognition of the role of intermediaries, and incentivizing of both industry and apprentices.

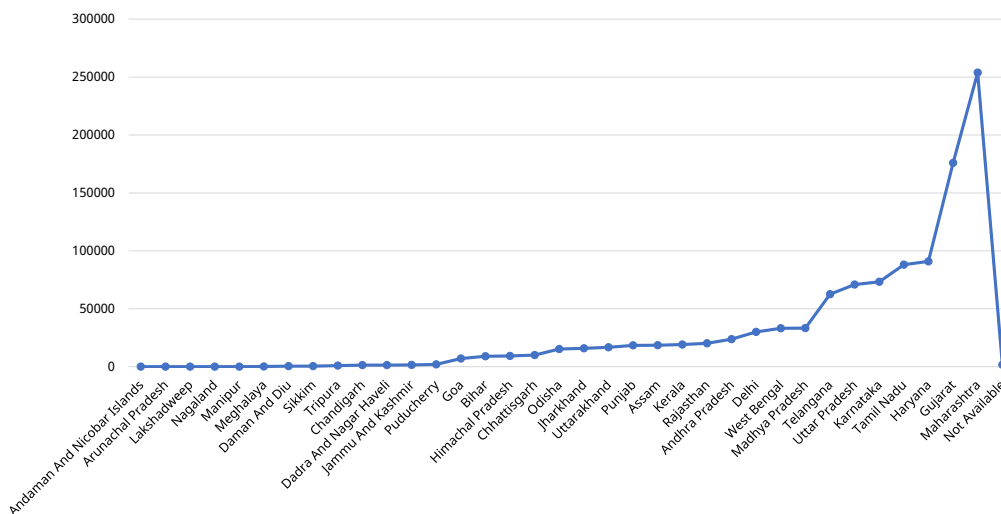
Figure 21. Apprenticeship contracts generated by SSCs, April 2018 to January 2022 (in thousands)



Source: Unpublished data provided to the author by the MSDE in April 2022.

As vocational training (including the apprenticeship programme) is a topic of importance in India, state governments have a strong role in the successful implementation of this programme. A state-wise analysis of the count of apprentices in the period from 2016 to 2022 is presented below (figure 22).

Figure 22. Apprenticeship contracts generated by SSCs, April 2018 to January 2022 (in thousands)



Source: Data provided by the NSDC from the Apprenticeship Portal

As per the MSDE's Draft Concept Note on Amendment in Apprentices Act (2021) "... there is potential for other States to increase apprenticeship engagements too. State Universities may utilize University Grants Commission (UGC) permitted provisions for apprenticeship-embedded degrees for enabling degree students to get formal skills that can make them employable".

A good practice example in this case is of the state of Gujarat is briefly mentioned in the box below. Additional details are given in annexure 3.

Factors ensuring the success of Gujarat's Mukhyamantri Apprenticeship Yojana (MAY)

- ▶ **Strong political will and involvement:** A clear, strong message was sent out to all stakeholders about the importance the state government attached to apprenticeship.
- ▶ **Higher financial benefits:** Additional reimbursements were provided to industries:
 - 1,500 rupees for freshers and ITIs
 - 2,000 rupees for diploma holders
 - 3,000 rupees for degree holders
- ▶ **Well-planned outreach to establishments:** A comprehensive strategy for outreach at multiple levels (district and state) was planned, involving the use of different channels of communication (letters, webinars, visits, etc.). Annual targets were also set for continuous monitoring and review up to the district level.
- ▶ **Outreach to youth:** This included promotion and publicity campaigns, hoardings and banners, radio jingles and social messages on television. Sessions raising awareness about the apprenticeship programme were conducted in government schools. Counselling and guidance sessions were held in schools every two to three months, along with organizing job fairs.
- ▶ **Decentralized implementation of the apprenticeship programme by district skill committees:** At local level, district skill committees were to implement an apprenticeship programme to reach the rural youth (for schemes like DDU-GKY) and small and micro establishments, to promote the registration of apprentices and enterprises, as well as monitor the scheme.
- ▶ **Recognition of well-performing establishments:** The enterprises which engaged apprentices on a regular basis and met the maximum permissible limits (which is 15 per cent of the total workforce) were appreciated and used as role models.

Source: This study is based on the details provided by MSDE to the author and follow-up discussions with officials from the state of Gujarat

1.3.4 Continuing reforms and modernization of apprenticeship

Through the MSDE, the central government has continuously promoted apprenticeship by implementing reforms and extending financial support. The MSDE is committed to improving the status of apprenticeship training in India and since 2021, the ministry has held several meetings with different stakeholder groups (including SSCs, TPAs, industry representatives and state governments) to discuss the possible strategies to promote apprenticeship in India. The focus of these meetings has been to reduce complexities, simplify processes and systems, enhance synergies and foster convergence. Some of these actions resulting from these meetings include:

- ▶ Apprenticeship under the MSDE was being administered through three departments – one each under the DGT, NSDC and MSDE. These departments have now been combined to enable greater synergies between each other and focus on the promotion of apprenticeship in the country.
- ▶ The processes and procedures creating bottlenecks in the implementation of apprenticeship at the MSDE were identified, and office memoranda were issued to address them. These include memoranda for the (a) simplification of the processes on the apprenticeship portal, (b) simplification of the processes in apprenticeship training, and (c) simplification of NAPS guidelines.
- ▶ To reduce the differences in the processes and compliances involved in the apprenticeship schemes being offered through the MSDE and the MoE, the relevant officials from both the ministries met and as a first step, they agreed on building a unified portal for the apprenticeship schemes offered by the two ministries.

1.3.5 Need for further reform

Potential for apprenticeship training in India

The ‘Guidelines for Implementation of National Apprenticeship Promotion Scheme (MSDE 2019)’ state that only 30,165 establishments are currently engaging apprentices in designated trades. This is an insignificant number compared to the total number of establishments in the country. Of these, 36,000 apprentices are in central public sector undertakings, and 194,000 apprentices are in state public sector undertakings and the private sector.’

It further states that there are about 5 million employees in central public sector undertakings, the central government and the banking sector. If these establishments engaged apprentices, even up to the mandatory minimum limit of 2.5 per cent of the total workforce, there could be a further 125,000 apprentices being trained.

Besides, according to the Fifth Economic Census (MoSPI 2005), there are 2.06 million MSMEs with six or more workers. If each establishment engages even one apprentice each, the number could be 2 million. Therefore, there is a huge potential in apprenticeship training in India which remains untapped.

A study on the assessment and anticipation of the current and future skill requirements in the manufacturing sector conducted by the MSDE (2021) in seven segments of the manufacturing sector – apparel, textiles, leather and footwear; automotive; rubber and plastic products; electrical and optical equipment; basic metals; food industry; and chemicals including pharmaceuticals – reveals that in all the subsectors taken together, skilled workers account for the largest proportion of the total workforce (52.1 per cent) followed in order by unskilled workers (18.8 per cent), apprentices (11.7 per cent), professional staff (11.2 per cent) and clerical staff (6.2 per cent). The overall share of apprentices lies in the range of 0.5 to 7 per cent of the workforce, except for the leather segment which has reported a 13.5 per cent share of apprentices in the total workforce (MSDE 2021).

In a comment on the draft of this report, Raymond Saner, from the Centre for Socio-Eco-Nomic Development, noted that their research and consulting experience in India had revealed the following:

1. In-service training is very rarely evaluated; hence, companies do not know whether the return on investment (RoI) in training is positive or if training is merely an expense.
2. Training is organized as if it were a stand-alone activity and is comparable to a school programme.
3. What is usually missing is the active involvement of managers, who in turn, expect newly hired workers to perform well. Without the involvement of the former, training is mostly an acquisition of knowledge and skills for the trainee without any meaningful transfer to the job site and job behaviour.
4. In-service training should be based on Kirkpatrick's Four Levels of Training Evaluation (reaction, learning, behaviour, results). Without clear intent in terms of training/skill development/apprenticeship investment, in-service training is a stand-alone activity without ROI for the company and without motivating the trainee.

1.3.6 Promoting WBL in ITIs

The National Policy for Skill Development and Entrepreneurship, 2015, emphasized the strengthening of the WBL component in institutional training to promote job-related skills and enhance the employability of these candidates. As a result, WBL has been promoted even outside apprenticeship programmes. This has mainly been part of the CTS being implemented through ITIs across the country.

Since 2014, two schemes with a considerably large component of WBL have been introduced.¹³ As these schemes did not fall under the Apprentice Act, the participants of this WBL component are referred to as trainees and not apprentices. These schemes have the following features.

Flexible Memorandum of Understanding (Flexi-MoU) Scheme¹⁴

The Flexi-MoU Scheme was introduced to encourage industries to participate in the CTS by training young persons in required operational skills, increasing the employment opportunities for the candidate. Under this scheme, enterprises/industry can customize the curricula of skill development programmes to have market-relevant content that meets industry requirements.

The scheme envisages a prospective employer or industrial training partner (ITP) to have established infrastructure, robust training facilities and trained faculty to conduct in-house skilling to enable prospective employees to add industry-ready trainees to their workforce. These ITPs can be industries/organizations, industry clusters/associations, skill universities, etc. To ensure standardized training, the curricula for apprentice courses can be taken from the existing NSQF-compliant courses under the Apprenticeship Training Scheme or, if need be, they can be drafted, finalized and aligned to the NSQF.

The ITP develops the curriculum of these courses with a focus on industrial training and must have high employment potential. For IT, ITeS and other similar sectors, these courses may be conducted purely online. The duration of the training, including the classroom training and industry training components, is normally between 6 -24 months. Perceived benefits of the Flexi-MoU scheme for the participating industries and the trainees is given below in table 5.

¹³ Please see the details provided in section 2.3.1.

¹⁴ For more information, see the [scheme guidelines for Flexible Memorandum of Understanding](#) (with effect from 28 February 2019).

Table 5. Perceived benefits for trainees and industries participating in the Flexi-MoU Scheme

Benefits for participating industries	Benefits for trainees
<ul style="list-style-type: none"> ▶ New courses with customized content and curriculum tailored to trainees' needs and having them approved by the DGT to be created ▶ Flexibility of selecting candidates for training ▶ Flexibility to tie up with external vocational training providers to impart classroom training, mobilize trainees and conduct sessions on soft skills or provide career counselling 	<ul style="list-style-type: none"> ▶ Obtain training in industry-relevant courses with high employment potential ▶ Benefit from interactions with experienced industry experts/professionals ▶ Gain exposure to industry shop floors and environments with the latest equipment ▶ Have potential job opportunities in the industry with increased employment avenues in multiple industries in the sector ▶ Have an advantage in terms of industry readiness, exposure to best practices, latest machines, tools and equipment

Source: Author's analysis

The ITP enters into an agreement or a MoU with the DGT for a period of three years, and this may be extended in slots of three years, if successful. The ITP entering the Flexi-MoU Scheme must train a minimum of 100 trainees per annum with a cap of 1,000 trainees per annum.

The ITP has the flexibility of selecting the trainees as per their own criteria, over and above the prescribed criteria. The admission time and training cycle is flexible and can continue through the year, and training selected candidates is the sole responsibility of the ITP. Assessment is jointly done by the ITP and DGT, and the ITP is in charge of practical and formative assessments and evaluation. The ITP must ensure a placement for at least 50 per cent of the total successful trainees. As of 31 May 2022, the MSDE had 12 MoUs under this scheme.¹⁵

The scheme is a good example of WBL, as most of the practical training takes place in the workplace. Not enough MoUs have been signed, and the rate of increase in the number of MoUs signed is very slow. There are not many details with respect to the outcome of the Flexi-MoU Scheme available in the public domain, and the scheme has not undergone any review or evaluation yet.

Dual System of Training Scheme

The Dual System of Training (DST) Scheme seeks to support ITIs in aligning the contents of their training courses with the skill demands of industry, by enabling ITIs to partner with interested employers and convert parts of the ITI course curriculum into on-the-job training modules. This form of cooperative training holds advantages for both ITI students and employers.

- ▶ For ITI students, it helps them familiarize themselves with their future job roles and gain hands-on work experience in their respective fields, thus giving them an edge over the graduates from non-DST courses and significantly increasing their job prospects.
- ▶ For employers, the scheme helps them actively shape the skill sets of their future workforce. Thus, they help create a pool of qualified workers with the exact skills needed in their companies, thus enhancing the productivity of their workforce (GIZ 2019).

¹⁵ For more information on the MoUs signed, see the DGT website: <https://dgt.gov.in/flexi-mou-s>.

The number of MoUs signed under the DST Scheme has seen a gradual increase from 748 MoUs in January 2020 to 1,061 in January 2021. Examples of implementation of DST scheme at selected industry partner is shown in the box 9 below.

Box 9. Implementation of DST Scheme at Maruti Suzuki India Ltd and Daikin Industries Ltd

Maruti Suzuki India Ltd. has signed MoUs with six ITIs, under which it offers dual training to students and later absorbs them into its own workforce. The company further reported that these industry partnerships also help prepare students in soft skills and English speaking. ITI Bhilai, Pusa, Panaji, Gurgaon, Nalagarh, Kalamassery, Coimbatore and Varanasi have in-plant training programmes that help students familiarize themselves with the latest developments in their respective fields.

In addition, at ITI Pusa, Daikin Industries Ltd. has set up a refrigeration and air conditioning laboratory to train students on the latest developments in the field. In some cases, the partnering companies have also trained instructors, thus keeping students updated with the current developments in their respective trades.

Industry partnerships have not only helped the ITIs place students, but they have had an impact on the introduction of job-oriented trades, training of instructors and other aspects as well.

DST MoUs in Haryana

By September 2020, the Haryana Skill Development and Industrial Training Department (Skill Reporter 2020) had signed a series of DST MoUs under which over 5,500 ITI students from about 60 government ITIs would receive industry-oriented skill development training.

As per the agreement, 287 trade units in 41 different trades, along with 160 eminent industries would collaborate with 60 ITIs.¹⁶ The Additional Chief Secretary of the Haryana Department of Skill Development said: "It was a long-pending demand of the industry association, as they had pointed out that ITI pass-outs don't have the adequate knowledge about the latest machinery and are not conversant with the work environment of the industry".¹⁷

Skill Strengthening for Industrial Value Enhancement (STRIVE)

Skill Strengthening for Industrial Value Enhancement (STRIVE) is a Government of India project, implemented with assistance from the World Bank, with the objective of improving the relevance and efficiency of skills training provided through ITIs and apprenticeships. STRIVE encourages ITIs to engage with industry clusters.

STRIVE has four result areas and one is these is the Improved and Broadened Apprenticeship Programme. Based on proposals submitted by industry clusters to implement NAPS, 30 industry clusters have been shortlisted by various states and selected at the national level.

By March 2022, 426 ITIs and 33 industry clusters had been selected from 34 states and UTs under STRIVE, and the initial tranche of funds had been released for 424 ITIs and 28 industry clusters. The DGT has conducted national and regional workshops to support the states and other implementing agencies in grounding the project (MSDE 2021c).

¹⁶ In India, there are two types of ITIs: (a) government ITIs are those which are run by the government – both national and state government have their roles in the setting up, administration and operation of the ITI (b) Private ITIs are those where the institute belongs to a private or non-government body but implements the CTS and offers NSQF-aligned courses.

¹⁷ For more information, please see [Haryana: Pact Inked, Over 5k ITI Students to Get Skill Development Training](#).



2

**Research
approach and
methodology**

Research approach and methodology

Building on the previous work on quality apprenticeships at the global and country levels, the ILO's ADULT project aims to generate new ideas and innovative policy options to modernize apprenticeships to meet the needs of all segments of the population in existing and new economic sectors, including the digital and green economy for countries at various stages of development. Apprenticeship programmes in India have come a long way since their inception in 1961 with the enactment of Apprentices Act. Several amendments and reforms have taken place since the implementation of the Apprentices Act and Apprenticeship Rules.

An evaluation study carried out of the NAPS, in its major findings states that the (a) benefits of apprenticeship are beginning to be understood by establishments, (b) the youth find it an extremely useful programme for increasing their chances of employment and (c) although the apprenticeship programme has presently only about 300,000–400,000 apprentices every year, given the present workforce it can very easily have 2.0-2.5 million ongoing contracts at any given point of time.

It is evident that though apprenticeship is seen as the most preferable and productive route for skilling youth by all key stakeholders, the present utilization of the apprenticeship positions does not match this belief. Hence, there is huge scope to understand the reasons for this mismatch and identify the aspects which, if modernized and transformed, would lead to an increase in the number of apprenticeships and enhance their quality.

To determine these issues/aspects, the study involved extensive research based on the following:

- ▶ Secondary data, consisting of more than 15 reports and studies, including the recently conducted evaluation study of the NAPS by the National Productivity Council (2021)
- ▶ Primary data, consisting of administering the ILO Evaluation Tool (Questionnaire A and B and C.)

This research study explores the perspectives of key stakeholders across the Indian apprenticeship ecosystem. Stakeholder engagement was carried out to assess the key challenges and the present status of apprenticeship in India, via video conferencing and personal interviews to collect primary data.

Primary research

To understand the aspects related to the implementation of the apprenticeship programme in India, a survey was conducted from August to October 2021 by administering the ILO Evaluation Tool. The purpose of the survey was to develop a clear understanding of the management of the apprenticeship system in the country, which is necessary before embarking on insights on the development of an apprenticeship system.

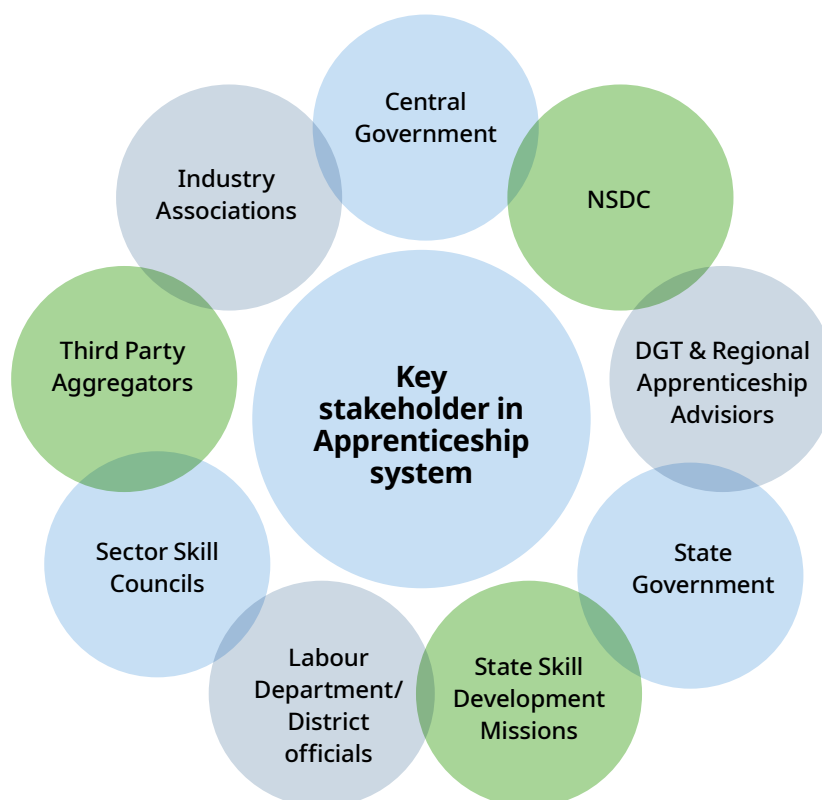
The ILO Evaluation Tool provides the framework for an analysis of the characteristics and performance of a country's apprenticeship policy and system, which can then be benchmarked against international good practices. The Evaluation Tool makes it possible for policymakers and social partners to review, reform and modernize apprenticeships. The tool serves three purposes:

- ▶ As a comprehensive evaluation tool
- ▶ As a rapid self-assessment tool
- ▶ As a tool for understanding the policy environment



The various stakeholders approached for the study play an active role in the complete apprenticeship lifecycle in the country. These included representatives of policymakers, industry associations, TPAs, SSCs, the NSDC, labour unions and state governments (Figure 23). These stakeholders were requested to share their opinion/perspectives on various aspects of the apprenticeship programme in India, its key issues and possible solutions.

Figure 23. Key stakeholders in the Indian apprenticeship ecosystem



Source: Author's compilation.

▶ 2.1 Stakeholders' assessment of the Indian apprenticeship system

2.1.1 Findings from primary research

A total of 355 people responded to ILO Evaluation Tool Questionnaire B. An analysis of the responses received through the open-ended questions bring out the following major areas of concern for apprenticeship in India:

- ▶ The need to make apprenticeship aspirational among the youth
 - a. Lack of progression pathways in apprenticeship
 - b. Need to mainstream and integrate apprenticeship into formal education and qualification systems
 - c. Absence of a system of credit framework for apprenticeships
- ▶ Need to formalize informal apprenticeship
- ▶ Need to promote the engagement of MSMEs in apprenticeships
- ▶ Need for effective apprenticeship management systems
- ▶ Need to enhance awareness of apprenticeship and put an effective communication outreach strategy in place
- ▶ Encourage the digitalization of the apprenticeship programme
- ▶ Move towards digital capabilities
- ▶ Need for continuous upskilling and lifelong learning
- ▶ Need for evaluation of, and studies on, apprenticeship

To understand the aspects related to the management of the apprenticeship programme in India, a survey was conducted from August to October 2021 by administering the ILO Evaluation Tool questionnaire to social partners and other stakeholders involved in quality apprenticeship systems. The purpose of the survey was to develop a clear understanding of the management of the apprenticeship system in the country, which is necessary before embarking on further development.

The respondents included representatives of SSCs and TPAs, industry associations at the national level and the local industry chambers, trainers, mentors, supervisors, and human resources officers in an enterprise, and other experts.

The questionnaire had two distinct parts.

- ▶ Part 1 included close-ended questions structured to obtain feedback against the six key building blocks of quality apprenticeship - meaningful social dialogue, equitable funding arrangements, robust regulatory frameworks, strong labour market relevance, clear roles and responsibilities, and inclusiveness.¹⁸

¹⁸ For more information, see [System and policy level: Key building blocks for quality apprenticeships systems.](#)



- ▶ Parts 2 and 3 of the questionnaire included open-ended questions, inviting respondents to give their views on the apprenticeship system, its strengths and challenges, as well as the chance to offer suggestions on how to improve the apprenticeship system.

About 400 responses were received, which have been analysed and the key results presented here.

The Indian apprenticeship system measured against the ILO building blocks of quality apprenticeship

Meaningful social dialogue

The main goal of social dialogue is to promote consensus building and democratic involvement among the main stakeholders in the world of work. About 57 per cent of the respondents of the primary survey were confident that the government always effectively involves employers' and workers' organizations in the development and implementation of regulatory frameworks, including in laws and regulations. However, only around 43 per cent of the respondents believed that employers' organizations are always involved in designing of apprenticeship programmes, while 6 per cent mentioned that employers are not involved in policy formulation and designing.

The representatives from trade unions, in the consultative meetings with stakeholders, mentioned that if the government provided trade unions space by involving them in policy decisions and setting standards for apprenticeship, they would actively participate in promoting apprenticeship in the country and also contribute to achieving the target of 1 million apprenticeship contracts by mid-2023.

Robust regulatory framework

An efficient quality assurance system is important for the successful implementation of an apprenticeship programme. Of all the respondents, 54 per cent said that a quality assurance mechanism was in place. However, only 47 per cent were confident that employers' organizations are always involved in the monitoring and evaluation of apprenticeship programmes, and though 42 per cent responded positively but were not completely confident that employers' organizations were involved.

Clear roles and responsibilities of trainers and supervisors

A quality apprenticeship system calls for the involvement of a number of stakeholders, directly or indirectly, in its design and implementation. The success of this multi-stakeholder system largely depends on the clarity of the roles of the teachers/trainers and supervisors in the learning journey of an apprentice. However, only 51 per cent of the respondents were confident that trainers are well-prepared for their role and are well-trained for mentorship roles.

Equitable funding arrangements

In response to the question on sharing the cost of apprenticeship among the apprentices, employers and government, less than 50 per cent of the respondents thought that the costs were fairly shared; 5 per cent mentioned that the fair sharing of the costs of apprenticeship training had never been the case; while 13 per cent mentioned that such fair sharing was either rare or only occasional.

Besides, only 47 per cent believed that adequate government funding is available to support the apprenticeship programme in India. Seven per cent mentioned that such funding support is rare, while 2 per cent said it was never the case.

However, in case of the remuneration paid to the apprentices, a clear majority of 74 per cent confirmed that the apprentices always receive remuneration. It may be noted that the Apprentices Act mandates employers to provide a stipend to the apprentices as per the prescribed rates by Government of India. In addition to this, the NAPS extended financial assistance to the employers to share the burden of stipends.

There is a need to revisit the funding arrangements available for apprenticeship training. Issues like awareness on these arrangements, administrative hurdles or even the cost of training in various types/sizes of establishments may need a review.

Strong market relevance

Quality apprenticeship requires a close assessment of the current and future skills' demand and uses this information to inform the planning of apprenticeship programmes and the ways in which the skills gained by apprentices are assessed and certified in the form of qualifications.

The survey revealed that 53 per cent of the respondents believed that apprenticeships always have a positive impact on young people; while the other 37 per cent felt that apprentices usually have a positive reputation. Besides, 46 per cent mentioned that the apprenticeship programme always met the skills needs of employers, while 34 per cent said that employers' skills needs were usually met. This gives a clear indication that stakeholders consider apprenticeship a win-win model of skilling workers to meet the needs of industry.

The survey findings also revealed that employers and off-the-job training providers work in close collaboration to complement the on-the-job and off-the-job learning. Around 40 per cent of the respondents observed that the two components of training are always imparted in close coordination with employers; 33 per cent mentioned that this was usually the case, while another 15 per cent agreed that such close collaboration between employers and off-the-job training providers does take place sometimes.

Respondents mentioned that the apprenticeship programmes have a strong market relevance.

Inclusiveness

As per the survey results, 67 per cent of the respondents mentioned that the government always gives importance to apprenticeship and is committed to promoting it. Nearly 28 per cent of the respondents believed that such importance is usually or sometimes provided.

Fifty-two per cent of the respondents said that small and medium enterprises always receive support to engage

The social protection policies for the apprentices need to be revisited to make it more attractive to existing and potential apprentices

apprentices, while 34 per cent said this was usually or sometimes the case. As the majority of the firms in India are small and medium-sized, the penetration of apprenticeship in small-sized enterprises would be crucial to scale apprenticeship programmes.

Regarding social protection measures, such as insurance for apprentices in the workplace, only 36 per cent of the respondents confirmed that such social protection is ensured during the apprenticeship. A large portion, 31 per cent of the respondents, said that such measures were “never” the case or happened “rarely”, and some responded with “Not applicable” or “Don’t know”.

2.1.2 Findings from secondary research

Studies and progress reviews on the Indian apprenticeship programme and WBL conducted in last few years have provided recommendations and direction for further modification of apprenticeship schemes. Some of the key recommendations from selected reports are listed here to help develop the possible strategies to modernize and reform the Indian apprenticeship system and WBL.

- ▶ Streamline the NSQF alignment of optional trades
- ▶ Promote continuous upskilling and lifelong learning as a key to sustain competitiveness
- ▶ Need for apprenticeship programmes in digital and modern technological courses
- ▶ Need for in-built mechanisms in apprenticeship programmes to support a timely response to the global health pandemic
- ▶ Review the stipend reimbursement subsidy extended to enterprises
- ▶ Align common cost norms and assessment fees for apprenticeship training with similar short-term courses
- ▶ Provide target-linked incentives to TPAs and SSCs
- ▶ Promote focussed efforts on awareness, advocacy/promotion and industry connections
- ▶ Greater focus required on capacity building for relevant stakeholders
- ▶ Build capacity for supervisors and mentors for the effective implementation of the apprenticeship programme
- ▶ Need to increase the strength of supervisors and mentors during the apprenticeship
- ▶ Provide mentors to apprentices during on-the-job training.
- ▶ Maintain apprenticeship data, including employment statistics and the placement record of apprentices
- ▶ Take up local demand and supply aggregation at the level of the district skill committees
- ▶ Develop a framework and promote the cluster approach for apprenticeships in the informal sector
- ▶ Take steps to improve the acceptance level of apprenticeship in various industries
- ▶ Simplify the processes of in contract signing and contract validation

Detailed findings from the secondary research can be found in Annexure 2.

The compilation and consolidation of the issues from the primary and secondary research resulted in nine major broad research themes:

- ▶ Making apprenticeship aspirational among youth
- ▶ Building awareness and developing a communication strategy
- ▶ Formalizing informal apprenticeships
- ▶ Engaging MSMEs in apprenticeships
- ▶ Encouraging the digitalization of apprenticeship programme
- ▶ Building effective apprenticeship management systems
- ▶ Moving towards strengthening digital capabilities
- ▶ Promoting continuous upskilling and lifelong learning
- ▶ Undertaking evaluation and studies on the apprenticeship programme

2.1.3 Prioritizing themes relevant for India and recommended for further research and study

The draft report was shared with the MSDE and was discussed in a meeting chaired by the Additional Secretary of the MSDE, Mr Atul Kumar Tiwari, on 3 September 2021. Senior officials from the MSDE, DGT and NSDC participated in the discussion. Based on the discussion, the following areas, considered important for further research and study, emerged.

- ▶ Mainstreaming apprenticeship in the technical-vocational education system and developing pathways for further qualifications and recognition (apprenticeship for lifelong learning)
- ▶ Formalizing informal skills through apprenticeship
- ▶ Building an effective apprenticeship management system through:
 - Effective communication and advocacy plans
 - Target setting
- ▶ Developing a model for convergence among various apprenticeship schemes namely NAPS, NATS, and NEEM to provide effective progression pathways to all types of apprentices
- ▶ Researching how the role of TPAs can be made more productive for designated trades as well

A two-day innovation bootcamp titled “Apprenticeship in India: Country Strategy” was organized by the ILO in cooperation with the MSDE from 27–28 April 2022 at the India Habitat Centre, New Delhi. The bootcamp had three major objectives:

1. Deliberate on the recommendations provided in the ADULT country research report on apprenticeship,
2. Learn from the global good practices in apprenticeship, and
3. Contribute to shaping the Indian national strategy for Apprenticeship 2030.

The recommendations provided by the stakeholders in the innovation bootcamp have been included while discussing the five themes mentioned for India.



▶ 3

Recommendations

Recommendations

▶ 3.1 Theme 1: Mainstreaming apprenticeship in the TVET system and developing progression pathways

Description of the theme and why it matters in modernizing and transforming apprenticeships

The basic purpose of the apprenticeship programme, since the early years of its implementation, has been to provide an opportunity for the youth to enter the labour market, become “job ready” to work in the manufacturing (and service) industries. Hence, not much attention was paid to connecting apprenticeship with further qualifications.

As per the insights revealed through the primary survey¹⁹ undertaken as part of this study, the current apprenticeship ecosystem is not sufficient to attract youth to apprenticeships. Some of the reasons given by the respondents include the following.

- ▶ Lack of access to certain careers through the apprenticeship route: The lack of possibilities and progression pathways (academic or vocational) after the completion of apprenticeship training is one of the major hurdles in promoting apprenticeship training.
- ▶ Lack of opportunities for vertical and lateral entry into education: Higher qualification through an apprenticeship is not available in India. Apprenticeship is still not recognized as part of the mainstream education system. There is a clear lack of permeability between apprenticeship and higher education.
- ▶ Lack of formal recognition for apprenticeship: The time spent in apprenticeship training is not counted towards admission into general or higher education or other skilling courses. In other words, a young person will have to forgo the time invested in apprenticeship training. There is no well-established system for credit recognition, accumulation and transfer for apprenticeship training in the country.
- ▶ Lack of transparency and simplicity: Despite considerable efforts in streamlining the apprenticeship system, it remains bedevilled by layers of complexity and overlap, leading to unnecessary duplication, inefficiencies, and confusion. There are too many parallel schemes, and a lack of coordination exists between each of these.

The survey further revealed that apprenticeship training can be made aspirational if the pathways to acquire higher training for apprentices are well defined and properly implemented and if the multiplicity and complexities in the systems are reduced (see Annexure 5).

¹⁹ The list of challenges mentioned by the respondents are in Annexure 1.



Other issues related to progression pathways for apprenticeships, which were emphasized by the respondents of the primary research as well as in many secondary studies, were continuing upskilling and lifelong learning. The challenges include:

- ▶ Apprenticeships should provide opportunity for higher skilling/reskilling.
- ▶ Apprenticeships should impart transferable skills to workers that can enable them to ride through the wave of automation and any resulting structural shifts in the labour market.
- ▶ The eligibility for apprenticeships should include part-time apprentices, which would be conducive to those pursuing higher studies and those seeking re-skilling.
- ▶ Apprenticeship training should be given weightage in the selection procedures for higher studies.
- ▶ Apprenticeship training should be given weightage in the selection procedures for work in the government sector or public sector establishments.

A study by the Federation of Indian Chambers of Commerce and Industries (FICCI) entitled *Implementation of Apprenticeship in India* (2019) highlighted the **need for the formal alignment of apprenticeship to education**. It noted that linking higher education to apprenticeship to provide vertical and horizontal mobility is critical to make it aspirational for youth, and made the following recommendations:

- ▶ Credit for learning in apprenticeships (alignment with NSQF standards): An apprentice can be registered for open or online courses with universities like the Indira Gandhi National Open University (IGNOU) or with SWAYAM.²⁰ A combination of theoretical and practical aspects of learning should provide credits, and this could help in educational mobility.
- ▶ Apprenticeship-based diplomas: Apprenticeship can be linked to the Bachelor of Vocational Studies (B.Voc) or diplomas to ensure that students finish the apprenticeship programme with a recognized certification.

This theme attempts to explore issues related to these challenges.

²⁰ SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) is a programme initiated by Government of India and is designed to achieve the three cardinal principles of the education policy: access, equity and quality. For more information, see <https://swayam.gov.in/about>.

3.1.1 A critical analysis of ongoing practices

Traditionally, apprenticeship programmes were designed as a systemic “one-way street” with the sole purpose of providing students with a route for immediate transition into the labour market. As a result, the progression pathways to higher education or higher levels of skilling were not consciously connected.²¹

However, due to the rapid changes in modern labour markets and the fact that a constantly growing number of people are striving for higher education, greater permeability in both vertical and horizontal terms is urgently needed. Hence, apprenticeship training must provide access to higher education or higher levels of skilling to maintain its attractiveness to the youth. With permeability, individuals can always retool, upgrade or change career pathways. This is especially critical as frequent technological changes make education and training a lifelong pursuit (Caves, Renold and Backes-Gellner 2018).

The survey results show that apprenticeship in India will become aspirational if the qualifications gained through apprenticeship are recognized as the eligibility for entry to higher levels of skilling or to academics. Accordingly, this topic has been explored from the perspective of permeability to both academic and technical diploma and degree courses for apprentices and for the progression through vertical and horizontal mobility in the same trade.

As per the current structure, though a certificate from an ITI is accepted as eligibility for admission to the second year of B.Voc and diploma courses as part of lateral entry for these youth, the National Apprenticeship Certificate is not included as eligibility in any of these courses.

Progression pathways: From apprenticeship to higher education

Currently, the only higher education courses linked to apprenticeship are graduation courses. This progression pathway was approved recently (December 2021) with the signing of a MoU between the DGT and the National Institute of Open Schooling (NIOS) to:

- ▶ integrate pathways between CTS and Apprenticeship Training Scheme (ATS) towards school education certification;
- ▶ enhance the employability of NAC graduates under ATS;
- ▶ enable NAC graduates to move to appropriate academic courses/programmes (senior secondary/degree courses);
- ▶ accept subjects taught under the CTS/ATS schemes for academic equivalence under credit transfer; and
- ▶ enable NAC holders to earn secondary/senior secondary qualifications.

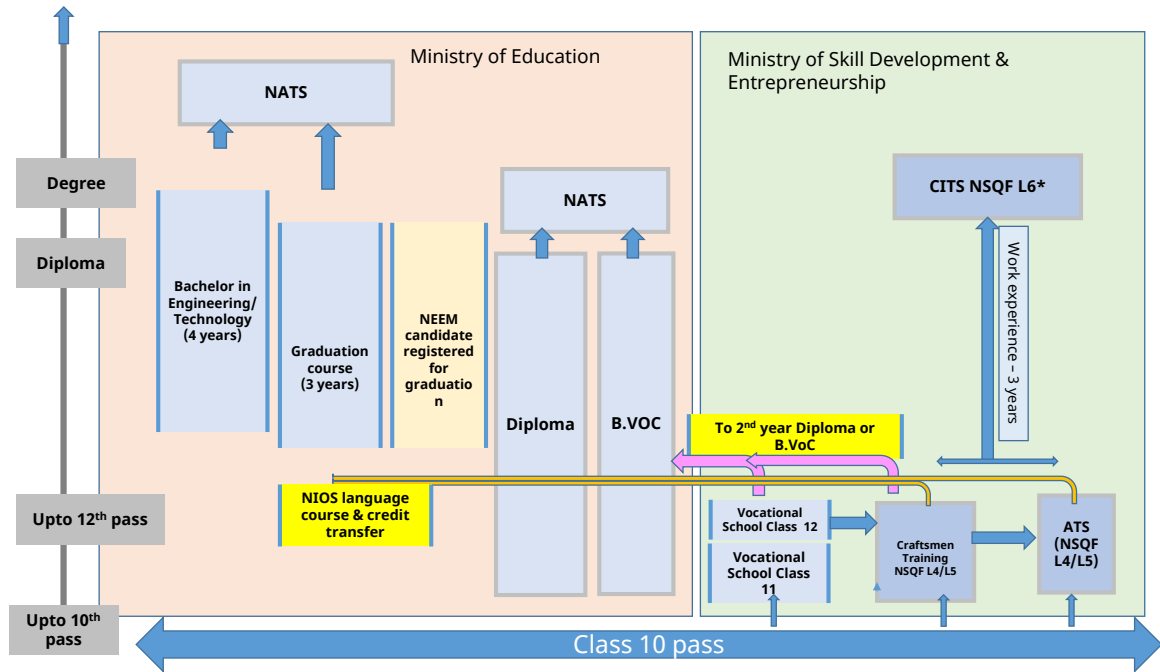
With this MoU, the apprentices from designated trades will have the opportunity to further their academic qualifications by seeking admission to degree programmes. More clarity in the linkages between the NAC and school education will be achieved after the implementation of the proposal.

The current system of CTS and apprenticeship shows that while a CTS certificate holder (after completing their ITI education) is eligible to take admission in the second year of a B.Voc course or a diploma course, a NAC holder does not have these privileges. The pathways for transition from apprenticeship to other apprenticeship streams or to higher vocational education is extremely limited, creating a system with “dead ends”.

In other words, this implies that the apprentice who, after the completion of training, wishes to obtain further skill qualifications other than crafts instructor training, has no option but to forgo the time invested as an apprentice (refer figure 24 below).

²¹ For more information, see the MSDE’s CSTARI website: 1

Figure 24. Progression pathways within the existing structure of apprenticeship in India

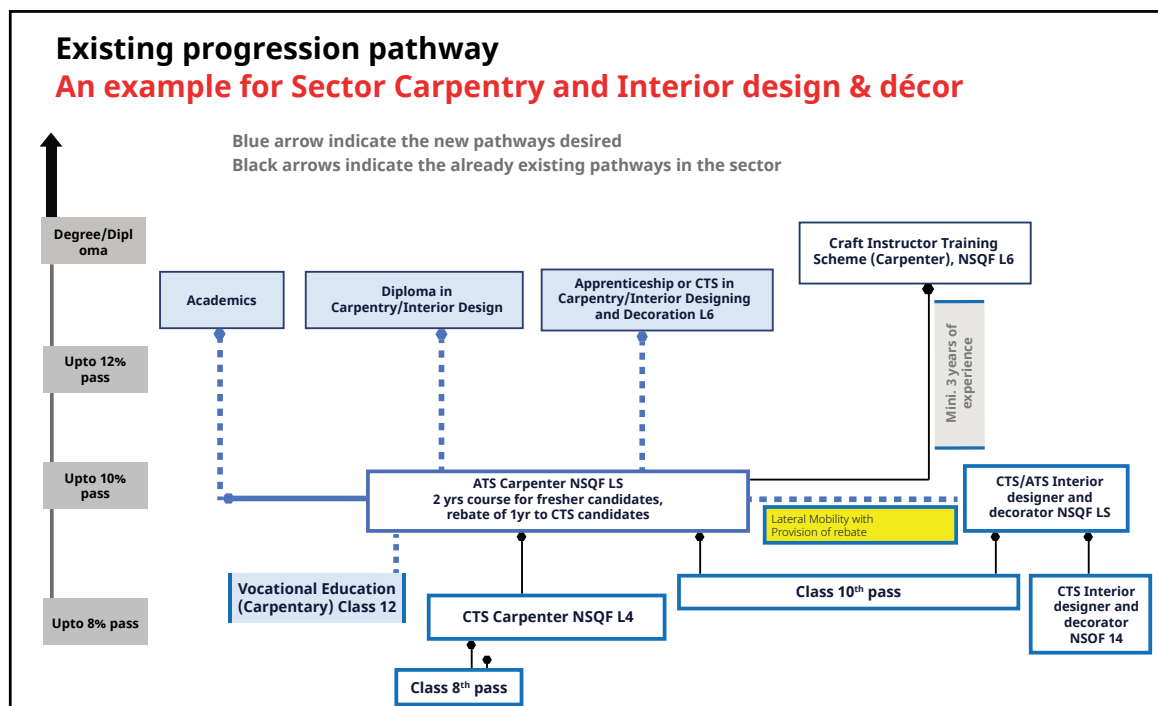


Source: Author's compilation



Similar situations exist in the case of the progression to higher skill training. Apprenticeship courses in India are not aligned to promote such lateral mobility. As an example, the mapping of the apprentice from carpentry trade (NSQF level 5) is shown in figure 25. The black lines are the existing pathways for progression for the apprentice.

Figure 25. Possible progression pathways within the carpentry sector (promoting links between ATS and CTS)



Source: Author's compilation

As seen in figure 25, the options available to a NAC level 5 (represented through the NSQF L-5) certificate holder in carpentry are to:

- ▶ seek employment and become part of the workforce; if they are interested, after a minimum of three years of experience, they can undertake the crafts instructor course to become an instructor for the carpentry trade. Alternatively, they can continue working in the trade sector; or
- ▶ undertake specially designed courses through distance learning (as offered through the NIOS) alongside their apprenticeship programme to be eligible for admission to higher education.

Though there are a number of advanced training programmes with similar or higher NSQF level under the CTS, the pathways linking them to apprenticeship training programmes are missing.

In figure 25, the following routes for vertical and lateral mobility may be explored.

a. Vertical mobility: NAC holders of any NSQF level (level 4 or 5) should be considered eligible to:

- ▶ Seek apprenticeship to the next NSQF level (which, in this case, may be level 5 or 6 respectively), which means moving one level higher within apprenticeship training itself. Where required, work experience of one to two years (or as deemed fit) can be included as a pre-requisite to further the skills through this route.
- ▶ Seek admission to next level of the CTS offered through traditional institutional training.

b. Lateral mobility: NAC holders from a particular trade may be eligible to seek apprenticeship training in a related trade at the same NSQF level. In this case as well, both options, apprenticeship and CTS courses, should be accessible to the apprentice. The apprentice may also be given time rebates equal to the duration of the common qualification packs (QPs) or modules in both the cases.

Such progression pathways may provide apprentices the opportunity to opt for a second apprenticeship to further their skills and competences or to widen their skill sets to obtain a greater opportunity for entrepreneurship.

The implementation of undertaking multiple apprenticeships is under consideration by the MSDE.

In a webinar organized by United Nations Development Programme (UNDP), with the states of Madhya Pradesh and Karnataka, to discuss the Concept Note on the Amendment of the Apprentices Act, one of the issues discussed was to allow multiple apprenticeship with the following conditions:

- ▶ Candidates can pursue similar occupations with higher NSQF levels or competencies in the same or different companies.
- ▶ Different trades/occupation with the same NSQF level should be allowed in the same or different companies.
- ▶ No similar occupation should be allowed in the same company with the same NSQF level.

For proper implementation, the multiple apprenticeship programme would require the development of sectoral approaches in apprenticeship, where each trade sector offers lateral and vertical progression pathways to apprentices within the sector.

Does apprenticeship add to the qualification of a trade apprentice?

One of the key objectives of apprenticeship is to provide industry-linked training to ITI graduates (trade apprentices). Hence, to ensure that ITI graduates find apprenticeship attractive, it is expected that, besides making youth job-ready, the apprenticeship programme will also lead to:

- ▶ Enhancing the qualifications of ITI graduates by at least one level in the NSQF.
- ▶ Providing uniform time rebates to ITI graduates undertaking apprenticeships.

A random analysis of 16 similar curricula under CTS and ATS (designated trades) from the Central Staff Training and Research Institute (CSTARI)²² was undertaken as part of the study (see Annexure A). The following trends have been noted.

²² For more information, see the CSTARI's website: <https://www.cstaricalcutta.gov.in/ATS-1.aspx>.

Not all apprenticeship courses lead to the enhancement of qualification levels (NSQF).

Of the 16 courses:

- ▶ In five trades, the apprenticeship curricula were pitched at a level higher (in terms of NSQF) than their preceding CTS trades.
- ▶ In three trades, there was no corresponding apprenticeship course. Two of these were in the IT sector: Internet of Things technician (which has three CTS trades) and data entry operator.
- ▶ In eight trade areas, the apprenticeship courses had the same NSQF level as that of their preceding CTS courses.

This misalignment of the courses, as in points ii and iii, can be seen as a demotivating factor for ITI graduates seeking to undertake apprenticeship for these courses. It is clear that further analysis is required to understand the relationships between CTS and ATS courses.

- ▶ A few short-term courses under the CTS have mentioned the NAC in the admission eligibility criteria. However, no specific advantage to the trade apprentice is provided as the NAC qualification is mentioned at par with the CTS certificate. An example in this case is the short-term professional make-up artist and hair stylist course (NSQF 5) and short-term senior nail technician course (NSQF 5), as seen in table 5.

Table 6. Short-term courses in the beauty and wellness sector (curriculum developed by CSTARI)

Name of the trade	Senior nail technician	Name of the trade	Professional make-up artist and hair stylist
Trade code	DGT/8010	Trade Code	DGT/8012
Reference NCO	2015 51402.0201	Reference NCO	015 5141.0202, 5142.9900
NSQF level	Level 5	NSQF Level	Level 5
Duration of craftsmen training	320 Hours	Duration of craftsmen training	480 Hours
Entry qualification	Passed class 10 with NTC in cosmetology or NAC in beautician/hair and skincare . Or passed class 12 with a beauty and wellness vocational course. Or passed a Level 4 short-term course related to nail art/ manicure and pedicure.	Entry qualification	Passed NTC in Cosmetology or NAC in Hair & skin care/ Hair cutter (dresser) . Or passed class 12 with a beauty and wellness vocational course. Or passed in a Level 4 short-term course related to make-up art/ hair and skincare.

Source: Author's analysis from the CSATRI's website.

These insights are based on a random analysis, and it is clear that an in-depth analysis will be helpful in providing answers to the question: Does apprenticeship training add to the qualifications of an ITI graduate?



3.1.2 Ongoing policy initiatives

Developing credit-based progression pathways between vocational education, school education and higher education has already been included as one of the main objectives of National Policy for Skill Development and Entrepreneurship, 2015. The NSQF Gazette Notification (Ministry of Finance 2013) details the integration of credit accumulation and the credit transfer system in NSQF.

Designing such progression pathways becomes more crucial in light of the recommendations in the National Education Policy (Ministry of Human Resource Development 2020), as per which, “it is important to mainstream apprenticeship in education system as well as in the minds of people. Hence, there is a need to explore holistic proposals on various types of apprenticeships, developing pathways for further qualifications and recognition”.

Accordingly, a high-level committee to develop a unified credit accumulation and transfer framework for both vocational and general education was constituted in November 2021,²³ with the aim of developing a credit framework system to enable the integration of the academic and vocational domains/components of learning and to ensure flexibility and mobility between the two. The committee is tasked with:

- ▶ Assigning credit values to academic and skill courses taught at various levels (school education, higher education, skilling ecosystem, distance/blended learning, etc.).
- ▶ Identifying ways of credit accumulation (for vocational, school and higher education).
- ▶ Proposing a credit transfer model for:
 - Vocational and school education and vice-versa
 - Vocational and higher education and vice-versa
- ▶ Establishing academic equivalence between vocational and general education at all levels.
- ▶ Developing the unified credit framework for integration of vocational education into school and higher education, in line with the National Education Policy 2020 to enable vertical and horizontal mobility between education and skilling.
- ▶ Identifying the mechanism for the accumulation and storage of credits through a credit bank.

²³ No. Coord-11/01 /2021-P&C [Comp No. 44290], Government of India, Ministry of Skill Development & Entrepreneurship, dated 18 November 2021.

One of the first results was achieved in December 2021 with the signing of a MoU between the MSDE and the NIOS to:

- ▶ Integrate the pathways between the CTS and ATS towards school education certification
- ▶ Enhance the employability of NAC holders under the ATS
- ▶ Enable NAC holders to move to appropriate academic courses/programmes (senior secondary/degree courses)
- ▶ Accept subjects taught under the CTS/ATS schemes for academic equivalence under credit transfer
- ▶ Enable NAC holders to earn secondary/senior secondary qualifications.

With this MoU, the apprentices from designated trades will have the opportunity to further their academic qualifications by seeking admission to degree programmes. Further clarity in the linkages between the NAC and school education will arrive after the implementation of the proposal.

3.1.3 Recommendation for the theme

To make apprenticeship aspirational, the apprenticeship programme must provide options for access to higher levels of skilling. Options for both vertical and lateral mobility need to be established, so that apprentices have the opportunity to establish themselves properly in their trade.

- ▶ With regard to vertical permeability, wherever possible, special examinations or courses can be offered to lead apprenticeship graduates to a higher education entrance qualification. As in the United Kingdom, an apprentice could be allowed to take these exams and courses while undergoing apprenticeship training or after completing training.
- ▶ With regard to lateral mobility, attractive options for movement between courses in the same trade sector should be promoted. This may also encourage entrepreneurship among apprentices.

An essential element of the successful implementation of the progression pathway system is the presence of effective and dynamic structures of implementation and governance. While the NCVET acts as an overall skills regulator and establishes the minimum functioning standards of these entities, there is a need for institutions to have sufficient autonomy and decision-making powers, with which they can provide options for multiple apprenticeships and the smooth transition between apprenticeships and institutional training (as under craftsmen training), leading to qualification progression. The suggested institution may undertake work on the following focus areas:

- ▶ Provide ease of mobility between apprenticeship, vocational training and education and provide pathways for higher academic qualifications
- ▶ Structure bridging courses where required and define options for vertical mobility within the trade sector
- ▶ Develop options for lateral mobility within the trade sector by proposing rebates in training duration
- ▶ Provide guidance and support for young people through career advice and counselling
- ▶ Advise institutions (such as National Instructional Media Institute, SSCs, CSTARI, or NIOS) on how to design and offer e-courses required for the ease of mobility
- ▶ Advocate for and promote the apprenticeship programme as a desirable eligibility criterion in the selection procedure for government sector jobs and public sector undertakings.

This theme and the suggestions provided here were discussed with the key stakeholders of the apprenticeship ecosystem during the Innovation Bootcamp, “Apprenticeship in India: Country strategy” conducted on April 27–28 2022. The results of the group discussions are briefly presented in box 10.

Box 10. Recommendations of the group discussion on “Mainstreaming apprenticeship in TVET systems” at the Innovation Bootcamp

Twenty-five participants from different organizations that are actively involved in apprenticeships participated in a group discussion led by Dr (Ms) Veena Swarup, Ex-Director (HR) at the Indian Oil Corporation Ltd. to discuss the need to mainstream apprenticeship in TVET systems and develop progression pathways. After the discussion, the group shared the following insights.

The members in the group unanimously agreed on the following needs:

- ▶ After the assessment and certification of their apprenticeship, apprentices should have a higher level of qualification.
- ▶ Apprenticeship should be mainstreamed in general and higher academics and skilling and progression pathways should be developed to make it aspirational.
- ▶ Education curricula should be aligned to apprenticeships.
- ▶ A higher standard of skilling and apprenticeship should be maintained.
- ▶ Apprenticeship should be made a mandatory component of education.
- ▶ Credits for apprenticeship training should be at par with other skills training.
- ▶ The number of hours in apprenticeship should be accepted as experience.
- ▶ Similar treatment should be given to designated and optional trades.
- ▶ Advocacy should be carried out for apprenticeship with youth and industry.
- ▶ The health and safety of apprentices should be ensured.
- ▶ The NAC should be mainstreamed to the NSQF.
- ▶ Easy entry and exit to apprenticeship should be promoted, and apprenticeship should be modularized.
- ▶ The right definition of apprenticeship is important and should be updated.

3.1.4 Areas for further study and research

In November 2021, the Unified Credit Accumulation and Transfer Framework was constituted for both vocational and general education with the aim to develop a credit framework system which would enable the integration of the academic and vocational components of learning and ensure flexibility and mobility between them.

The ILO Apprenticeship Toolbox Volume 2²⁴ states that “Apprenticeship programmes are characterised by horizontal and vertical permeability to ensure that there are no dead ends in the systems, that graduates are employable and that gifted VET graduates have rich opportunities to continue in education” (ILO n.d.). In addition, several models for various pathways and permeability can be found in the Toolbox.

In-depth research can be conducted to identify the points of interest for India, especially those which can be adapted and replicated to implement progression pathways for apprenticeship.

²⁴ For more information, see the ILO’s [Apprenticeship Toolbox](#).

▶ 3.2 Theme 2: Formalizing informal skills through apprenticeship

For years, India has been known for its “guru-shishya parampara”.²⁵ This student-teacher system required students to live at their teacher’s home till their education was complete. The course of study followed a multi-disciplinary model. In the Vedic period, science, linguistics, agriculture, metallurgy, warfare, logic and critical thinking were vital to the curriculum. Equal importance was given to yoga and spiritual progress. Students could also pursue an education in music, dance and painting, which helped them develop an artistic temperament.²⁶

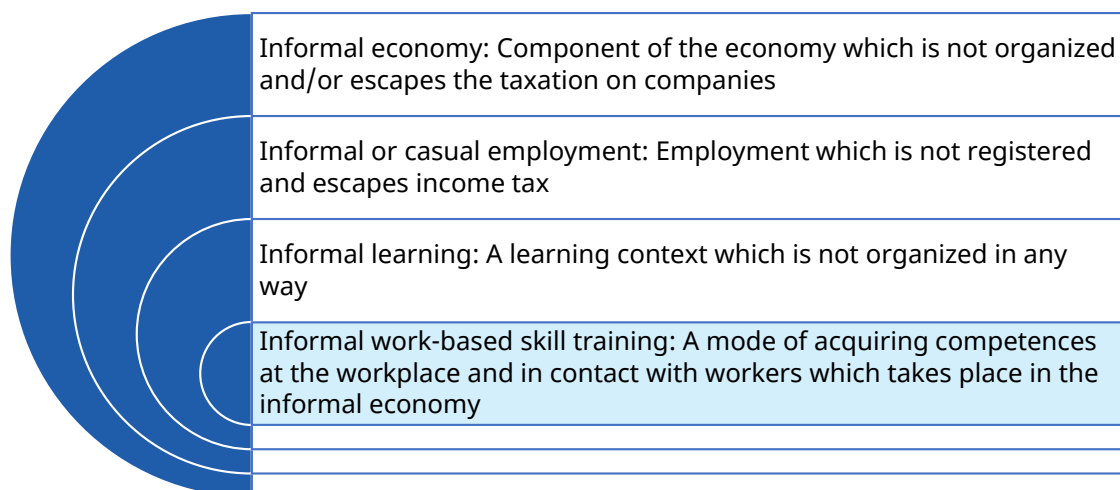
Even today, many traders’ communities, craftsmen, and others still follow similar systems of learning. The art of the work is passed on from father to son or other interested relatives within close family circles. Though the model is good, it has its weaknesses similar to those of informal apprenticeships.

Description of the theme and why it matters in modernizing and transforming apprenticeships

The Indian economy is driven by its enterprises operating in informal markets. Nearly 94 per cent of the enterprises in the country, employing 110.9 million workers, operate in the informal sector and generate employment and livelihood opportunities for the masses. Even the industries of the formal sector are heavily dependent on the enterprises of the informal sector as they function as ancillary units for large-scale industries.

As most of the skills learnt informally are done through on-the-job training, and the term “informal skills” is equated with informal apprentices. Informal apprenticeship can be broadly defined using four interrelated contexts (figure 26).²⁷

Figure 26. Informal apprenticeship



Source: Author’s compilation.

²⁵ This is a Sanskrit phrase, in which shishya literally translates to ‘student’ while parampara refers to ‘an uninterrupted tradition’. Thus, this is a lineage of passing wisdom from a succession of gurus to their shishyas through the oral tradition (Pratha 2021).

²⁶ For more information, see, [Guru-Shishya Parampara: An Introduction to the Ancient Indian Education System.](#)

²⁷ https://www.vettoolbox.eu/drupal/files/public/2021-05/ENGpercent20notepercent20dpercent27orientation_0.pdf



MSMEs in India play a crucial role in the informal economy, as they have immense potential for employment and income generation. These small firms also produce the maximum number of goods and services in the country. Some of the significant contributions of MSMEs to the Indian economy are listed here (table 7).

Table 7. Share of MSMEs in the Indian economy

S. No.	Indicators	Performance
1.	Share of MSMEs in GDP (2016-17)	29%
2.	Estimated number of MSMEs in rural areas	32.49 million
3.	Estimated number of MSMEs in urban areas	30.9 million
4.	Per centage share of rural MSMEs in the country	51%
5.	Per centage share of urban MSMEs in the country	49%
6.	Share of estimated employment generation in manufacturing MSMEs in the country	32%
7.	Share of estimated employment generation in trade MSMEs in the country	35%
8.	Share of female workers in the rural MSMEs	45%
9.	Share of female workers in the urban MSMEs	55%

Source: MSME (2018-19)

As per the insights revealed through the primary research, there is a strong need to reach out to:

- ▶ young persons who learn skills informally in an ecosystem that is not regulated in terms of quality.
- ▶ the micro and small enterprises which employ more than 4 but less than 29 workers (and which, are therefore, not mandated under the Apprentices Act to engage apprentices).

There is a strong need to engage MSMEs in apprenticeships, and the following actions should be taken.

- ▶ Apprenticeships should be mandatory for all establishments.
- ▶ The government should provide support for MSMEs to participate in apprenticeships.
- ▶ On-the-job training, not only in large firms, but in MSMEs as well should be incentivized, and greater awareness should be built about the returns from skilling.
- ▶ Extra financial/non-financial benefits should be extended to MSMEs to encourage them to provide apprenticeship places.
- ▶ The upper ceiling of apprenticeship intakes may be increased from 15 per cent to 20 per cent for MSMEs.
- ▶ Special provisions for MSMEs and special considerations or benefits to those apprentices who join MSMEs can be provided.
- ▶ A legal mandate should be enforced on establishments for not complying with apprenticeship regulations.

Some of the issues raised by the respondents include:

- ▶ There is no framework for apprenticeship in the informal sector.
- ▶ There is a need to formally recognize workers with skills acquired through informal and non-formal learning. It is also important to enhance the skills of such workers by providing them with potential pathways into the formal labour market.
- ▶ The cluster development approach needs to be promoted to address the challenges of informal economy.

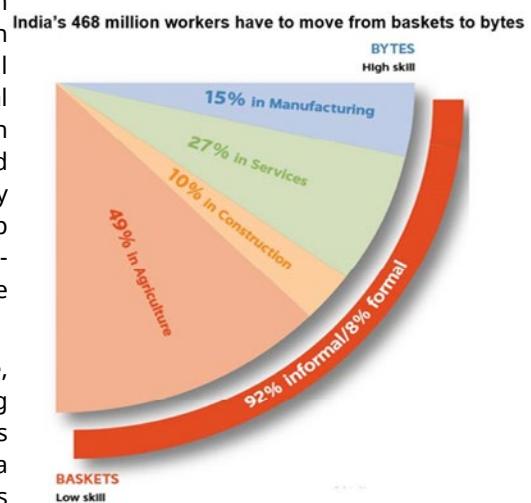
3.2.1 A critical analysis of ongoing practices

India's MSMEs are a significant generator of employment, with nearly 63.3 million MSMEs hiring 110 million citizens and contributing close to 30 per cent of the GDP. However, most of these units are small and, therefore, are not part of the Goods and Services Tax (GST) network. While the MSME sector employs a large section of the non-farm workers, most hire fewer than five workers, with the World Bank estimating that this is the case for nearly 94.6 per cent of all MSMEs (2021). About 99 per cent of Indian MSMEs have less than 10 workers, leaving them out of the list of establishments mandated to hire apprentices.

Small enterprises provide employment for a large section of both the rural and urban masses and serve as rich learning grounds for the casual workforce of the Indian economy. Many who start their careers in the informal sector soon acquire technical skills and enter the formal labour market. Informal apprenticeship, therefore, can emerge as an effective way of preparing the skilled workforce with the right hands-on skills and is mostly likely the need of the hour. Informal apprenticeship offers flexibility and the chance to acquire skills in real-time, which is crucial for local industries as they are currently suffering a shortage of skilled manpower.

According to the report *Skilling India: No time To Lose*, most of the informal workforce in India is unskilled owing to low education and training levels (NCAER 2018). It is estimated that 90 per cent of the 450 million jobs in India require vocational skills. Only 4 per cent of the workers have formal vocational skills (National Commission for

Figure 27. Informal workers by sector (2018)



Source: *Skilling India: No Time to Loose*-2018-NCAER

Enterprises in the Unorganized Sector 2007). This leads to a vicious cycle of low productivity and low wages. Higher productivity can be achieved only through skilling India's informal workers according to the demands of industry and deploying them in high-growth formal sectors. Formalization also increases a worker's motivation to remain skilled because of competitive wages, better working conditions and social security benefits.

Apprenticeships as the way to boost formal w: The primary advantage of upgrading informal work-based skills training is that it helps young people transition into decent work. Formal TVET systems are often out of the reach of disadvantaged youth. Upgrading informal work-based skills training is a cost-effective bridge to boost youth employability because training through apprenticeships takes place directly at the industry and uses the tools and techniques required to master a trade. The training becomes an "investment" between the master craftsperson and apprentice with the flexibility to impart skills to even poor youth. Box 11 below presents few reasons for why improving informal apprenticeships may be a smart policy solution (2020).

Box 11. Informal apprenticeship: A smart policy solution

In a blog post on the NORRAG website, Fabian Jacobs presents reasons for why improving informal apprenticeships may be a smart policy solution (2020).

- ▶ "First and foremost, informal apprenticeships are a common way of skills development in many countries and in some cases attract far more young people than the formal TVET system. For policy makers it may be more feasible and effective to work with existing apprenticeship models which are accepted amongst enterprises and society, rather than trying to replace a functioning training delivery system.
- ▶ Further, apprenticeships efficiently increase youths' employability since the training takes place on the job and contents are therefore geared towards the actual requirements of small and medium sized enterprises. Considering the economic performance of the informal sector, upgrading informal apprenticeships can improve human capital and productivity and therefore contribute to enabling a formalisation of informal enterprises in the long run.



As informal apprenticeships²⁸ are only conducted in the workplace, there is usually no involvement with formal TVET institutions and vocational schools. Hence, apprentices do not have any access to theoretical education, and learning content at the enterprise level does not follow any official standards. Further, access to modern technology is often limited due to the constrained resources of small, informal enterprises. Such apprenticeships also do not always follow decent work standards and are not necessarily equally accessible to women.

Some of the other shortcomings of informal apprenticeship, as stated in the ILO policy brief on 'Upgrading Informal Apprenticeship System' is presented in box 12 below.

Box 12. Shortcomings of informal apprenticeship

Informal apprenticeships have several shortcomings (Aggarwal 2013), including:

1. Training is neither systematic nor structured and the quality of the training provided by the various skilled craftpeople varies significantly (Haan 2006).
2. There are generally no training standards or effective quality assurance mechanisms.
3. There is usually a lack of decent working conditions and occupational safety and health provisions.
4. The knowledge underpinning the training is often not adequately provided to apprentices.
5. The agreement between a skilled craftsman and an apprentice is typically verbal and, therefore, difficult to enforce, which may lead to the exploitation of the apprentice.
6. The duration of the training could be much longer than required.
7. Some master craftspeople charge fees to train apprentices.
8. The skills acquired during an informal training are neither certified nor recognized nationally, making it difficult, though not impossible, for the apprentice to be mobile in the labour market (Hofmann and Okolo 2013).

To enhance the quality of informal apprenticeships, these challenges can be addressed, for example, by building linkages to vocational schools and institutions in the formal TVET system. Thus, young people can easily gain access to standardized theoretical knowledge and technical know-how. Further, formal educational achievements make competencies visible to potential employers and enable access to greater formal education for trainees.

3.2.2 Ongoing policy initiatives

With the major share of establishments lying outside the mandatory apprenticeship net, the numbers of apprenticeship positions in the country have been drastically reduced. Some of the policy reforms implemented by the Indian government have led to the widening of the target group of apprentices, and apprenticeship opportunities are now available to young persons who were outside the "formal apprenticeship" category. These initiatives include the following.

²⁸ For more information, please see the ILO policy brief on [Upgrading Informal Apprenticeship Systems](#).

3.2.2.1 Comprehensive reforms in apprenticeship systems (2014)²⁹

The comprehensive reforms in the apprenticeship system, implemented by the Government of India in 2014, bring some parts of informal apprenticeship into the formal system. Some of the actions taken were:

- i. Expanding the number of companies mandated to engage apprentices by reducing the size of total workforce from 40 to 30 workers. This brought many companies into the mandated apprenticeship net, increasing the number of apprentice positions to include a larger group of young people in formal apprenticeships.
- ii. Expanding the “apprentices” categories to include early school-leavers (as fresher apprentices) and the graduates from short-term skilling courses such as PMKVY or DDU-GKY, NRLM etc
- iii. Opening up apprenticeship to include optional trades and service sector trades
- iv. Inviting micro-units and other service providers, even as small as those with only four workers, to participate in the apprenticeship programme
- v. Relaunching the recognition of prior learning (RPL) in order to formalize the skills learned outside the formal training system with the added component of a bridging course.

Though these initiatives helped increase both the number of apprenticeship places created and the number of establishments registered on the portal, the incremental increase is quite miniscule in comparison with the large youth population which enters the labour market each year.

In recent times, the MSDE has been making efforts towards piloting an RPL model where a young person undergoing an informal apprenticeship can be formally certified by RPL and given a progression pathway in the formal labour market.

3.2.3 Recommendations for theme 2

Extending opportunities for apprenticeship to RPL-certified skilled workers

Several pilot projects focussing on RPL were approved and implemented by the NSDC in the first phase of the PMKVY (2016–20). However, simply assessing skills and providing certificates using RPL has not proved to be sufficient because even after obtaining a skill certificate, the skilled worker may continue to operate at the same level of proficiency and productivity.

RPL can be effectively used by providing apprenticeship opportunities to a candidate who successfully qualifies for assessment under RPL. Thus, a skilled person has the opportunity to further their competencies through a well-structured programme, which does not demand intensive classroom study, but that emphasizes practical WBL. At the end of the training, this approach can be an effective way to ensure the progression of the candidate’s skills and career.

In addition, the advantage of learning from experienced professionals in real time will help informally skilled youth to perform better, achieve greater overall productivity and make fewer mistakes. They will also learn how business is conducted first-hand. Such a model may lead to meeting the needs of the gig economy and expanding micro-enterprises entering the online and home delivery consumer market, a segment that has witnessed exponential growth since 2020 and the spread of the COVID-19 pandemic.

²⁹ For more detail, please see section 2.3.2.

Clusters of microenterprises, handloom, handicrafts, etc, which face the biggest challenges in the availability of skilled young persons willing to work in these sectors, can, as clusters, engage with apprenticeships. Skill training institutes do not always have courses relevant to local MSMEs. Most apprenticeships and other skill courses are drafted with the support of representatives from large industries, and these experts are not really in sync with the realities of micro-enterprises or individual-run units.

The Confederation of Indian Industry and UNDP (CII n.d.b), in meeting with the MSDE, have provided a number of recommendations on amendments to the Apprentices Act. Some of the suggestions which related directly to apprenticeships with small and micro enterprises, included the following:

- a. Apprenticeship opportunities should be enhanced by including institutions such as cooperatives and larger farmers producer organizations (FPOs) in the rural sector.
- b. The government should cover gig workers in the Apprentices Act.
- c. An awareness campaign with an emphasis on rural areas, particularly at the school level, should be conducted. Social media may also be leveraged for the campaign.
- d. There is a need to provide career guidance and counselling to students, which might also build awareness of the available skill training and promote apprenticeship by clearing issues at the institutional level.
- e. Industry participation, with a focus on MSMEs, should be increased. For this, the government may look at providing incentives to establishments hiring apprentices, including: fiscal incentives; priority in government procurements or reduced rates of interest on loans offered by public sector banks; payment of apprentices' stipends; or reimbursement of the costs incurred by the employer in running an apprentice programme, etc.
- f. Employers may be allowed to deploy apprentices through contractors without compromising training norms. This will lead to the enhancement of apprenticeship opportunities in outsourced jobs or seasonal industries.
- g. Support should be provided to the potential apprentices in the following ways.
 - ▶ Along with technical education, soft skills may be imparted.
 - ▶ Government and industry could consider an apprenticeship certificate equivalent to an experience certificate.
 - ▶ A robust mechanism for career guidance and counselling is necessary to inform students/ other potential candidates about apprenticeship opportunities and to help them make the right choices. This is necessary to reduce/prevent dropouts, generally improve the spread to new and non-optional trades and improve the overall quality of apprenticeships. Such an approach will also help brand apprenticeship in a more aspirational way.
- h. There is a need to enhance the of role of ITIs/vocational institutes.
 - ▶ There is a need to leverage opportunities in traditional value chains.

Dedicated courses on fields like mining could be conducted.

Each of these recommendations is crucial in promoting quality apprenticeships in the informal sector.

3.2.4 Areas for further study and research

The challenges facing the Indian government are the questions of how to improve WBL at every level and how to adopt some of the characteristics of structured programmes to formalize informal training. At the same time, the government must also meet the challenge of low productivity–low wages in the informal sector. NCAER (2018) clearly recommends that higher productivity can be achieved only through skilling India’s informal workers on industry needs and deploying them in high-growth formal sectors.

Initiatives to improve learning while working would have more impact if these extend beyond the relatively small formal sector and reach out to MSMEs, which dominate the region’s informal sector. The following gap areas were identified.

- ▶ There is no institution which currently captures data on informal apprenticeships. In absence of relevant data, strategies to effectively address informal apprenticeships are difficult to design.
- ▶ Informal skilling is crucial to sustain the economy. Innovative strategies to provide opportunities for skilled workers to obtain quality training from informal apprenticeships, providing access to upskilling and reskilling, need to be designed.
- ▶ The active involvement of local cluster associations – SMEs, artisans, handicrafts, FPOs, etc. – is crucial in making a positive impact on informal apprenticeships.
- ▶ Institutions like SSCs and TPAs should be incentivized to support the quality, relevance and effectiveness of informal apprenticeships, as well as counsel the skilled worker on the available pathways to transition to formal apprenticeship. However, such a proposal would need to be backed by a closely monitored result-based approach.



▶ 3.3 Theme 3: Effective apprenticeship management systems

Description of the theme and why it matters in modernizing and transforming apprenticeships

Several reforms have been introduced in the Apprentice Act and the Apprenticeship Rules, making apprenticeship establishment-friendly, easy to implement and attractive for all players. However, MSDE data from March 2021 shows that only 120,000 establishments were registered on the portal (which implies that they are either already participating in the apprenticeship programme or are willing to participate); and less than 500,000 apprentices' contracts were generated in 2020–21. However, the Concept Note on Amendment in Apprentices Act (2021) by the MSDE mentioned that India has a capacity of 2 million apprentices per annum.

As per the respondents of the primary survey, the major challenges faced by Indian apprenticeship programmes relate to poor management of the system, including:

1. Poor functioning of the apprenticeship portal;
2. Multiplicity of schemes, processes and portals;
3. Lack of target setting and monitoring;
4. Lack of clarity of roles of the various players in the apprenticeship ecosystem;
5. Lack of advocacy, awareness building and communication;
6. Lack of trained in-company trainers;
7. Lack of effective evaluation; and
8. An effort to make apprenticeship aspirational for youth by providing post-training support and including social protection and health benefits for apprentices.

Quality apprenticeship needs to be embedded in a system which addresses most of the points listed above. In this section, an attempt has been made to address points 2, 3 and 5, while point 4 is addressed in theme 5.

3.3.1 Sub-theme: Minimizing multiplicities in schemes, processes and portals

The primary survey revealed that:

- ▶ Multiplicity in the apprenticeship programme has resulted in confusion among establishments because the guidelines and processes of each scheme are different. SSCs, TPAs and even state authorities often do not have the same understanding of the various provisions and clauses of the Apprentices Act and therefore, they operate different understandings of the same thing.
- ▶ There is a lack of clarity in the roles of the various players in apprenticeship in India.
- ▶ There is no one place where all the updated guidelines and regulations for apprenticeship can be found.

3.3.1.1 A critical analysis of ongoing practices

As discussed previously, apprenticeship in India is administered by two ministries, the MSDE and the MoE. Under the MSDE, the DGT is responsible for designated trades and the NSDC for optional trades. A quick reference to the points of departures between these two apprenticeship management systems is presented in table 8.

Table 8. Apprenticeship programme under the MSDE (designated trades and optional trades) and MoE

Apprenticeship programme	MSDE Designated trades (through DGT)	MSDE Optional trades (through NSDC)	MoE
Portal for administering apprenticeship	Apprenticeship Training Portal		National Apprenticeship Training Scheme portal
Categories of apprentices	Trade apprentices, optional trade apprentices, fresher apprentices and technician (vocational) apprentices		Graduate apprentices, technician apprentices and degree apprentices
Curricula	Trade apprentices follow the curricula as prescribed under the ATS.	Optional trade apprentices follow the optional trade curricula as dictated by industry demand.	There are no fixed curricula; only practical training imparted in industries.
Period of training	<ul style="list-style-type: none"> ► As defined in the ATS curricula for fresher apprentices. ► Rebates to ITI graduates mentioned in the curricula Normally, the period is between 3-24 months.	As defined by industry and uploaded on the apprenticeship portal (often NSQF-approved); normally, the period is between 6 months to 3 years.	This is a fixed period of 1 year.
Examinations and certifications	Apprentices must take end-course examination conducted by the DGT. Successful candidates are awarded the National Apprenticeship Certificate (NAC).	SSCs and establishments are responsible for end-of-training assessment. Successfully assessed apprentices obtain a certificate from the SSC or joint certificate from SSC and establishment.	There is no end-training assessment. Apprentices obtain an on-the-job-attachment certificate (certificate of proficiency) from the establishment or a joint certificate from the establishment and a BOAT.
Implementation and monitoring department/ authorities	Divided between the DGT, Regional Directorate of Skill Development and Entrepreneurship, and state apprenticeship advisors.	SSCs, NSDC, state skill development missions	Directorate of Higher Education, through the BOATs
Financial incentives to enterprises through reimbursements of stipends paid to apprentices	<ul style="list-style-type: none"> ► Under the NAPS, the government reimburses enterprises for 25 per cent of the apprentice's stipend, subject to a maximum of 1,500 rupees per month per apprentice; it shares the basic training costs for apprentices without any formal trade training, subject to a maximum of 7,500 rupees. ► Those not under NAPS do not receive a reimbursement. 		Under the NATS, the government reimburses enterprises for 50 per cent of the apprentice's stipend.

Source: Author's compilation

Most establishments normally engage apprentices from different academic backgrounds – graduates, ITI-educated, freshers, etc. With multiple apprenticeship systems, companies have to ensure that they keep abreast of the developments in each scheme so that the respective processes for different “apprentices” categories are complied with. For large companies, handling multiple processes this might not be difficult, as they normally have a dedicated team to oversee apprenticeship training. However, for medium and small establishments, this multiplicity creates an additional workload and discourages quality participation in the apprenticeship programme.

Box 13. Engagement of apprentices in a large enterprise: A snapshot

The JBM Group, a leading global manufacturer of key auto systems, electric vehicles and buses, has been actively participating in skilling Indian youth for a long time. Per their requirement, they engage apprentices from all categories. As per Mr Rajeev Sharma, Skill Head at JBM Group, the organization engages approximately 3,000–3,500 apprentices at any point of time, and 200-300 apprentices are contracted every month. In addition, the company actively participates in training ITI trainees from the dual system of training and B.VoC trainees.

The number of apprentices engaged since the introduction of the NAPS is shown here.

Apprentices engaged	Fresher apprentices	Trade apprentices	Diploma	Graduate	Total	ITI trainees from DST
FY 2016–17	25	515	-	-	540	-
FY 2016–17	80	778	219	74	1 151	-
FY 2017–18	100	765	165	97	1 127	-
FY 2018–19	120	749	276	117	1 262	40
FY 2019–20	163	804	406	117	1 490	60
FY 2020–21	189	907	571	128	1 795	80
Total	677	4 518	1 637	533	7 365	180

The JBM Group has a strong focus on sustainability, and the skill development team is part of this division. The team is responsible for the entire apprenticeship cycle, from mobilizing apprentices, organizing training, ensuring that compliances required for each apprentice category are met, and supporting assessments where required.³⁰

3.3.1.2 Ongoing policy initiatives

The MSDE is aware of the challenges faced by the apprenticeship system and has already initiated the restructuring of apprenticeship. As a first step, the MSDE and MoE have clearly demarcated their responsibilities with respect to different apprentices’ categories based on education levels:

- a. Apprenticeship for youth below university graduate level will be administered by the MSDE.
- b. Apprenticeship for youth with the university graduate level and above will be administered by the MoE.

³⁰ Discussion between the author, Nidhi Gautam, Mr Sharma and Mr Rajiv Sahdev (President and Group Chief Human Resources Officer, JBM Group) on 28 January 2022.



With the objective of minimizing the gap between the units implementing optional trades (NSDC) and designated trades (DGT), the MSDE brought the apprenticeship divisions under the NSDC and DGT together in February–March 2022. The Director of Apprenticeship Division, MSDE, heads both these divisions. Such a move is expected to increase coordination and provide a single-window approach to establishments to deal with optional trades and designated trades. As the first step towards convergence, the portals for optional trades and designated trades have been merged into a single portal.

The MSDE is also in close communication with the MoE for closer coordination between the NAPS and NATS, which includes bringing the NATS on the same portal.

However, more effort is required to create uniformity and coherence in the system.

3.3.1.3 Recommendations for minimizing multiplicities

- ▶ The structures for implementation and governance – as recommended in theme 1 – may be mandated to ensure coherence and synergies in the various apprenticeship schemes, as follows:
 - Promote one portal for all the apprenticeship schemes or ensure that the multiple portals are able to communicate seamlessly with each other. To the users and stakeholders, the apprenticeship portal should be presented as an integrated single portal for apprenticeship in the country.
 - Align and streamline the various apprenticeship categories so that there is synergy and coherence and no competition for the same apprentice positions in an establishment.
 - Align the curricula of the various apprenticeship courses. The curricula of designated trades, optional trades, training under the NATS and any such apprenticeship scheme vary in terms of number of hours, progression pathways, etc. Hence, a new body should work on the rationalization of such variations.
 - Establish inter-ministerial dialogue since apprenticeship cuts across various ministries, such as the MoE and the Ministry of MSME, which would help tackle issues of informal apprentices. The Ministry of Industry and Commerce, Ministry of Corporate Affairs, Ministry of Petroleum and Natural Gas, etc. are some of the crucial ministries which should closely work with the MSDE to promote industry relevant apprenticeships, boost industry participation across all key sectors, and integrate apprenticeship in general and school education.

3.3.2 Sub-theme: Target setting and advocacy for apprenticeship

Setting targets is one of the first and most crucial steps in effective management. In India, the target for the apprenticeship programme is set at the national level, which helps allocate budget and other resources. Having clear and specific targets smooths the process of monitoring and helps in effective communication among various stakeholders.

However, it has observed that unlike the practice followed by the MSDE in setting targets for PMKVY, its flagship programme, the exercise of reaching out to the key stakeholders to set realistic targets is still not in place for the apprenticeship programme.

3.3.2.1 A critical analysis of ongoing practices

One of the main reasons for the success of the PMKVY (and the DDU-GKY) can be contributed to this immaculate target-setting exercise, which results in effective monitoring and timely corrective actions. Such an elaborate exercise with relevant stakeholders is also necessary for apprenticeship programmes, in absence of which the management of the programme can be adversely impacted.

In 2018, the ILO published the Survey Report on the National Initiatives to Promote Quality Apprenticeships in G20 Countries. This report summarizes the key findings from the ILO survey of national initiatives to promote quality apprenticeships conducted in the G20 Member States. India, a G20 member country, also participated in the survey.

The very first issue covered in the survey was “Establishing national goals to expand and improve apprenticeships”. The report mentions that numerical targets for apprenticeship expansion exist in almost all countries. “It is encouraging that all the Member States who responded to the survey use national targets or goals, both quantitative and/or qualitative, to promote quality apprenticeships. They actively seek to expand apprenticeship opportunities, as well as to improve the quality of skills development through apprenticeships. This is in line with the goals of the G20 Initiative” (ILO 2018).

The quantitative target mentioned by India was 5 million apprentices from 2016-17 to 2019-20. The achievement against the quantitative target was only 1.04 million, which is just about 20 per cent.

3.3.2.2 Ongoing initiatives

When the NAPS was formalized, the targets for the scheme were distributed over annual targets that were laid down for the period from FY 2016-17 to FY 2019-20. The targets and achievements are presented in table 9.

Table 9. NAPS: Target and achievement

The NAPS had an ambition target of achieving a cumulative of 5 million apprentices over 4 years, from FY 2016-17 to 2019-20.

Financial year	Annual target (designated + optional trades)	Cumulative apprentices count (designated + optional trades)	Establishments registered on portal
2016-17	500 000	222 449	17 608
2017-18	1 000 000	395 483	40 018
2018-19	1 500 000	595 518	60 590
2019-20	2 000 000	859 753	74 598

One of the possible reasons for the drastic difference between the targets and their achievement is that they were not set up in consultation with key stakeholders, leading to setting unrealistic targets. Setting specific, measurable, achievable, realistic, and timely (SMART) targets through a participatory process results not just in appropriate resource allocations but also in effective monitoring and a developing a relationship of trust relationship between key stakeholders.

However, the frequency and level at which such a dialogue should take place, the operational criteria for the meaningful engagement of stakeholders, and the processes to be followed that can prevent the gap between ideas and actions will need to be clearly worked out.

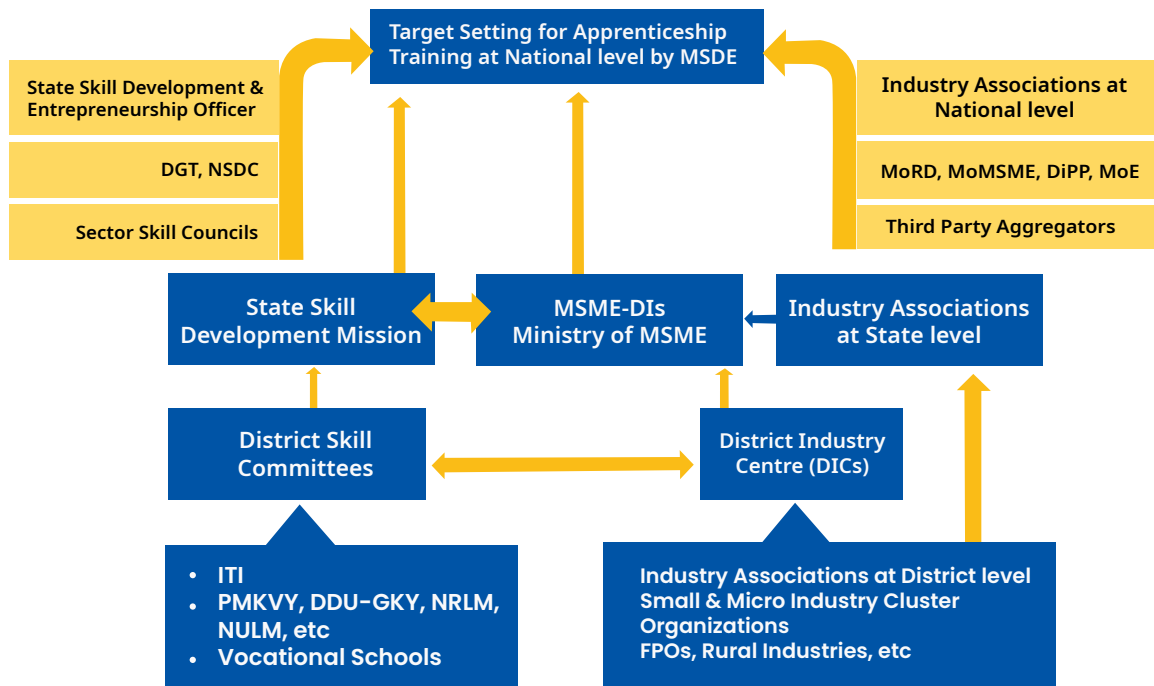
Suggested model for target setting for apprenticeship training

Apprenticeship is a multi-ministerial issue. Hence, setting SMART targets requires the active participation of all the key players engaged in apprenticeship ecosystem. These include:

- ▶ Industry: they have a crucial role in implementing apprenticeship programmes
- ▶ Skill development departments: the participants of various skill development programmes are potential apprentices.

Maintaining high-level engagement with (a) Industry (through industry associations, district industries corporations and development institutes run by the MSME) and (b) skill providers (through various district skill committees) is seen essential for target setting for apprenticeship by the MSDE.

Figure 28. Proposed structure for target setting for apprenticeships

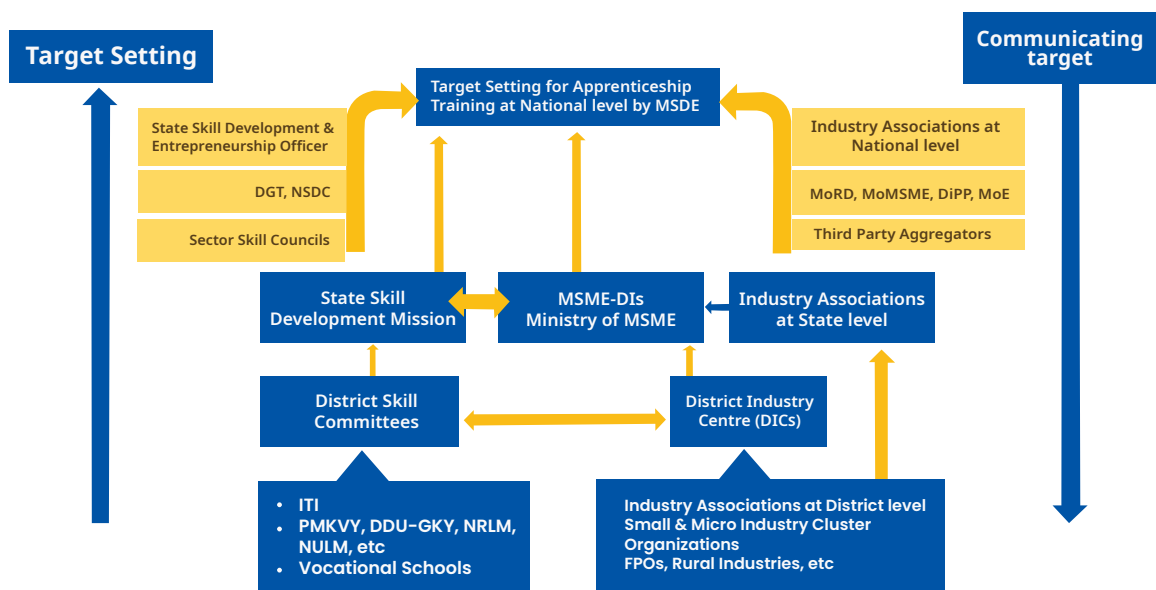


Source: Author’s analysis

Figure 27 proposes larger roles for organizations and some suggestions in setting apprenticeship targets. These include the following.

- a. The target setting exercise should be led by the MSDE at the national level.
 - ▶ At the state level: Industry associations, trade unions, MSME development institutes and state skill development missions
 - ▶ At the district level: district skill committees and the district industries centres
- b. Target validation should be done in consultation with the regional skill development and entrepreneurship officer, DGT, NSDC, SSCs, TPAs, industry associations at the national level, MSME, Ministry of Rural Development, etc.
- c. The communication of targets at all the relevant levels should be sent from the highest level to the smallest office unit, respecting the hierarchy. The main communication should be initiated from the MSDE to the states, from the states to the districts and industry associations, and through relevant channels to the implementing organization at the grassroot-level, as is also practiced in the PMKVY. A system for receiving grievances with respect to the targets should also be created at the MSDE.

Figure 29. Target for apprenticeship: communication and monitoring



Source: Author's analysis

- d. The targets for each of these stakeholders should be uploaded on a single apprenticeship portal where they are closely monitored and evaluated on a quarterly basis. Reports for each stakeholder should be uploaded and managed on the portal.
- e. As an input for a regular planning and target setting, having the companies with 30 or more workers create an apprenticeship plan (as a mandatory return on the number of apprentices proposed to be hired annually for two years) can be considered.
- f. A central research and labour market information system may be set up to forecast and recognize emerging trades in apprenticeship and creating new National Occupational Standards based on emerging trends.

Such a comprehensive target-setting exercise would also result in:

- ▶ enhancing awareness of all the stakeholders involved,
- ▶ clarifying their roles and responsibilities; and
- ▶ ensuring clear communication channels among the stakeholders.

In May 2018, the state of Gujarat launched the state-level apprenticeship programme, the Mukhyamantri Apprentice Yojna³¹ (MAY) with the involvement and support of the highest political and administrative executives of the state. The design of the scheme was such that it ensured reaching out to district-level organizations for setting targets and reporting on the achievements against the targets. Box 10 explains the good practices of the scheme.

Box 14. Implementing the Mukhyamantri Apprentice Yojna (MAY): A snapshot from Gujarat

With focused target setting, communication, organization and monitoring of the apprenticeship system in the state, the achievements in terms of the number of apprentices' contracts recorded in Gujarat were almost two-and-a-half times more than those in 2016–17 and 2017–18. Gujarat reported 58,631 apprentices engaged in 2018–19 and 50,085 in 2019–20, contributing almost 25 per cent of the national tally of apprentices, becoming one of the top-performing states for apprenticeship.³²

Some of the initiatives under the MAY scheme with respect to effective target setting, communication, advocacy and monitoring include:

- ▶ In the initial phase of implementation, activities were conducted on a large scale at both the state and district levels to reach out to private employers. A comprehensive strategy was adopted, including setting annual targets for apprenticeship registration and allocating these targets to different departments and district skill committees.
- ▶ Virtual conferences, chaired by the Chief Secretary of the state (the highest administrative position in the state), were held on a quarterly basis with the heads of the other departments and the district collectors to review the progress of the target to be achieved.
- ▶ As the scheme envisaged a massive scaling up of the number of apprentices engaged, it was decided to decentralize implementation to the district level. Accordingly, the district skill committee, headed by the district collector and consisting of representatives of all key departments (industry, training and employment, rural development, agriculture, education, mining, highway and road construction, drinking water and sanitation, etc.), was made responsible for promoting the registration of apprentices and monitoring the scheme.
- ▶ The ITI principals, who were also designated as ex-officio assistant apprenticeship advisors, played a key role in organizing meetings, conducting outreach programmes for the establishments of the districts and in regular monitoring. To streamline the processing of claims from establishments/industry, the responsibility of processing the claims was given to the ITI principals.

Some of the key success factors of the MAY scheme include:

- ▶ Timely dissemination of information about the scheme to various stakeholders and industries through regular district skill committee meetings and reviews of apprenticeship numbers of the district collector
- ▶ Regularly organizing apprenticeship melas (fairs) at the institutional level, such as at the ITIs where the major industries and establishments are invited to hire apprentices, with information on this scheme being provided

³¹ The name of the scheme can be translated as the Chief Minister's Apprenticeship Scheme.

³² Data provided to the author by MSDE and the Gujarat state government.

With such enriching experiences and an equally remarkable achievement, the state of Gujarat has demonstrated that target setting, communicating targets to the relevant stakeholders and close monitoring at the highest level of state functionaries can result in effective implementation of an apprenticeship programme.

Setting quality targets: Apprenticeship trainers in BTCs and in-company trainers

Teachers and trainers are the backbone of any VET system.³³ They transfer knowledge, skills and attitudes to the participants, and their own levels of competence can affect the quality of training. Therefore, the quality of VET programmes significantly depends on the competences of the teaching staff. What makes teaching in VET colleges a real challenge is that due to the speed of innovation and technological change, technical knowledge and skills become outdated much more quickly than they do in general education. Those training the apprentices must keep abreast with the most recent industry practices, principles of teaching and training methodologies as soon after finishing with the basic training centres, the apprentices would be attached to an employer for in-company training.

The in-company trainer, who is normally a supervisor in the employer's premises, is rarely trained how to train, monitor and supervise the learning of the apprentices. In India, as of now, there are no compulsory qualifications that in-company trainers must have. So far, there is no dedicated training scheme for in-company trainers who supervise, train, mentor and counsel apprentices at the MSDE. This creates issues in setting qualitative targets for the monitoring of the quality of an apprenticeship programme. For designated trades (fresher and trade apprentices), the only indicator possible to use is the number of apprentices who complete the assessment and obtain a NAC. For optional trades, the indicator for quality apprenticeship is a successful assessment by the SSC/employer.

In-company trainers are closer to the world of work and have the competence to perform the technical tasks of WBL approaches (such as apprenticeships, dual training, etc.). But they are rarely trained on how to gradually acquaint learners with workplace requirements. Quite often they lack pedagogical skills, especially when it comes to caring for individuals with specific needs or learning difficulties. This makes the training of staff a real hurdle for any progress and improvement in quality of apprenticeships in India.



³³ For more information, see Understanding and analysing vocational education and training systems – An introduction at [Script Online-Presentation „Systemic Approaches in VET“ \(shareweb.ch\)](#).

3.3.3 Sub-theme: Awareness raising and communication strategy

The primary research revealed that:

- ▶ There is a lack of awareness about apprenticeships among Indian youth and employers.
- ▶ The multiplicity in apprenticeship training has created confusion with regards to the requirements and guidelines of various schemes of apprenticeships. SSCs and TPAs, and even the states and other authorities, do not have the same understanding of the sections and legal provisions of the Apprentice Act and, therefore, they have different versions all the time.
- ▶ The speed at which changes are being made in the apprenticeship systems is much faster than the time required for the system to assimilate these changes and put them into action.
- ▶ There is no mechanism to inform stakeholders about the updated guidelines and regulations introduced by the government.
- ▶ There is a lack of awareness about the benefits of apprenticeship.

3.3.3.1 A critical analysis of ongoing practices

The studies and reports from the secondary research also noted that awareness of apprenticeship amongst the youth, establishments/industry and other stakeholders is quite low. Box 15 provides an example from a tracer study of ITI graduates.

Box 15. Lack of awareness amongst trainees (or potential apprentices): A snapshot from a tracer study of the ITI

A tracer study of ITI graduates was conducted in 2018 as part of the Vocational Training Improvement Project (VTIP), which was implemented by the MSDE with assistance of the World Bank (from 2007–08 to 2016–17). The target group of the study included trainees from the ITIs both covered and not covered under the project. A total of 4,850 trainees were interviewed.

The study indicated that though the DGT guidelines spell out the importance of trade-specific apprenticeship programmes for ITI graduates, very few graduates (0.5 per cent) actually had the opportunity to pursue the specialized module/apprenticeship scheme (MSDE 2018). Further, only 28.7 per cent of ATS graduates reported the receipt of a stipend, which was also paltry (3,465 rupees per month).

As per the study, only 8.5 per cent of the trainees undertook an apprenticeship. The reason stated for not having undertaken apprenticeship were as follows:

- i. Didn't know about the apprenticeship 45.8 per cent
- ii. Option for specialized module/apprenticeship scheme was not available 46.5 per cent

Other reasons quoted by ITI-trained candidates included (in order of priority):

- i. Don't think an apprenticeship can add value
- ii. Stipend offered for an apprenticeship was low
- iii. Got a job and hence an apprenticeship was not required
- iv. Apprenticeship allotted was far from home
- v. Registered and waiting for an apprenticeship
- vi. Couldn't get an apprenticeship for my trade

The study also recommended that the government should lay down proper guidelines to direct public sector undertakings to appoint/provide employment opportunities to ITI graduates (MSDE 2018).

India is home to over 100 languages, over 700 different tribes and every major religion in the world. The extent of industrialization, the type of industries, the education and skill training, etc. varies from one district to another. Hence, raising awareness is a complex process and requires a multipronged strategy. Constant and simple communication is needed to create better awareness on understanding the apprenticeship system – where to start, who to approach, where to get information, and how to recruit and manage apprentices.

Some tools that have been found effective and are, therefore, prevalent in many countries include the following.

- ▶ **Career guidance and counselling services:** These assist in promoting apprenticeships as an attractive career option (ILO 2020b). Such services provide people with information about the world of work and help them make informed decisions about further education and skill training opportunities that are the most suited to them based on their skills and aptitude and the specific requirements of various occupations. An important purpose of career guidance is also to provide young people from all backgrounds with relevant information about the labour market and specific careers. Given that young people's choices are shaped by their social and personal circumstances, enabling them to make well-informed choices could help to break intergenerational cycles of disadvantage, while simultaneously providing employers with a broader range of potential future employees (Musset and Kurekova, 2018).
- ▶ **Work experience programmes:** The Adecco Group offered the Experience Work Day programme to introduce young people to the world of work. On designated days, Adecco opened its 700 offices and branches in 46 countries to young people, allowing them to shadow Adecco Group employees in departments, learn more about their preferred jobs by stepping into their mentors' shoes, and improve their skills through workshops and coaching. In 2017, more than 9,000 young people benefited from the Experience Work Day programme.
- ▶ **Apprenticeship Ambassador Programme:** This is one of the most popular programmes being implemented in many countries across the globe, including Australia, UK, USA, etc. Under the aegis of the NAPS, India announced its Brand Ambassador programme in 2016. The revised guidelines of the NAPS issued in 2019 also included a paragraph on brand ambassadors. However, the programme did not get the requisite support and as of now, it does not seem to exist.

The eligibility and role of brand ambassadors (as included in NAPS Revised Guidelines 2019) were:

- (i) Those who have undergone apprenticeship training and are successful in their field
- (ii) Employers engaged or engaging apprentices
- (iii) Those selected/appointed by the MSDE

The brand ambassadors were paid 2,500 rupees per day for their participation in the workshops, seminars, or meetings. Besides, they would also be reimbursed for travel expenses, not exceeding 1,000 rupees per visit at actuals, whenever they are required to travel.

One of the main success factors for the MAY scheme in Gujarat was its extended outreach to both establishments and the youth. This outreach consisted of the following:

Outreach to establishments: In the initial phase of implementation, activities were conducted on a large scale at both the state and district level to reach employers in the private sector. A comprehensive strategy was adopted and included the following:

- ▶ Employers with large potential to engage apprentices were addressed directly by the Chief Secretary of the state.
- ▶ Letters were sent to more than 18,000 companies, informing them about the apprenticeship programme being undertaken with the MAY scheme.
- ▶ District administrative heads conducted outreach programmes with industries and industrial associations in the district.
- ▶ The Administrative Secretary of the Department of Labour and Employment and the Director of Employment and Training also conducted outreach programmes at the state and district levels. The department also proactively arranged recruitment fairs to help industries and industry associations to find suitable apprentices. More than 1,500 apprentice recruitment fairs have been organized till date.

Outreach to youth: To also address the availability and willingness of the youth to participate in apprenticeships, the state government included promotion and publicity as part of the MAY scheme. This strategy included the following:

- (a) Hoardings and banners promoting apprenticeship programmes in places likely to receive more attention
- (b) Radio jingles and social messages on television to reach a larger number of youths, mainly those from rural and suburban areas
- (c) Information sessions on apprenticeship conducted in government schools and ITIs
- (d) Career guidance sessions held in schools every two-three months
- (e) Job fairs conducted regularly.

3.3.3.2 Recommendations for minimizing multiplicities

Learning from the experience in Gujarat, it is crucial to reach out to the youth as well as industry to inform them of the advantages of apprenticeships, educate them on the laws that mandate industries and establishments, the organizations which can support them in implementing an apprenticeship programme, the incentives of the scheme, the various opportunities for the youth, etc.

The ILO Toolkit on Quality Apprenticeship Volume 2: Guide for Practitioners (2020) recommends the following strategy:

- ▶ “Bring together stakeholders to agree on a communication strategy, including a social media strategy and a range of awareness-raising and marketing activities to promote apprenticeship.
- ▶ Based on the communication strategy, create information materials explaining quality apprenticeships, using a mix of media tools tailored to the needs of the different target groups (students, teachers, parents, enterprises, and education and career counsellors). Different modes of communication could include seminars and media events, press conferences, radio and TV interviews, articles placed in newspapers, social media and internet chat rooms, among others.

- ▶ Make targeted career guidance and comprehensive advice available to young people at the level of school, communities and districts, to inform their further learning and career decisions and when they may be considering pursuing an apprenticeship. Such guidance may form part of a wider sphere of guidance activities, preparing all young people, in all types of schools, for the world of work.
- ▶ This guidance should start at an early stage in the school education system and be provided by qualified/trained teachers or specialist organizations (e.g. employment services, TVET providers, employers' and workers' organizations).
- ▶ Encourage cooperation between enterprises and local schools and training providers to engage stakeholders in career guidance and apprenticeship promotion, with events such as careers fairs, open days and trial apprenticeships." (ILO 2020)

Selected good practices in communication and publicity

Orientation on apprenticeship: A pilot initiative implemented by the Automotive Skill Development Council

It is a common fact that "potential apprentices" are not aware of apprenticeship programmes. Even amongst those who have heard about them, very few understand the advantages of taking up an apprenticeship.

In a discussion with the author, Nidhi Gautam and Amass, the Automotive Skill Development Council (ASDC) shared the experiences of piloting an orientation programme for awareness raising on apprenticeships among the trainees in a polytechnic in Uttar Pradesh. The programme aimed at providing insights to apprenticeship – the advantages of being an apprentice, stipends and other benefits, the possible job opportunities and career pathways post the apprenticeship.

The orientation programme was offered in the form of a blended learning programme with an e-learning module of about 18 hours (to be completed over the course of a month) and a one-day visit to the establishment, where the participant would see the plant and the facilities, and they would be able to interact with the senior management. The course was offered at a fee of 1,500 rupees (US\$ 20.32) to polytechnic students in Bagpat, Uttar Pradesh, and 100 trainees from different disciplines enrolled for the programme. For the industry visit, the ASDC tied up with three member companies. The 100 students were split into three batches, with each visiting one of the companies.

For most of the participants, this was the first time they had seen a manufacturing unit in operation, and it was a very inspiring experience. From these 100 students, 60–65 did register for the apprenticeship programme. An indirect benefit of the programme was that one of the companies visited found that some of the students fitted in well as trainees and were happy to recruit them as apprentices. These new apprentices were scheduled to join their respective organizations soon after the COVID-19 lockdowns were relaxed. The ASDC intends to monitor their progress to understand better the value of the pilot initiative undertaken. Besides rolling out this course to a larger target group, the ASDC also plans to offer such orientation programmes through the TPAs

3.3.3.3 Recommendations for awareness raising and communication strategy

- ▶ Schools should encourage exposure to industry for students. They should also invite neighbourhood industry to engage with students from class 5 onwards as well as organize industry visits for students from class 6 onwards.
- ▶ A chapter on vocational training and apprenticeship should be included in school textbooks for class 9 or 10.



- ▶ Access to a user-friendly online platform containing comprehensive information on the potential benefits for apprentices, enterprises and TVET providers has been proven to improve enrolment and retention rates. This platform should also include rosters of apprenticeship positions, both open and filled. While such a platform may be developed initially by a government agency, social partners can subsequently take over responsibility for it.
- ▶ Wherever possible, e-learning on apprenticeship should be provided. The pilot by ASDC may also be studied further as an example of good practice and may be revised, if need be, to be implemented on a larger scale.
- ▶ Career guidance and comprehensive advice should be made available to school children at various stages of their schooling (classes 5, 8, 10 and 11/12). This guidance should be provided by qualified/trained teachers or specialist organizations (such as employment services, TVET providers, employers' and workers' organizations).

3.3.4 Recommendations for establishing an effective apprenticeship management system

The MSDE has been given the ambitious target of registering 1 million apprentices by end of 2022, which is a 100 per cent increase over previous achievements. Such huge targets can be achieved only when:

- ▶ target setting takes place to the level of the district skill committee so that the target achievement can be properly monitored.
- ▶ all the stakeholders in the apprenticeship ecosystem are involved with clear roles and responsibilities.
- ▶ both the youth and enterprises who are relevant target groups for apprenticeship have sufficient information for them to participate in apprenticeships.
- ▶ the apprenticeship portal manages data from and for each stakeholder, including TPAs, SSCs, etc. Multiple portals should communicate with each other so that the consolidation of the target and its achievement takes place at the central level. Systems for training in-company trainers as part of quality targets should also be set up. Having professional and trained trainers is a crucial requirement for the success of any system.

An innovation bootcamp on “Apprenticeship in India: Country strategy” was conducted on April 27–28 2022 in New Delhi to discuss the recommendations made in the draft India-country research report on Apprenticeship and work-based learning. While responding to the questions on the future of apprenticeships and the differences in the performance of apprenticeship programmes between different countries, Ashwani Aggarwal, Team Leader for the Workgroup WBL, Apprenticeship and RLPL at the ILO Headquarter, shared that:

- ▶ Apprenticeships are flourishing in some countries because they are continuously innovating, improving their attractiveness to enterprises and learners.
- ▶ Future apprenticeships will be quite different from those today and there will be several models
- ▶ The basic concept of theory and practice may prevail, but how those are delivered and who is responsible will vary.
- ▶ Permeability between general and vocational education will be important, and Diversified methods of financing leads to increased role of government

Ashwani Aggarwal, Team Leader for Workgroup (WBL, apprenticeships and RPL), ILO

(Remarks at the innovation bootcamp on “Apprenticeship in India: Country strategy” conducted on April 27–28 2022)

3.3.5 Areas for further study and research

To make apprenticeship aspirational, enhanced focus is required on the following:

- ▶ Post-training placement of apprentices: Consultations with industry can be held to promote the employment of at least a certain number of apprentices so that they have a motivation for learning.
- ▶ Inclusion of social protection and health benefits: These allowances may be discussed with members of the Central Apprenticeship Council, especially the trade unions.

Other suggestions provided by the respondents of the primary survey, which are equally relevant and need further deliberation, include:

- ▶ There is a need for the evaluation of and studies on Indian apprenticeship programmes. This may also include regular tracer studies to study the long-term impact.
- ▶ A clear cost-benefit analysis should be presented for industry to adopt.
- ▶ Future skills and employment should be linked with apprenticeship.
- ▶ The number of apprentices trained and placed should be monitored on a regular basis; this data should be uploaded on to the apprenticeship portal.
- ▶ Large industries should create a separate department to implement apprenticeships and nominate a nodal person (or a single point of contact) responsible for providing details on the status of the apprenticeship programme in the company.
- ▶ There should be a clear demarcation of roles between apprentices and workers at the enterprise level to eliminate labour arbitrage issues.
- ▶ Social protection and health benefits should be included for apprentices. Group medical insurance should be made mandatory; the Employees' State Insurance Corporation clause should be implemented during the training period.

- ▶ Both job protection and guarantees should be provided after the completion of an apprenticeship. It should be made mandatory for establishments to hire staff from those who have undergone apprenticeships in the concerned establishment. Recruitment for entry-level positions should be only done from the pool of apprentices.

▶ 3.4 Theme 4: Convergence among various WBL schemes to provide effective progression pathways to all types of apprentices.

The growing population of young people and the high incidence of poor employability and unemployment has caused establishments to adopt new ways of skilling youth. Apprenticeship training for graduate engineers and diploma holders was already included in the Apprentices Act through reforms in 1973. Since then, several other initiatives were undertaken by both the MoE and MSDE to promote work-based skill training (see table 10).

Besides the multiple apprenticeship programmes offered by the MSDE and MoE, the All-India Council of Technical Education (AICTE), introduced another programme called the National Employability Enhancement Mission in 2013, which also involved long-term in-company training.

This theme discusses the possibility of convergence among three schemes, namely:

- ▶ The National Apprenticeship Promotion Scheme (NAPS)
- ▶ The National Apprenticeship Training Scheme (NATS)
- ▶ The National Employability Enhancement Mission (NEEM)

3.4.1 A critical analysis of ongoing practices

Table 10 provides a quick overview of the implementing ministries and the target group/qualification criteria addressed by the three programmes.

Table 10. WBL and apprenticeship schemes under various ministries

S.No.	Schemes	Implementing agencies/ Ministries	Qualification criteria
1	NAPS	MSDE	A candidate who has passed class 5 or higher
2	NATS	MoE (implemented through BOATs)	Graduation and Diploma holders in engineering and non-engineering field
3	NEEM	All India Council of Technical Education (AICTE), MoE	Socio-economically backward Youth, who are enrolled in graduation courses

Source: FICCI (2019)

The three programmes are offered in silos. Each of these schemes have their own management systems and processes. A brief description of NATS and NEEM is provided here. NAPS and NATS have been presented at length in the previous chapters are hence mentioned very briefly.

The NATS: A one-year apprenticeship programme, NATS is the flagship programme for the Department of Higher Education, MoE. There are four BOATs, which are located in Mumbai, Chennai, Kanpur and Kolkata. Since 1973, the BOATs implemented the NATS with the aim of enhancing the employability of technically qualified youth by equipping them with practical knowledge and skills required in their respective field(s) of work.

During the period of apprenticeship, the apprentices are paid a stipend, 50 per cent of which is reimbursable to the employer by the government. At the end of the training, the apprentices are issued a Certificate of Proficiency by the Government of India, and this can be registered at all employment exchanges across India as valid employment experience. The apprentices are placed for training in central, state and private organizations that have training facilities.

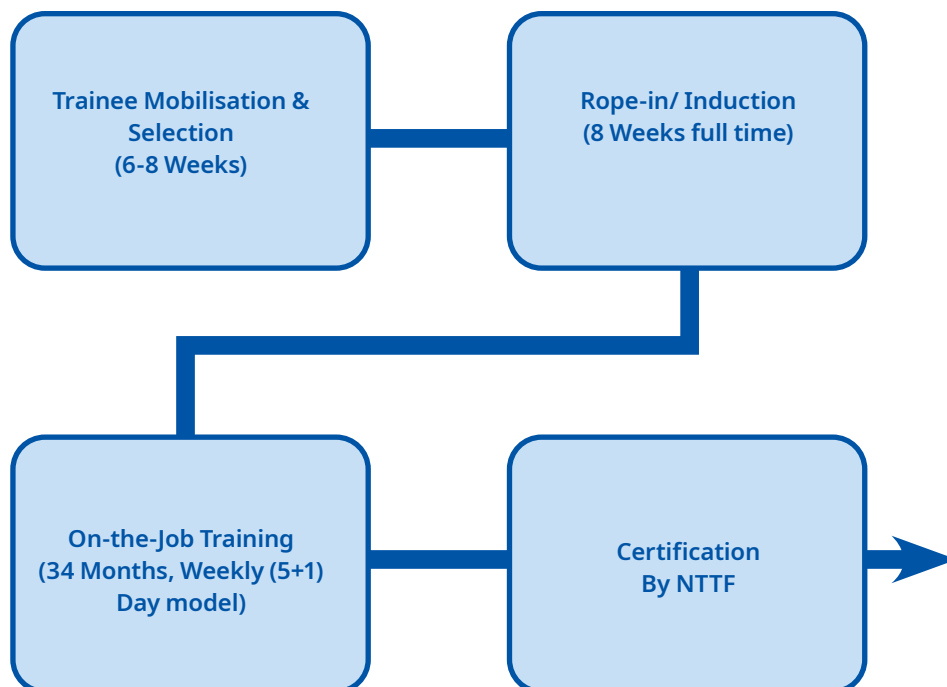
The NAPS: This scheme was launched in 2016 by the MSDE to motivate establishments to engage apprentices in order to promote apprenticeships in India. The scheme extends financial support to the establishments undertaking apprenticeship programmes under the Apprentices Act. The scheme has two components:

- (a) Sharing 25 per cent of the prescribed stipend subject to a maximum of 1,500 rupees per month per apprentice with the employers; and
- (b) Sharing basic training costs with respect to 20 per cent of apprentices who come directly to apprenticeship training without any formal trade training. The basic training cost is limited to 7,500 rupees for a maximum of 500 hours calculated at 15 rupees per hour.

Phase I of the implementation of the NAPS had the provision to fund basic training for 1 million apprentices till March 2020. Due to COVID-19 restrictions implemented in 2020–21 and 2021–22, the NAPS was extended until March 2022. Phase II of NAPS is awaiting approval.

The NEEM: This scheme is implemented outside the ambit of the Apprentices Act, and trainees of the NEEM scheme are not considered apprentices. Enterprises (those with 30 or more workers) implementing NEEM programme must also engage apprentices to fulfil the requirements mandated to them under the Apprentices Act.

Figure 30. Execution model for 3-YEAR NEEM PROGRAM at NTTF



The NEEM scheme offers practical, on-the-job training to enhance the employability of a person pursuing a graduate degree/diploma in any technical or non-technical stream. The trainee target group ranges between 16–40 years, and the training period varies from 3 to 36 months. The number of trainees engaged by industry depends on accommodative factors. NEEM trainees receive a stipend which is equal to or more than the notified wages for unskilled employees in that industry.

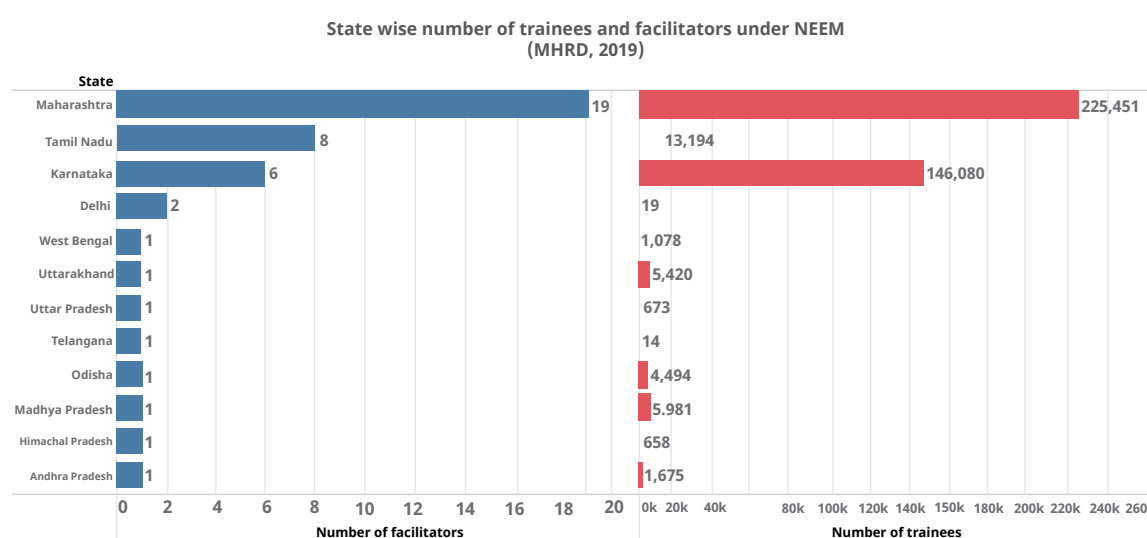
The implementation of the scheme is facilitated by NEEM facilitators, and a contract is signed between a facilitator and the trainee stipulating all the terms and conditions governing the relationship. These facilitators are expected to have strong networks with enterprises/ employers where the NEEM trainees are placed for on-the-job training. Figure 30 above presents the execution model for NEEM, a 3 year programme as implemented at NTTF, Bengaluru.

The facilitators pay trainees a stipend at par with the minimum wages for unskilled workers in that industry, and enrolled trainees are supervised by the facilitator. Their working hours, leave and holidays are as per company policy. After the completion of their training, candidates receive a system-generated certificate.

The data related to trainees, like period of training, industries in which they are engaged, the stipend paid, etc., are updated on the portal by facilitators every month to apprise the AICTE about the training turnover. The Expert Visit Committee (EVC) under AICTE conducts periodic inspections and advises facilitators on any improvements warranted.

In November 2019, a total of 43 facilitators across 12 states were approved by the AICTE, and more than 400,000 trainees were enrolled under the NEEM scheme during that period across these states. The highest number of trainees and facilitators were to be found in Maharashtra, followed by Karnataka. In November 2019, Maharashtra accounted for 56 per cent of the total number of trainees and 44 per cent of the approved facilitators (figure 31).³⁴

Figure 31. Trainees and facilitators under NEEM



Source: Ministry of Education, Department of Higher Education

³⁴ Ministry of hrd, department of higher education lok sabha unstarred question no. 139 To be answered on 18.11.2019 AT [AU139.PDF](#)

The two major highlights of NEEM are:

- ▶ The candidates are given a platform to learn and to work at the same time. They can test their abilities in the real world, where the employer can directly hire them based on their merit and performance.
- ▶ The programme/scheme is led by industry. The government contributes to the administration and monitoring of the scheme. No financial incentives are provided to NEEM facilitators or industry.

3.4.2 Need for convergence

Convergence of different apprenticeship and WBL schemes will enable better planning and effective investment in the desired target areas. The following would benefit from this convergence:

- ▶ enterprises, which implement different apprenticeship programmes and NEEM;
- ▶ young persons who want to participate in apprenticeship programmes or NEEM, as they will be able to pick and choose the programme that works best for them; and
- ▶ government, as the convergence will bring in synergies between different apprenticeship and WBL programmes/schemes in terms of planning, processes and implementation. Collective planning and implementation amongst different stakeholders will improve the management and work output of the scheme.

Most of establishments/enterprises engage apprentices from different levels of educational qualifications. Hence, they tend to deal with more than one apprentice categories, and therefore, with more than one apprenticeship programme. Additionally, some of these enterprises also engage NEEM trainees. All in all, the enterprise has to be aware of the specific processes of each of the apprenticeship programme as well as of NEEM. This becomes a challenge for enterprises which do not have a dedicated support system for complying with the specific requirements of each apprenticeship programme in addition to NEEM. The multiplicity of processes creates additional work, making the apprenticeship programme unattractive to SMEs.

Also, though most of these schemes target the youth with different educational qualifications, they do not complement each other by offering a career progression pathway, resulting in apprenticeships not being aspirational for young people. For the Government of India, convergence of these schemes will provide a national face to apprenticeship and result in the achievement of much larger targets.

Multiplicity has also led to the creation of multiple brands, which is confusing to participants on both the demand and supply sides. With limited or no advocacy around the schemes, aspirants find it difficult to choose between multiple schemes, training providers evaluate schemes based on their return on investment, and employers are confused with variation in the skill sets of trainees trained by various schemes. Further, the multiplicity of schemes leads to poor resource utilization and misses the larger national objective.

Hence, the need for convergence is felt, not only between the different apprenticeship programmes, but between apprenticeship and the other WBL programmes. A clear connection should preferably be made amongst NATS, NAPS and NEEM, so that the youth see these as possibilities of career progression.

The MSDE report Skill Assessment and Anticipation (2021) states that the definition and duration of apprenticeship programmes, as defined under the Apprentices Act and the Rules framed thereafter, are not strictly adhered to except by firms which have enrolled under the NAPS scheme. The structure, duration and profile of the apprenticeships pursued across sectors are hugely variable. There are instances where the distinction between a worker and an apprentice is not apparent, and a labour arbitrage may be at play. At the same time, there is a need to provide sector-specific norms and flexibility in apprenticeship rules and compliances. This is needed to increase adherence to already laid down norms. Since enterprises

in general prefer re-skilling/up-skilling as the preferred modes to meet the demand for skilled workers, there is scope for putting a greater focus on government-supported skill programmes to focus on re-skilling/up-skilling in addition to fresh training.

Table 11 depicts a comparison of the three apprenticeship programmes revealing following systemic challenges.

Table 11. Comparison of the limitations and advantages of the NATS, NAPS and NEEM schemes vis-à-vis each other

Aspects in which NAPS and NATS are limited as compared to NEEM

NAPS and NATS	NEEM
NAPS and NATS are government funded and supported.	NEEM is industry led. No financial incentive are extended to industry.
The Apprentices Act limits the number of apprentices to between 2.5 per cent to 15 per cent of the total strength of the workers.	There are no limits on the number of trainees engaged.
The administration of the apprenticeship programme is done by industry in the case of NATS, while NAPS provides an option to engage an intermediary.	The programme is implemented by NEEM facilitators. The structure for this is in place.
NAPS and NATS prescribe a minimum stipend, which is less than the minimum wage.	NEEM provides stipend equal to or more than the minimum wages for unskilled workers

Aspects which favour NAPS and NATS as compared to NEEM

NAPS and NATS	NEEM
The apprentice’s contract is signed between employer and the apprentice and is registered on the apprenticeship portal.	The contract is signed between the trainee and the facilitator. It is not certain if the trainee will be associated with one or multiple employers. The chances of exploitation are much higher in this case.
The stipend is paid by the employer and the details are uploaded on the apprenticeship portal.	The facilitator receives payment for the trainees from the employer. The stipend to trainees is paid by the facilitator.
The self-monitoring of NAPS and NATS may lead to apprentices being used as cheap labour.	No structured monitoring exists. Hence, there are instances where enterprises hire NEEM trainees instead of workers and do away with paying minimum wages. The chances of exploitation are much higher.

Source: Author’s analysis.

Private enterprises are willingly participating in NEEM scheme and strategically positioned the same to create win-win for both the enterprises and trainee. Some of the enterprises preferred deploying NEEM trainees on the assembly line under supervision of line managers, rather than employing unskilled or semi-skilled workers. One such case is presented below, where the enterprise preferred placing NEEM trainees on assembly line rather than employing semi-skilled workers and training them.

Box 16 KION India Limited: A case study of an enterprise participating in NEEM (through the Earn and Learn programme)

KION India, a leading supplier of forklifts and warehousing technology in India, was established by the KION Group (a German manufacturer of material handling equipment) as sole proprietorship in 2012.

Till 2020, the enterprise had no blue-collar worker. The company was determined to look for alternate solutions for the labour force. As the first step, they got in touch with Yashaswi Academy for Skills, the accredited NEEM facilitator and drew out an innovative workforce structure. The company agreed to take trainees under the NEEM (Learn and Earn scheme).

In 2012, KION India's manufacturing facility started with 50 trainees on the shop floor. KION, through Yashaswi, supported these trainees to enrol in three-year diploma courses. The arrangement with Yashaswi was that at any point of time, the required number of trainees should be present at the shop floor. The model worked well for all the three stakeholders as seen here.

The company	Yashaswi - the skill academy	The youth
<ul style="list-style-type: none"> ▶ The company had no long-term liability as they did not employ workers for assembly-line production ▶ They also did not have to manage trainees as Yashaswi was in charge of the Learn and Earn trainees 	<ul style="list-style-type: none"> ▶ The academy received payment from KION for every candidate sourced ▶ They could enrol a larger number of trainees without bothering to arrange practical training. 	<ul style="list-style-type: none"> ▶ The youth had opportunity to learn practical skills on-the-job. ▶ They received a stipend equivalent to minimum wages and three meals from the company. ▶ And received hands-on experience, enhancing their employability

In the first batch, after completing the diploma course, all the trainees were able to get better salaries and perks in other companies in comparison to what KION offered them. Hence, none of them remained with KION. This was also as per the scheme recommendation: the trainees are not mandated to continue with the company.

KION was confident of the quality of the training they were providing to the trainees. Hence, towards the end of the second training programme, KION invited their dealers for recruitment drive and all trainees were placed with the dealers. This was a win-win for all three parties – the trainee, the dealer and KION. This soon became a regular practice.

IN 2015, KION opened its shop floor to women candidates. Forty women candidates joined the first batch of women trainees. KION created facilities for the women candidates (the ladies' toilet and other facilities) as required. A woman mechanical diploma holder was recruited as the production supervisor, and, under her, one of the three production lines was converted into an all-women's production line. The results were positive, and overall, the performance of the women proved to be better than that of the men. after one batch of the exclusive women's production line graduated, the concept was abandoned. About 33 per cent of the shop-floor trainees were women.

Since then, there has been no looking back. Sunil Gupta says: "We are adding skills, not simply providing employment." Over the various training courses sponsored and conducted by KION, they have trained almost 2,500 trainees. KION is a known name in work-based-learning, and trainees regularly look for positions at KION.

However, with the COVID-19 pandemic in 2020, KION faced a difficult time. Since March 2020, of the 150 trainees engaged with KION at any point of time, only one third are on the shop floor since March 2020. Just about 10 women trainees are still in the factory, as the others went back home and are not in contact anymore.

3.4.3 Suggestions for convergence

The primary research and the bootcamp discussions showed that convergence among the NAPS, NATS and NEEM schemes should be structured in such a way that the advantages of all the schemes are not simply retained but also strengthened.

The convergence of these schemes requires strong coordination among the responsible departments and ministries. An autonomous body, vested with the required leadership and decision-making power, would be required to coordinate and oversee the implementation of the converged model of apprenticeship and WBL. This body may be a council, which is part of the existing set-up under the MSDE, with redefined functions (such as the Central Apprenticeship Council), or a new institution or independent body (such as a board or a council like AICTE) with the required autonomy and decision-making powers to design, implement, monitor and manage apprenticeship programmes at the national level.

The proposed institutional structure would promote a national unified system for all types of WBL, including apprenticeships. Such a body may be mandated to:

- ▶ represent all the apprenticeship and WBL (NEEM and others) schemes under the same roof, enhancing synergies and coherence and promoting options of vertical and lateral mobility to apprentices.
- ▶ promote a structure, which is aspirational for the youth and offers possibilities of mobility right from middle school to higher qualifications through apprenticeship programmes; offers lateral mobility to deepen skills across the trade; promotes options for multiple apprenticeships leading to qualification progression through upskilling and reskilling; and encourages entrepreneurship among apprentices.
- ▶ establish uniformity in processes, guidelines and an integrated portal for apprenticeship in the country.
- ▶ set targets for (both quantitative and qualitative) for all WBL and apprenticeship programmes and monitor them at the national level.
- ▶ undertake promotion and advocacy of apprenticeship across key stakeholders.
- ▶ promote models of apprenticeship across MSMEs in both urban and rural areas.
- ▶ promote models of RPL followed by apprenticeships to formalize skills learnt informally and support the skilled worker with quality training.
- ▶ keep abreast with global apprenticeship developments to replicate relevant strategies through pilots in India.
- ▶ coordinate with SSCs, state authorities and other key players to ensure uniformity and consistencies in apprenticeship guidelines and processes.
- ▶ organize evaluations of ongoing schemes for decisions on continuations, expansions, closures, etc.

3.4.4 Area for further study and research

The following areas were identified for further study and research.

- ▶ A more sophisticated study may be required to design a model encompassing all the WBL and apprenticeship schemes being implemented in the country.
- ▶ Where possible, good practices from industry may be considered to understand the systems created by employers to manage different kinds of WBL /apprenticeship programmes, while responding to the challenges they face as well as the advantages they have in working with multiple systems.
- ▶ Consultative workshops with NEEM facilitators and TPAs could be considered to explore a possible unified track to bring these three schemes under one umbrella.



▶ 3.5 Theme 5: Enhancing and strengthening the role of intermediaries in apprenticeship

This theme reviews the role of TPAs in promoting optional trades and explores the possibility of TPAs making designated trades more productive.

In some countries across the globe, intermediaries (referred to as third-party aggregators, or TPAs, in the context of apprenticeship in India) play an important role in promoting and implementing WBL, including apprenticeships.

As per the Education Strategy Group, intermediaries across the WBL spectrum provide the required capacity and services to manage and scale up programmes to encompass more opportunities accessible to more youth. In today's highly technical and ever-changing economy, these early experiences are invaluable in ensuring that employers have access to a large and well-prepared workforce and that the youth have access to competitive, well-paying careers. Despite important differences in form and function, all intermediaries fulfil a common mission: to serve as conveners or connectors of traditionally disconnected stakeholders.³⁵

3.5.1 A critical analysis of ongoing practices

In India, TPAs have been active in the apprenticeship ecosystem since the introduction of NAPS in 2016.

Until 2016, apprenticeships involved hiring ITI trainees as apprentices in already established designated trades and/or hiring engineering graduates/diploma holder under the NATS. However, this linear process became complex with the introduction of the NAPS. Enterprises were given the opportunity to deal with multiple categories of apprentices involving multiple processes over multiple portals. In addition, they could design curricula to meet their specific skill needs. To use the benefits extended in the form of financial incentives, they had to necessarily upload details for each apprentice on the portal.

Though the developments were in favour of the enterprise, they required administrative effort to deal with the multiple compliances. Besides, enterprises which were new to apprenticeship training required support in engaging apprentices. To support a larger number of enterprises in participating in apprenticeships and moving towards achieving the target set for the NAPS (registering 5 million new apprentice contracts over the period of the scheme), the MSDE felt the need to induct facilitators to support establishments in effectively participating in the NAPS. These facilitators were known as TPAs. The guidelines for defining the role of TPAs were issued by MSDE in 2016. The role of the TPAs defined in the guidelines is presented in the box 17 below.

³⁵ <https://edstrategy.org/wp-content/uploads/2019/11/ESG-Youth-apprenticeship-12092019-update.pdf> (page 6)

Box 17. Guidelines for TPAs

The MSDE guidelines for TPAs issued in August 2016 mention:³⁶

“To facilitate the industry (specially the MSMEs) to undertake apprenticeship programme as mandated under the Apprentices Act 1961, a provision has been made under section 8(2) of the Apprentices Act, 1961 which enables several employers to join together either themselves or through an agency approved by the Apprenticeship Adviser, for and provide apprenticeship training to the apprentices under them according to the guidelines issued from time to time by the Government. Further, the government of India has launched a new scheme ‘National Apprenticeship Promotion Scheme (NAPS)’ on 19th August 2016 to provide financial support to establishments undertaking apprentice programmes. The target under the scheme is to undertake apprenticeship for 50 lakh³⁷ persons by 2019-2020 against which we have covered less than 5 lakh³⁸ at present. It is, therefore, proposed to support MSMEs and other establishments by providing them the facility of Third-Party Aggregators (TPA) and encourage them to engage large number of youths for Apprenticeship Training in accordance with these guidelines.”

Figure 18 (section 2.3.3) shows the increase in new apprentices enrolled in optional trades, year on year from 2015–16 to 2020–21. It is clear that the number of new apprentices has been increasing each year and over this period, it increased from 111,000 to 290,000 apprentices, which is more than 150 per cent.

This graph shows that the number of apprentices enrolled in optional trades has consistently increased from 300 in 2016–2017 to 160,477 in 2020–2021. This rise presents a strong case in favour of TPAs.

3.5.2 Ongoing practices: The role of TPAs in promoting apprenticeship

TPAs have a vital and crucial role in the apprenticeship training, which includes:

- ▶ Acting as a bridge between (a) the apprenticeship implementing agency (NSDC, DGT, RDSDE, etc.) and establishments; and (b) industry/establishments and potential candidates
- ▶ Aggregating apprentices to facilitate employers to engage apprentices and to help employers meet their statutory obligations under the Apprentices Act, including filing returns
- ▶ Increasing women’s participation in apprenticeship
- ▶ Assisting establishments by:
 - Arranging basic training under the Apprentices Act through basic training providers for fresh apprentices in case an establishment wants to outsource this.
 - Getting approval for basic training centres in case they are not on the panel of approved basic training centres under the DGT/NSDC as the case may be
 - Designing courses under the apprenticeship programme and having them aligned to the NSQF (in case the establishment opts for NAPS)
 - Conducting assessments, issuing certificates and coordinating with assessment authorities as required for designated trades and the NAPS

³⁶ For more information, see Guidelines for the Third-Party Aggregators.

³⁷ 50 lakhs is equal to 5 million.

³⁸ 5 lakhs is equal to 500,000.

- ▶ On behalf of an establishment, the TPA may:
 - Upload apprenticeship contracts on the apprenticeship portal for registration by the apprenticeship advisor
 - Upload the syllabus for the apprenticeship course along with its duration
 - Furnish the details with evidence on attendance of the apprentices, stipend paid to them, etc on the apprenticeship portal
 - Submit reimbursement claims for the stipend paid to apprentices
 - Help apprentices register on the portal
 - Ensure apprentices' compliance with all formalities to appear in assessment examinations as and when required.

Table 12. TPAs in the apprenticeship ecosystem (NAPS)

TPAs approved prior to 29 March 2019	7
TPAs approved in First TPA Empanelment Committee Meeting, 29 March 2019	17
TPAs approved in Second TPA Empanelment Committee Meeting, 16 July 2019	8
TPAs approved in Third TPA Empanelment Committee Meeting, 12 Dec 2019	9
TPAs approved in Fourth TPA Empanelment Committee Meeting, 17 Feb 2021	13
TPAs approved in Fifth TPA Empanelment Committee Meeting, 22 June 2021	5
TPAs approved in Fifth TPA Empanelment Committee Meeting, 7 Dec 2021	26

According to data provided by the NSDC from the Apprenticeship portal shows that of the 85 TPAs listed on the portal:

- ▶ Seven have not registered any apprentice contracts so far. They have supported establishment in registering on the portal.
- ▶ Nine have not yet registered any apprentice contracts or establishments on the portal.

Since 2017, TPAs have generated 162,839 apprentice contracts, of which more than 65 per cent were achieved in the year 2020–21, the year that the COVID-19 pandemic disrupted normal functioning. In case of establishment registrations on the portal, almost 60 per cent of the total registration was achieved in 2020–21.



Table 13 provides insights on the performance of the top five TPAs in the country.

Table 13. Performance of top five TPAs in India (2020-21)

Name of the TPA	Contracts generated designated trades (DT)	Contracts generated optional trades (OT)	Total contracts generated DT + OT	No. of establishments registered	Total contracts generated (DT + OT) since inception	Total No. of establishments registered
Total of all the TPAs	4 624	101 647	106 271	1 778	162 839	2 989
Yashaswi Academy for Skills	653	22 431	23 084	319	34 875	470
2COMS Consulting Private Limited	7	20 893	20 900	497	38 065	669
Teamlease Skills University	281	19 526	19 807	90	26 672	145
Amass Skill Ventures Private Limited	401	265	666	14	1 168	30

Source: Data provided by the NSDC from the Apprenticeship portal

To get an idea on the range of services provided by the TPAs in India, a brief on two of the above mentioned TPAs – the Yashaswi Academy for Skills, Pune and the Amass Skill Ventures Private Limited, New Delhi, is presented below in box 18.

Box 18. A snapshot of TPAs

Before 2016, the Yashaswi Academy for Skills, Pune, was a registered facilitator for two schemes – (a) Learn and Earn, a scheme of the state government of Maharashtra; and (b) NEEM with the AICTE. Realizing that a TPA's functions were close to their existing functions, they were amongst the first few agencies to be registered as a TPA for apprenticeship training in 2017. They have received the 'Best Skilling Initiative' award from the NSDC during their initial days.

Amass Skill Ventures Pvt Ltd was set up in 2010 as a consulting organization for corporate training programmes. In 2013, Amass entered the area of skill development and became a training partner of the NSDC to implement the Star Scheme, skilling 300–400 trainees per year. With the launch of the PMKVY scheme in 2014, Amass became a PMKVY training partner and entered partnerships with various Haryana state schemes. Realizing the challenges faced by industry in meeting the compliances of apprenticeship training, in 2015, Amass moved for industry integration. With the launch of the NAPS in 2015, Amass was amongst the few very first TPAs to be registered with the MSDE.

Both Amass and Yashaswi, like many other TPAs, provide services beyond signing apprentice contracts that are required over the apprenticeship training lifecycle, which include:

- ▶ Awareness raising for the youth from school onwards
- ▶ Mobilizing candidates and supporting them to register on the portal
- ▶ Mobilizing companies and supporting them to register on the portal
- ▶ Matchmaking between candidates and establishments
- ▶ Fulfilling all compliances on behalf of the establishment as required by the apprenticeship training programme
- ▶ Where required, appointing trained and certified trainers, to support the:
 - Basic training of candidates
 - In-company training of apprentices by providing apprentice registration for examinations and filing requests for financial incentives on behalf of establishments.

The TPA business model is based on payments made by the company on a per-candidate-per-month basis. Therefore, the viability of the TPA business model rests on the both the number of apprentices in a particular establishment and the length of their training. To conduct a profitable business, TPAs prefer not to work with establishments with less than 300–500 workers as the investment to be made by the TPA, especially in terms of assigning a certified trainer to the training cohort, does not make business sense.

Challenges faced by TPAs in the smooth implementation of the NAPS

Consultations were held with selected TPAs to obtain an overview of the challenges they face within the apprenticeship systems. The issues highlighted by TPAs include the following:

- ▶ TPAs felt a need for a common, unified understanding of the Apprentices Act among different stakeholders. They further saw a need for clarity on some of the clauses in the Act. The difference in understanding of different clauses creates a difference in conditions of operation.
- ▶ There is no uniformity in the processes related to apprenticeship programmes set up by the different SSCs.
- ▶ There is a lack of clarity of the roles of key stakeholders, including the SSCs, TPAs, apprenticeship advisors, etc.
- ▶ There is a lack of awareness about the NAPS amongst the youth. Other than the PMKVY scheme, where the candidate registered for apprenticeship is treated as placed, no proper awareness raising, and counselling is extended to potential apprentices.

As per the TPAs, the apprenticeship programmes (for both optional and designated trades) can be made more attractive if the following recommendations are addressed:

- ▶ Uniformity of and consistency in apprenticeship processes and guidelines among different SSCs and state authorities is required.
- ▶ Timely responses from the authorities, especially apprenticeship advisors, on the requests submitted is required.
- ▶ Timely reimbursement of stipends and basic training expenses, (and other incentives) under NAPS – whether it is to establishments or basic training providers, or the payment of incentives to TPAs or SSCs – is required. There are no timelines set for such payment by the government.
- ▶ A system should be created on the portal to engage trade apprentices. Currently the portal does not offer seamless processes, especially in case of designated trade apprentices.
- ▶ A mechanism to resolve industries’ issues within a stipulated timeframe should be established.
- ▶ Government budget grants should be earmarked for TPAs to effectively raise awareness about apprenticeship training.
- ▶ The apprenticeship portal should be used effectively for:
 - ▶ Providing updated guidelines and processes related to the NAPS
 - ▶ Providing uniform understanding of the clauses in the Apprentices Act
 - ▶ Clarity of the roles of the SSCs, TPA, apprenticeship advisors, etc.
 - ▶ Creating a dashboard that presents specific sections with relevant information for TPAs, enterprises and SSCs
 - ▶ Creating a new section on the portal for report from TPAs
- ▶ Developing and uploading e-modules for capacity building for key stakeholders on the portal. These e-modules may include details of each step of the apprenticeship lifecycle, the processes involved with relevant guidelines and timelines for each process (freezing the timelines).
- ▶ Developing and hosting animated videos explaining apprenticeship training processes and the tools and clauses in the Apprentice Act in simple and friendly language for the TPAs. Such videos could address the following processes:
 - ▶ Registering apprentices on the portal
 - ▶ Managing apprentices on the portal over the apprenticeship lifecycle
 - ▶ Managing the reimbursement process with timelines
- ▶ TPAs, if incentivized by the government, can play a central role in supporting micro-enterprises having less than 10 workers participate in apprenticeship. They can provide support through aggregating demand, take on all the administrative processes, advise the apprentices, provide training, and monitor the progress of the apprentices. In addition, TPAs can link with three enterprises and circulate apprentices in these units to ensure that their training is completed at a certain quality. To provide such intense support to small and micro-enterprises, the government should incentive TPAs so that they can create a viable business model and are able to sustain it.

Due to the inherent advantage of engaging TPAs, there is an acceptance and interest in doing so from almost all types of industries. However, at present, the role of TPAs is mostly limited to optional trades. There is a general feeling that the TPAs can also play a more productive for designated trades too.

An indicative survey was conducted with randomly selected TPAs and SSCs to identify the factors which should be in place to enhance the role of TPAs in promoting designated trades.

Some of the points presented in the discussion were:

▶ **Business model of TPAs**

As stated previously, TPAs provide a whole package of services related to apprenticeships to enterprises. In the case of optional trades, TPAs also support enterprises in drafting the curricula and getting it aligned to the NSQF. The TPA business model is based on payment by the company on the basis of a per-candidate-per-month approach. Therefore, the viability of the TPA business model rests on the both the number of apprentices in a particular establishment and the length of the apprenticeship training. To sustain their business, TPAs prefer to work with organizations which have a professional, client-orientation approach and a strong focus on reaching out to targets. The SSCs, being private and professional bodies, also have a strong target orientation, which matches the requirement of TPAs.

Apprenticeship advisors are part of the MSDE, and most of them do not have much experience of working with the private sector. This changes their priorities and limits their focus on targets, which becomes a roadblock in the TPA business model. Hence, TPAs do not engage much in designated trades.

▶ **Approach and attitude**

The implementation of apprenticeship training for optional trades is done through SSCs while training for designated trades is implemented in conjunction with apprenticeship advisors. TPAs find it easy to work with SSCs as their business model depends on the number of apprentices engaged by an enterprise. Hence, for them, a professional attitude, which helps them reach a much larger target audience, makes for a more attractive proposal. According to the TPA, apprenticeship advisors do not display such professional and focused attitudes and behaviour.

▶ **Procedural delays**

According to the TPAs, in the case of designated trade apprentices, there is normally a delay in generating the apprentice contracts as this needs to be verified through the apprenticeship advisors. In addition, the reimbursement to companies, as financial incentives, is also delayed. These delays create gaps in the TPAs' operational cycles. Hence, they prefer working with optional trades.

3.5.3 Suggestions for making the role of TPAs more productive for designated trades

Based on the results of the survey and the consultations with TPAs, the following recommendations have been suggested to make the role of TPAs more productive for designated trades.

- ▶ Apprenticeship advisors should see TPAs as an important stakeholder in enabling apprenticeships. The advisors should have regular interactions with TPAs and coordinate to support apprenticeship training implementation.
- ▶ Apprenticeship advisors should be trained to become target-oriented and solution-oriented. They should engage more regularly with apprenticeship implementing bodies, such as enterprises, TPAs, etc., to become a catalyst in the system.
- ▶ The procedural delays in the case of designated trades should be reviewed and removed.
- ▶ Apprenticeship advisors should involve TPAs in promoting apprenticeships in their region; for monitoring the participation of enterprises in apprenticeships (especially those which are under a mandated category); in sending notices to industries who do not provide apprenticeship places and follow up with these units to promote NAPS.

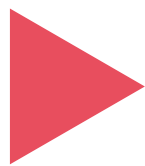


During web-consultation with senior representatives from various industries, a senior manager at JVM Equipment Limited suggested that the role of TPAs in promoting and supporting SMEs participation in apprenticeships should be increased. This is where TPAs can actually add quality to the implementation of apprenticeship training. Large companies normally have sufficient training infrastructure and a human resources department which takes over the responsibility for apprenticeship training. Replacing the training section of large companies with a TPA is not advisable. In long run, this may lessen the importance of skill development by large companies

3.5.4 Area for further study and research

The following areas were identified for further study and research.

- ▶ TPAs have expressed willingness to expand and strengthen their role in promoting apprenticeship in designated trades, provided that some areas of intervention are looked into. The MSDE may like to take this further with various TPAs.
- ▶ The Gujarat model of recruiting TPAs can be explored to be replicated in other states.
- ▶ The business sustainability of TPAs may be considered using a performance-driven approach. This does not imply that there should be a flow of money, but corrections need to be brought into the existing system of designated trades. The functioning and the process flow for designated trades demands major restructuring to help other players function smoothly. This applies to TPAs, as their business is affected by the slow functioning of these trades. At the same time, the TPA ecosystem should be strengthened and backed up by a strong quality assurance mechanism to ensure there are no cases of malpractice.



4

Conclusions

Conclusions

The experience in India shows that building an effective and successful apprenticeship is often a challenging task. While in some countries, apprenticeship is a well-established route to skilled employment, elsewhere apprenticeship is uncommon with employers favouring other means of labour training and upskilling. These differences in apprenticeship provision across countries are reflected in the differences in policy choices in costs and benefits from apprenticeship training accruing both to companies and individuals (Kuczera 2017)

Though apprenticeship training in India has been in existence for six decades, the country is still grappling with the challenging task of building an effective and successful apprenticeship system. The number of reforms and amendments introduced since 2014 clearly emphasizes the need to make apprenticeship an attractive option for both industry as well as the youth.

The MSDE has taken note of the key findings of the draft ILO report “Good practices in apprenticeships in India: Challenges and opportunities.” Some of the recommendations which have been acted on include:

- ▶ The apprenticeship units in the NSDC, DGT and MSDE have been brought together as one team with more synergy and convergence.
- ▶ The possibility of apprentices to obtain the equivalence of class 10 and 12 qualifications, as was the case with ITI trainees, has been granted.
- ▶ The portal has been unified and further reforms on the same are in process.

However, further action is required by the MSDE in making apprenticeship aspirational for the youth and desirable for industry.

Atul Kumar Tiwari, Principal Secretary, MSDE

(Remarks at the innovation bootcamp on “Apprenticeship in India: Country strategy” conducted on April 27–28 2022)

In October 2014, financial incentives were offered to eligible employers (mainly the manufacturing sector) hiring apprentices for the first time. In 2016, this scheme was replaced by the NAPS, which was launched on a much larger scale, with a target of 5 million apprentices over four years (from 2016–17 to 2019–20). Besides financial incentives, several other reforms, including administrative reforms have been introduced, promoting the “ease of doing apprenticeships” for enterprises. Intermediaries have also been formally introduced to support employers in apprenticeship training.

In spite of all these reforms and the financial incentives, it took almost four years for the NAPS to be accepted by a larger number of employers. The achievement of the target in the stipulated time period was less than 30 per cent. However, after four years, the number of apprentices enrolled in optional trades under the NAPS are on an upward trajectory.

The first phase of the NAPS has been completed, and despite all the challenges in terms of the not-so-smooth functioning of the apprenticeship portal, the lack of progression pathways post apprenticeship,



the lack of a proper communication strategy, poor target setting, etc., the NAPS has shown a gradual increase in numbers. The enrolment of apprentices has also been regularly increasing, and this raises the crucial question: what can be done to mitigate the remaining challenges so that the true potential of apprenticeship can be realized, and more apprentices can be successfully supported in the transition from school to the labour market?

The MSDE, in its Draft Concept Note On Amendment In Apprentices Act, observed that “India has immense untapped potential for apprenticeship training. To leverage apprenticeship, it is crucial to bring reforms in the present form and adopt a targeted approach to bring about the desired outcomes.” (MSDE 2021a)

The objective of this research by the ILO is to focus on garnering country insights for India, knowledge on modernizing apprenticeship, and exploring how apprenticeship systems can equip both the youth and adults with the skills relevant to the future of work, thereby facilitating their access to and progress in the labour market. In addition, the research has aimed at identifying innovative strategies and lessons, which could feed into global research, and share selected global good practices and strategies to provide recommendations for innovative strategies required to modernize apprenticeship in the country.

Using extensive primary and secondary research, the issues which require the utmost attention have been identified, and five of these have been discussed at length. These issues, and the areas identified for further studies with respect to each other, are presented below.

► **Need for a well-coordinated approach**

Apprenticeship training in India is a multi-ministerial issue. To implement apprenticeship to its full potential, a well-coordinated approach is required between not just the MSDE and the MoE, but should include other ministries like the Ministry of MSME, the Department for Promotion of Industry and Internal Trade, the Ministry of Labour and Employment, the Ministry of Heavy Industries, and also the social partners, all of whom have a significant role to play in making apprenticeship a success.

These coordinated approaches are only possible if appropriate structures with sufficient autonomy and decision-making powers are in place. These may be part of an existing set-up under the ministry with redefined functions (such as the Central Apprenticeship Council) or a new institution or independent body (which may be a board or a council like the AICTE) with the required autonomy and decision-making powers to design, implement, monitor and manage apprenticeship training at the national level.



The proposed institutional structure should promote a national unified system for apprenticeship. Such a body may be mandated to:

- ▶ represent all the apprenticeship schemes under one same roof, thereby enhancing synergy and coherence, and promote vertical and lateral mobility options to apprentices.
- ▶ promote a structure which is aspirational for the youth, and which offers possibilities for mobility right from middle school to higher qualifications through apprenticeship programmes; offers lateral mobility to deepen skills across a trade; promote options for multiple apprenticeships leading to qualification progression through upskilling and reskilling; and encourages entrepreneurship among apprentices.
- ▶ establishes uniformity in processes, guidelines and creates an integrated portal for apprenticeship training in the country.
- ▶ set targets (both quantitative and qualitative) for apprenticeship training and monitoring the same at the national, state, and district level,
- ▶ coordinate with SSCs, state authorities and other key players to ensure uniformity and consistency with respect to apprenticeship guidelines and processes.
- ▶ undertake the promotion and advocacy of apprenticeship to key stakeholders.
- ▶ promote models of apprenticeship training across MSMEs in both urban and rural areas.
- ▶ promote RPL as an assessment for entry into apprenticeship programmes and provide opportunities for quality training to those who have learnt skills outside formal systems.
- ▶ organize evaluations of ongoing schemes for decisions on their continuation, expansion, closure, etc.
- ▶ keep abreast with global apprenticeship developments to learn and exchange experiences with countries with similar demographics or similar challenges or other advanced countries.

▶ **Mainstreaming apprenticeship in technical-vocational education system and developing progression pathways**

Apprenticeship can be aspirational if it is not seen as a dead end. Apprenticeship must provide options that give access to higher education and higher levels of skilling. This research recommends that options for both vertical and lateral mobility need to be established so that apprentices have opportunities to access progression pathways.

In addition, apprenticeship training should be seen as a level higher than a CTS course which is included in its entry qualification. The report presents a few cases where eligible ITI trainees are at the same NSQF level which will be provided by the apprenticeship programme.

▶ **Formalizing informal skills through apprenticeship training**

A large number of young persons in India learn skills outside the formal skill system. The report presents a few models, based on apprenticeship training and RPL, to help formalize the skills of informally skilled workers.

Informal skilling is crucial in sustaining the economy. However, as it limits the progression of the informally trained workers, innovative strategies need to be designed to provide opportunities to those who desire formal certification. Initiatives to improve learning while working will have more impact if these extend beyond the relatively small formal sector and reach out to MSMEs, which dominate the country's informal sector.

The active involvement of the local cluster associations – SMEs, artisans, handicrafts, FPOs, etc. - is crucial in making an impact in informal apprenticeships. Existing institutions like SSCs and TPAs should be incentivized to support the quality, relevance and effectiveness of informal apprenticeships, as well as counsel skilled workers on available pathways to transition to a formal apprenticeship. They might also need capacities, tools and infrastructure to carry out this mandate. An ISO 10015-based quality system and quality culture could provide the starting points.

▶ **Effective apprenticeship management through (a) creating uniformity and coherence in the system by minimizing multiplicity; (b) target setting and advocacy; and (c) awareness building and communication**

Some of the recommendations of this theme include:

- ▶ The apprenticeship portal needs to be strengthened. Multiple portals should communicate seamlessly with each other. To the users and stakeholders, they should be integrated as a single portal for apprenticeship training.
- ▶ There is a need to align and streamline the various apprenticeship categories so that there is synergy and coherence, and no competition for the same apprentice positions in an establishment.
- ▶ Apprenticeship is a complex, multi-ministerial subject and, therefore, target-setting and monitoring should involve all the key ministries/departments which are directly engaged in apprenticeship training. There is a need to develop a system for apprenticeship target-setting and monitoring at all levels – district, block, state and national –involving all the key stakeholders. A district ranking index for apprenticeship can be created to make the available resources proportionate to apprenticeship opportunities at the district level.
- ▶ having companies with 30 or more workers create an apprenticeship plan (as a mandatory return on the number of apprenticeships proposed to be hired annually for two years) can be considered.

- ▶ A central research and labour market information system may be set up to forecast and recognize emerging trades in the labour market and apprenticeship training needs, which will lead to the creation of new National Occupational Standards based on emerging trends.
- ▶ A framework for an effective communication strategy for apprenticeship training may be developed, which addresses all the key stakeholders as well as provides a target-based approach to evaluate its effectiveness.

In addition to these five themes, this research pointed to the need of concurrent evaluation and studies on apprenticeship systems. It also pointed to the need to build capacity for the stakeholders involved in apprenticeship implementation and management, especially for in-company trainers who play an important role in the training of apprentices.

▶ **Convergence among various WBL schemes**

- ▶ It is assumed that convergence would be meaningful only if the schemes complement and supplement each other and extend mobility to the youth participating in these schemes. The proposed convergence model and the progression pathways require detailed study to assess their viability and worthiness.
- ▶ The convergence of these schemes requires strong coordination among the responsible departments and ministries. An autonomous body, with the required leadership and decision-making power, should take lead in coordinating and overseeing the implementation of the converged model of apprenticeship.
- ▶ Interactions and consultations with key stakeholders may also be considered to explore the possible unified track to bring these three schemes together.

▶ **Enhancing and strengthening the role of intermediaries in apprenticeship system**

- ▶ TPAs should be seen as important stakeholders in enabling apprenticeships by apprenticeship advisors. The advisors should hold regular interactions with TPAs and overcome difficulties in the implementation of apprenticeship policy.
- ▶ Apprenticeship advisors should be trained to more become target-oriented and solution-oriented. They should engage more regularly with apprenticeship implementing bodies – enterprises, TPAs, etc. – to become a catalyst in the system.
- ▶ The procedural delays in the case of designated trades should be reviewed and removed.
- ▶ The apprenticeship advisors should involve TPAs in the promotion of apprenticeship in their region; in the monitoring of participation of enterprises in apprenticeship training (especially those under the mandated category); and in reaching out to those industries that are eligible but do not participate in apprenticeship.

The Secretary Ministry of Skill Development and Entrepreneurship, Mr Atul Kumar Tiwari (who was then the Special Secretary, MSDE), at the valedictory session of the two-day innovation bootcamp on “Apprenticeship in India: Country Strategy”, organized for deliberate on the recommendations provided in the ADULT country research report on apprenticeship, shared the ideas which MSDE considered crucial for reforming the apprenticeship programme in the country. These are presented in the box 19 below.



Box 19: Excerpts from Mr Tiwari's speech in the session "Apprenticeship in India: Way forward" at the Innovation Bootcamp

Mr Atul Kumar Tiwari, Additional Secretary, MSDE, in the session 'Apprenticeship in India: Way Forward' shared the following valuable suggestions for 'Apprenticeship in India: Country strategy'.

- ▶ Considering the growing service economy, the expansion of the models of experiential learning, and the stagnant growth of apprenticeship training in designated trades (for last two-three years), there is a need to recalibrate the definition of apprenticeship. The new definition of apprenticeship should also consider the quality aspect.
- ▶ The difference between designated trades and optional trades needs to disappear beyond a point. Different types of apprenticeships need to be simplified and brought into educational pathways.
- ▶ There is a need for multiple models of assessment and certification of apprenticeship which are linked to a credit framework.
- ▶ There is a need to bring about convergence amongst various apprenticeship and work-based-learning schemes, and minimize confusion at the level of establishments, while also allowing them options. The consolidation of the NAPS and NATS is already in process. However, the discussions regarding NEEM are still in the preliminary stages.
- ▶ There is a strong need to revise the guidelines for TPAs, and a light but tight structure may be required.
- ▶ To promote apprenticeship in the private sector, the idea presented by the DET, Gujarat, regarding the appointment of apprenticeship advisors from candidates with a private sector background should make it easier for them to connect with the private sector as well as SSCs.
- ▶ To align apprenticeship with education, the MSDE is currently developing synergies and reframing apprenticeship programmes to one-year job roles.

▶ List of definitions

Apprentice	An apprentice is a person who is undergoing apprenticeship training in pursuance of a contract of apprenticeship as stipulated under Apprentices Act, 1961. The period of apprenticeship training varies according to designated trade. It is usually six months to three years but could last up to four years in a few trades.
Apprenticeship contract	An apprenticeship contract is an employment contract between an employer and a young person to undertake a course of training in any industry or establishment undergone in pursuance of prescribed terms and conditions under the Apprentices Act, 1961.
Atma Nirbhar Bharat Abhiyaan	The Atmanirbhar Bharat Abhiyaan or the Self-reliant India Movement is the vision of new India envisaged by the Honourable Prime Minister Shri Narendra Modi. It signifies a shift in socioeconomic policy focused on making India self-reliant in production and makes it a hub for global manufacturing and undertakes second generation of governance and administrative reforms. The five pillars of Atma Nirbhar Bharat are: economy, infrastructure, system, vibrant demography and demand.
Common Norms	Common Norms specify the input standards, outcomes, funding norms, fund flow mechanism, mechanism for monitoring and tracking, and the empanelment of training providers and assessors. They were notified in August 2015 by Ministry of Skill Development and Entrepreneurship.
Craftsmen Training Scheme	The Craftsmen Training Scheme (CTS) is a training programme of between six months to two years undertaken by the Directorate General of Training under the aegis of the Ministry of Skill Development and Entrepreneurship. Prerequisites for the courses range from having passed examinations ranging from class 8 to class 12. Upon the completion of the training, trainees write the All India Trade Test (AITT). Successful candidates receive the National Trade Certificate (NTC).
Designated Trade	“Designated trade” means any trade or occupation or any subject field in engineering or non-engineering or technology or any vocational course which the central government, in consultation with the Central Apprenticeship Council, may, by notification in the official gazette, specify as a designated trade for the purposes of the Apprentices Act, 1961.
Deen Dayal Upadhyaya Grameen Kaushalya Yojana	<p>The Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is a short-term skilling scheme implemented by the Ministry of Rural Development in 2014. The DDU-GKY is a part of the National Rural Livelihood Mission (NRLM), tasked with the dual objectives of adding diversity to the incomes of rural poor families and catering to the career aspirations of rural youth.</p> <p>The DDU-GKY is uniquely focused on rural youth from poor families between the ages of 15 and 35 years. Over 180 million, or 69 per cent, of the country’s youth population between the ages of 18 and 34 years, live in its rural areas. Of these, the bottom of the pyramid youth from poor families with no or marginal employment number about 55 million.</p>
Directorate General of Training (DGT)	The Directorate General of Training is an arm of the Ministry of Skill Development and Entrepreneurship and is the apex organization for development and co-ordination of long-term vocational training. It functions through a network of around 15,000 industrial training institutes (ITIs), 33 national skills training institutes (NSTIs)/national skills training institutes for women (NSTI-W) and other central institutes.
District Skill Committees	District skill committees are a potential platform for strengthening the skill ecosystem and increasing overall employment generation and income enhancement at the district level. DSCs, led by the Ministry of Skill Development and Entrepreneurship, are designed to promote inter-departmental convergence and strengthen the skill and employment ecosystem. Personnel from departments of Agriculture, Livelihood, Rural Development, Education, Industries, and Skill are committee members. They have the potential to promote coherence across schemes and programs of central and state governments.
Industrial Training Institutes	Industrial training institutes (ITIs) are post-secondary schools in India constituted under the Directorate General of Training, Ministry of Skill Development and Entrepreneurship to provide vocational training in various trades.

Long-Term Training	The Ministry of Skill Development and Entrepreneurship ecosystem refers to “Long-term training” as trainings that last for more than 500 Hours (courses ranging between 200 and 500 hours are classified as short-term training). The Directorate General of Training is the apex organization under the Ministry of Skill Development and Entrepreneurship for the development and coordination of long-term vocational training.
Make in India	Make in India (MII) is an initiative by the Government of India to encourage companies to manufacture in India and incentivize dedicated investments into manufacturing. The initiative targeted 25 economic sectors for job creation and skill enhancement and aimed “to transform India into a global design and manufacturing hub”.
Ministry of Skill Development and Entrepreneurship	The Ministry of Skill Development and Entrepreneurship (MSDE) is the administrative ministry set up by the Government of India on 9 November 2014 to coordinate all skill development efforts across the country.
National Apprenticeship	The National Apprenticeship Promotion Scheme (NAPS) was launched by the Indian Government in August 2016. The scheme entails financial support to establishments undertaking apprenticeship programmes for designated and optional trades and is administered through the Ministry of Skill Development and Entrepreneurship.
National Apprenticeship Training Scheme	The National Apprenticeship Training Scheme (NATS) is a one-year programme for equipping technically qualified youth in higher education with practical knowledge and skills required in their field of work. The apprentices are given training by the organizations at their place of work. During the period of apprenticeship, the apprentices are paid a stipend amount, 50 per cent of which is reimbursable to the employer from the government. At the end of the training period, the apprentices are issued a Certificate of Proficiency by the Government of India which can be registered at all employment exchanges across India as valid employment experience.
The National Council of Vocational Education and Training	The National Council of Vocational Education and Training (NCVET), notified on 5 December 2018, has been set up as an overarching VET regulator to establish regulations and standards to ensure quality in the TVET space, subsuming the responsibilities of National Skill Development Agency (NSDA) and the erstwhile National Council of Vocational Training (NCVT).
National Industrial Classification Code	The National Industrial Classification Code (NIC Code) is a statistical standard for developing and maintaining a comparable database for various economic activities. This code has been developed with an intent to ascertain and analyze how each economic activity contributes towards national wealth.
National Occupational Standards	The National Occupational Standards (NOS) specify the standard of performance an individual must achieve when carrying out a function in the workplace together with the knowledge and understanding they need to meet a standard consistently. The NOS are industry aligned through the mechanism of sector skill councils.
The National Rural Livelihood Mission	A large portion of the population in rural India still lives below the poverty line. Rural poverty continues to be a major challenge to the government at all levels. To address this challenge, the Ministry of Rural Development conceived a mission mode scheme titled the National Rural Livelihood Mission (NRLM) in the year 2010, which was renamed Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM) with effect from 29 March 2016.
National Skill Development Corporation	The National Skill Development Corporation (NSDC) is a not-for-profit public limited company incorporated on 31 July 2008, under Section 25 of the Companies Act, 1956 (corresponding to Section 8 of the Companies Act, 2013). The NSDC has the mandate to enable and support the skill ecosystem by catalyzing the creation of large, quality and for-profit vocational institutions, ensuring quality assurance, information systems and train the trainer academies, either directly or through partnerships.
National Skills Qualification Framework	The National Skills Qualification Framework (NSQF) is a quality assurance framework which facilitates the awarding of credit and supports credit transfer and progression routes within the Indian education and training system. It organizes qualifications according to a series of levels of knowledge, skills and aptitude. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.

Optional Trade	An “optional trade” is defined as any trade or occupation or any subject field in engineering or non-engineering or technology or any vocational course as may be determined by the employer for the purposes of the Apprentice Act, 1961. As per Rule 7A(6), an employer is required to upload the syllabi and duration of the optional trade on the apprenticeship portal.
Pradhan Mantri Kaushal Vikas Yojana	The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) was launched in 2015 to encourage and promote skill development in India by providing free, short duration skill training and incentivize this by providing monetary rewards to youth for skill certification. As per the MSDE dashboard, over the period 2016–17 to 2020–21, a total of 108.99 million candidates have been trained under the scheme.
Qualification Pack	A qualification pack is a set of NOS aligned to a job role and is available for every job role in each industry sector. These packs drive both the creation of curriculum and assessments.
Qualification	A qualification is the final outcome of an assessment and validation process obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Recognition of Prior Learning	Recognition of prior learning (RPL) is defined as the process of recognizing previous/prior learning, often experiential, towards gaining a qualification. The programme trains, assesses and certifies those who have acquired their skills informally. It is part of the training provided under the PMKVY.
Sector Skill Councils	Sector skill councils are set up as autonomous industry-led bodies under the aegis of the NSDC. They create occupational standards and qualification packs, develop competency frameworks, conduct train the trainer programmes, conduct skill gap studies and assess and certify trainees on the curriculum aligned to NOS developed by the SSCs.
Short-Term Training	These activities are tailor-made to specific needs or problems of various target groups. They are conducted in a relatively short period of time. In India, there is provision of 200–500-hour-long skill-oriented training, both core and soft, at training centres to school/college dropouts or unemployed. Some of the short-term skilling programmes are offered under the aegis of the PMKVY, DDU-GKY, and NRLM.
Skilled Worker	A skilled worker is classified as an individual who can work efficiently while exercising considerable independent judgement and discharging his duties with responsibility. He must possess a comprehensive knowledge of the trade, craft, or industry in which he is employed. For the purpose of the study, production/shop floor workers are considered as skilled workers.

Source: Adapted from Skill Assessment and Anticipation Study, <https://www.msde.gov.in/sITes/default/files/2021-06/FINAL%20-%20MSDE's%20Skill%20Assessment%20and%20Anticipation%20Study%20Report.pdf>

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 **5** Annexure

Annexure A

▶ An assessment of randomly selected trades from CTS and ATS

Trades under Apprenticeship Training Scheme	Minimum entry qualifications	Course duration	Trades under Craftsmen Training Scheme	Minimum entry qualifications	Course duration
197. ATS_Turner NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	66. CTS – Turner (NSQF Level – 5)	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years
177. ATS-Solar Technician Electrical- NSQF-4	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	1 year 3 months rebate is allowed to any one of Solar Technician (Electrical), Electrician, Electrician – Power Distribution, Wireman, Electronic Mechanic, Technician Power Electronics and Mechanic Consumer Electronic Appliances trade CTS pass out.	53. CTS – Solar Technician (Electrical) (NSQF Level – 4)	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	1 year
77. ATS_ Instrument Mechanic NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	20. CTS – Instrument Mechanic (NSQF Level – 5)	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years
110. ATS_ Mechanic Agriculture Machinery NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	26. CTS – Mechanic Agricultural Machinery (NSQF Level – 5)	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	

Trades under Apprenticeship Training Scheme	Minimum entry qualifications	Course duration	Trades under Craftsmen Training Scheme	Minimum entry qualifications	Course duration
ATS_Tailor (Men) NSQF-4	Passed the class 8 examination or its equivalent (CTS trade - Sewing Technology & Dress Making)	15 months (3 months basic course) + 12 months practical training. Rebate to ex-ITI trainee is 3 months	51. CTS - Sewing Technology (NSQF Level - 4)	Passed the class 8 examination	1 year
43. ATS_Desktop Publishing Operator NSQF-4	Passed the class 10 examination	15 months (3 months basic course) + 12 months practical training. Rebate to ex-ITI trainee is 3 months	13. CTS - Desktop Publishing Operator (NSQF Level - 4)	Passed the class 10 examination	1 year
182. ATS_Steward NSQF-4	Passed class 10 examination under the 10+2 system of education CTS trades eligible: 1. Catering and hospitality management 2. Food and Beverages Services Assistant or its equivalent	15 months (3 months basic course) + 12 months practical training. Rebate to ex-ITI trainee is 3 months	5. CTS - Catering and Hospitality Assistant (NSQF Level - 4)	Passed the class 10 examination	1 year
			24. CTS - Food and Beverages Service Assistant (NSQF Level - 4)	Passed the class 10 examination	1 year
178. ATS-Spinning Technician- NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	54. CTS - Spinning Technician (NSQF Level - 5)	Passed the class 10 examination with science and mathematics or its equivalent	2 years
207. ATS_Wireman NSQF-5	Class 8 under the 10+2 system of Education	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainee	76. CTS - Wireman (NSQF Level - 4)	Passed class 8 under the 10+2 system of education	2 years
68. ATS_Horticulture Assistant NSQF-5	Passed the class 10 examination	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	34. CTS - Horticulture (NSQF Level - 4)	Passed the class 10 examination	1 year
21. ATS_Carpenter NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	5. CTS - Carpenter (NSQF Level - 4)	Passed class 8 examination	1 year

Trades under Apprenticeship Training Scheme	Minimum entry qualifications	Course duration	Trades under Craftsmen Training Scheme	Minimum entry qualifications	Course duration
12. ATS_Baker & Confectioner NSQF-5	Passed the class 10 examination under the 10+2 system of education	2 years (6 months basic course) + 18 months practical training. Six months rebate to ex-ITI trainees	2. CTS - Baker & Confectioner (NSQF Level - 4)	Passed the class 10 examination under 10+2 system of education	1 year
62. ATS_Foundryman NSQF-5	Passed class 10 with science and mathematics under the 10+2 system of education or its equivalent	2 years (6 months basic course) + 18 months practical training. One year rebate to ex-ITI trainees	16. CTS - Foundryman (NSQF Level - 4)	Passed the class 10 examination	1 year
			40. CTS - IoT Technician (Smart Healthcare) (NSQF Level - 4)	Passed the class 10 examination with science and mathematics	1 year
			28. CTS - Front Office Assistant (NSQF Level - 4)	Passed class 10 examination	1 year
			10. CTS - Data Entry Operator (NSQF Level - 4)	Passed class 10 examination	6 months

Annexure 1

▶ Findings from the Primary Research

A primary survey using the ILO evaluation tool to review a country's apprenticeship policy and systems was conducted from August–October 2021.

The instrument used was Questionnaire B from the ILO evaluation tool, which is addressed to social partners and other stakeholders involved in the quality apprenticeship system. The purpose of the survey was to develop a clear understanding of the management of the apprenticeship system in the country, which is necessary to undertake before embarking on the further development of the apprenticeship system.

Respondents of the questionnaire

The respondents to the questionnaire included:

- ▶ Representatives of sector skill councils and third-party aggregators
- ▶ Representatives of national industry associations and local industry chambers
- ▶ Trainers, mentors, supervisors and human resources officers in an enterprise
- ▶ Managers and teachers of TVET providers
- ▶ Representatives of workers' organizations
- ▶ Experts and staff of other institutions involved in the development of standards, qualifications, curricula and learning aids; examinations and certification; monitoring and evaluation of apprenticeship programmes

The ILO's approach to developing successful quality apprenticeship systems is based on six key building blocks: meaningful social dialogue, equitable funding arrangements, robust regulatory frameworks, strong labour market relevance, clear roles and responsibilities, and inclusiveness.

Questionnaire B assessed the stakeholders' response on apprenticeship systems in the country using these building blocks. It had two distinct parts as described here.

Part 1 explored the extent to which a given apprenticeship system conforms in the eyes of stakeholders. It has six sections, which include (a) the regulatory framework, (b) the roles and responsibilities of employers', workers' and other apprenticeship organizations, (c) quality assurance, (d) promotion of apprenticeships, (e) social inclusion, and (f) post-training transitions and evaluations.

Parts 2 and 3 of the questionnaire are in form of open-ended questions, inviting respondents to give their views on the apprenticeship system and its strengths and challenges, as well as offering suggestions on

how to improve the apprenticeship system through more open-ended responses. The questions in this part included views on:

1. Status of an apprentice
2. Remuneration, as a percentage of the minimum wage for skilled workers, that an apprentice should receive
3. The type of social protection provisions an apprentice should be entitled to receive
4. The other benefits an apprentice should be eligible to receive
5. The role of workers' organizations in promoting quality apprenticeships
6. The role employers' organizations in promoting quality apprenticeships

Part 3 included:

- ▶ Five strengths of the apprenticeship system in India
- ▶ Five challenges facing the apprenticeship system in India
- ▶ Five recommendations for improving the apprenticeship system

The various stakeholders approached for the study play an active role in the apprenticeship life cycle. These included representatives of policymakers, industry associations, third party aggregators, sector skill councils, the National Skill Development Corporation (NSDC), labour unions and state governments. These stakeholders were requested to share their opinions/perspectives on various aspects of the apprenticeship programme in India, the key issues and possible solutions.

- ▶ Findings from Part 1 of Questionnaire B can be found in section 3 of the main report.
- ▶ Findings from responses of parts 2 and 3 of Questionnaire B - The responses received on the open-ended questions have been consolidated, and to retain the thoughts of the respondent, phrases have been captured as they were without making any changes in the language or the words.

The headlines of the columns in the following table have been used to represent clusters of ideas.

1. Need to make apprenticeship aspirational among young people

Roles, facilities	Benefits to apprentices	Placement and job linkages
<ul style="list-style-type: none"> • Apprenticeship to be given the same weightage as regular employment • Clear demarcation of roles between apprentices and workers at the enterprise level to eliminate labour arbitrage issues • Proper training facilities to be provided • Increase in stipend • Government to enforce/ encourage apprentice training with incentives 	<ul style="list-style-type: none"> • Benefits like subsidized food, insurance, workmen compensation to be provided • Group medical insurance to be mandatory for apprentices • Inclusion of social protection and health benefits for apprentices • Inclusion of social security for apprentices • Social protection • Employees' State Insurance Corporation clause to be implemented during training period 	<ul style="list-style-type: none"> • Ensuring jobs after training • Job guarantees after completion of apprenticeship • Job protection • Job security • Ensuring that an apprentice gets placement lest he/she lose hope of getting a job • Recruitment at entry-level positions should be only from the pool of apprentices

2. Awareness building and communication strategy

Lack of awareness	Outreach to all establishments in country and educating them about the Apprentices Act, 1961	Strong communication strategy
<ul style="list-style-type: none"> • Lack of awareness about apprenticeship among young persons • Lack of awareness about the returns from apprenticeship • General awareness of schemes 	<ul style="list-style-type: none"> • Educational institutions to be involved in spreading information about apprenticeship • Awareness campaign to be undertaken in the service sector • Third-party aggregators should be incentivized to conduct awareness programs • Students should be made to understand the importance of this process from the beginning • A course on apprenticeship should be included in school syllabi • Greater visibility and promotion of apprenticeship schemes • Advertise the existence of the National Apprenticeship Promotion Scheme from the school level. Like Kellogg's, create a pathway for the young person 	<ul style="list-style-type: none"> • Apprenticeship schemes should be promoted exclusively • Advertisements to be undertaken • Educational institutions to be involved in spreading information about apprenticeship • Strong campaign for the scheme • Sector skill councils to take initiatives to promote apprenticeship • Rs 1000 /per contract to be given to a sector skill council /NSDC / TPA for each contract • Promotion of apprenticeships • Implement a multi-pronged communications strategy



3. Formalization of informal apprenticeship

Lack of awareness

- Formally recognize workers with skills acquired through informal and non-formal learning and enhance the skills of such workers by providing them with potential pathways into the formal labour market
- Address the lack of a framework for apprenticeship in the informal sector
- Use the cluster development approach to address the challenges of informal economy

4. Need to engage micro, small and medium enterprises (MSMEs) in apprenticeships

Support and hand holding for MSMEs by the government

- Need to encourage the participation of MSMEs in apprenticeship
- Special provisions to made for MSMEs and special considerations or benefits to given to apprentices who join MSMEs

Incentivize on-the-job training, not only in large firms but also in MSMEs, and build greater awareness about the returns of skilling

- Extra financial/non-financial benefits for MSMEs to adopt apprenticeships
- Subsidy amount of 1,500 rupees per month to be increased to 2,500
- Targeted financial support to MSMEs to increase participation in apprenticeship

Should be made mandatory for all establishments

- Upper ceiling of the number of apprentices of 15% may increase to 20% for MSMEs only
- One pay scale for the type of industry; bigger industries pay higher wages and all apprentices get recruited there. The rest of industries fewer apprentices or no one
- Legal mandates should be imposed on establishments not complying with apprenticeship regulations
- Industry should take up the ownership of grooming apprentices

5. Digitalization of apprenticeship training be encouraged

Online basic training for apprenticeship

- On-the-job training to be given for IT-based job roles
- Acceptance and adoption of "online" (virtual) mode of training as means of skilling, breaking out of the brick-and-mortar era
- Digitalization of apprenticeship including online modules

Unified and efficient portal to manage apprenticeships

- Implement a unified portal to act as the single window for the programme as far as the stakeholders are concerned and ensure that it runs efficiently
- Implement online processing claims, which is a direct and easy way

6. Effective apprenticeship management systems			
Absence of capacity building	Lack of proper target setting and target monitoring	Simplification of Procedures	Stakeholders diversification
<ul style="list-style-type: none"> • After training, apprentices must feel that they have been adequately skilled for the future employment • Trainers and mentors • Separate, regular staff exclusively for apprenticeship training in the state directorate and in the ITI's. • Motivated trainers to be provided • Business Management Organizations should be empowered to engage with organizations to update curricula • Several employers feel new apprentices lack basic foundational skills (both technical and soft) • Some companies also experience high non-completion rates, diluting their returns and affecting HR planning. • Employers face challenges in the quality and quantity of apprentices • More involvement of top leadership required 	<ul style="list-style-type: none"> • Lack of proper monitoring mechanism and social audits • Need for rigorous training and regular follow-up • Systematic approach for an evaluation process be implemented and added to the formal degree process of a candidate • Systematic implementation plan and curriculum to be developed • Periodic reviews to be undertaken while apprenticeship is in progress • Timely stipend reimbursements to be made to stakeholders • Mandatory assessment of each candidate • Timely modernization • Effective execution • Ensuring proper and good training and working environment • Education documents should be mandatory for apprenticeship • Incentives/ remuneration to be provided to apprenticeship advisors and assistant apprenticeship advisors for monitoring of training. • Implement, demand, and ensure quality, quality and only quality at every step and in every aspect and measure it 	<ul style="list-style-type: none"> • Different assessment norms and certification under Optional and Designated Trades • Strengthening the assessment and certification of apprentices on the completion of the programme • Reimbursement process for establishments should be faster • Remove the mandate of 5% fresher apprentices and its count on total 15% • Termination not be allowed after 6 months of apprenticeship training • Apprentices must be able to finish the training within the year of their completion of the ITI training • The apprenticeship system should be made even more simple • More transparency • Eradicate regulatory hurdles • Multiplicity of schemes, governing bodies, portals, trades create confusion, and should be streamlined 	<ul style="list-style-type: none"> • Should be outcome driven, and a more concerted and coordinated effort to be made between the Centre and states, and amongst various ministries • All stakeholders to implement the policy in letter and spirit • Policy convergence for all types of apprentices • Establishing national goals to expand apprenticeship in a broad range of occupations and sectors • Showcase apprenticeship as a nation-building activity • Employers' to have more ownership • BMOs to be empowered to engage with organizations to update curricula • Greater engagement with employers' federations, workers' federations • Inclusion of more diversified stakeholders like sector skill councils • Involve regional-level BMOs for the promotion of apprenticeship • Linkage of apprenticeship schemes to other appropriate government schemes like the PLI scheme • Strong connection between industry and government to ease apprentice hiring norms

6. Effective apprenticeship management systems

- Regular audits to be undertaken
- The implementation of Apprentices Act, 1961 is mandatory for organizations with more than 29 people. This should be monitored, and action must be taken for non-compliance
- Successful implementation
- Higher quality assurance in the implementation of apprenticeship programmes
- Quality of apprenticeship training to be raised
- Flexibility in legal framework
- Regular industry interaction with stakeholders
- An industry-linked authority to network with different stakeholders
- Employees to be involved in making policies

7. Movement towards digital capabilities

- Application of artificial intelligence and Internet of Things in production processes
- Mandatory requirements of skill sets that cover basic data management, computer literacy and handling digital machines for the workforce on the shop floor
- Need for apprenticeship training in new technological courses

8. Continuous up-skilling and lifelong learning

- **Levels of apprenticeships**
- Opportunity for higher/reskilling
- Short-term apprenticeship programmes to be implemented
- Absence of integrated credit framework for horizontal and vertical mobility in apprenticeship
- Consider expanding eligibility to include part-timers, which would be conducive to those pursuing higher studies and those seeking re-skilling.
- Lack of clarity on the progression pathways after apprenticeship
- Apprenticeship to be made a part of the mainstream education system and make it aspirational
- **Stock of low-skilled workers would reduce overtime. All employees would therefore need re-skilling and upskilling**
- Impart transferable skills to workers to enable them to ride through the wave of automation, and any resulting structural shifts in the labour market
- Training should flow very systematically
- Encourage higher studies
- Training period must increase if apprentices are to be trained on the job;
- Degree apprenticeship should be promoted
- Link future skills and future employment with apprenticeship training
- **More apprenticeship embedded educational initiatives**
- Needs to be embedded within education system, apprentice should be allowed during a course
- Pathways post apprenticeship to be provided
- Apprenticeship training should be weightage given in the selection process for those pursuing higher studies.
- Apprenticeship training should be given weightages in the selection process for jobs in the government sector and in public sector undertakings
- Minimum industry skills requirement awareness to be given to students



8. Continuous up-skilling and lifelong learning

- Mandatory for students and should have flexible timings
- Trainees must feel this is the continuation of their training
- Local demand and supply aggregation at the district level
- Create a district ranking index for apprenticeship
- Employment and apprenticeship portal to be made at the district level
- Resources proportionate to apprenticeship opportunities at the district level to be made available

9. Evaluation and studies

- | | |
|---|--|
| <ul style="list-style-type: none">• Undertake placement and drop-out analysis• Undertake tracer studies to study long-term impact• Human resource mapping to be done• Evaluation and tracer studies | <ul style="list-style-type: none">• National policy to be reviewed periodically• Make clear cost benefit analysis for the industry to see• Maintain data to provide adequate opportunities to upgrade VET for apprentices |
|---|--|

Annexure 2

▶ Findings from (secondary literature) studies and recommendations for apprenticeship and other work-based learning in India

Studies and progress reviews on apprenticeship training and work-based-learning conducted in the last few years have provided recommendations and direction for further modification of the apprenticeship schemes. Some of the key recommendations from some selected reports are listed here to develop a list of possible strategies required for the modernization and reform of the Indian apprenticeship system and work-based learning.

- ▶ The course approval process for NSQF alignment of optional trade courses in the case of the NAPS is a bit cumbersome, time-consuming, and needs to be streamlined to make the approval process faster. (National Productivity Council, 2021)
- ▶ Continuous up-skilling and lifelong learning will be the key to sustain competitiveness.
- ▶ **There is a need for apprenticeship training in new-age technological courses.** Though a number of new-age courses in Internet of Things (smart city, healthcare and agriculture), renewable energy, additive manufacturing technology (3-D printing), mechatronics, drone technology, geo-informatics, etc. have been introduced in ITIs, they have not yet been adapted into the apprenticeship training landscape. The addition of designated trades in apprenticeship was done in 2019 during the amendment of Apprenticeship Rules. The new trades included were in the printing group, leather crafts, centre of excellence trades, computer hardware and network group. Apprenticeship training has not successfully responded to the technological advancements, which, if not done soon, will leave a huge gap in the system.
- ▶ **Apprenticeships need to respond to the global health pandemic:** The apprenticeship system is digitized, but the training was being conducted in the traditional classroom and shop-floor format. The COVID-19 pandemic, which led to long lockdown periods, also impacted the apprenticeship system. Workplaces were closed, and in some cases, work was being managed remotely. Apprentices were not able to spend the required time on the shop floor.
- ▶ The stipend reimbursement subsidy may be removed for government organizations including central and state public sector organizations.
- ▶ An increase in the subsidy amount should be made only in case of smaller industries (those who fall in the non-mandatory apprenticeship window for establishments having more than 4 employees but less than 30 employees, women and people with disabilities (PWD) apprentices).
- ▶ There should be an alignment of common cost norms and assessment fees with respect to basic apprenticeship training with similar short-term courses
- ▶ Incentives to TPAs & SSCs can be continued. However, it is proposed that they be linked to certain targets.

- ▶ Separate Budget for Awareness, Advocacy / Promotion and Industry Connect.
- ▶ The existing brand ambassador programme can be revisited and promoted.
- ▶ A separate budget for a well-designed capacity building programme should be put in place to train and build relevant stakeholders' capacity on various aspects of the Apprentices Act (especially the amendments), the NAPS scheme and the portal functionalities.
- ▶ Employment statistics and placement/career record for apprentices should be maintained.
- ▶ There should be local demand and supply aggregation by the district skill committees
- ▶ The number of supervisors during apprenticeship training can be increased: a mentor should be provided to an apprentice during on-the-job training.
- ▶ There are more jobs in the informal economy than in the formal economy (80 per cent vs 20 per cent). The huge informal economy poses a challenge, which could be addressed by developing clusters or leading firms taking the initiative to help achieve economies of scale in skills development, development of competencies within and between firms, and availability of industry facilities. A framework for apprenticeship is lacking in the informal sector.
- ▶ A majority of the MSME establishments are beyond the purview of the Apprentices Act.
- ▶ There is a low level of acceptance of apprenticeship in various industries, and the reluctance is due to the issue of the payment of stipends.
- ▶ Both contract signing and validation remain a major hurdle.
- ▶ Apprenticeship was traditionally undertaken for engineering trades. New amendments and courses in trades are yet to make inroads.
- ▶ There is a lack of advocacy on apprenticeship. Despite a series of reforms being introduced in the Apprentices Act, establishments are not aware of these reforms and amendments in the Act. Indian industry still perceives apprenticeship as a system full of procedural bottlenecks and paperwork.
- ▶ There is minimal demand for certified skilled labour in the Indian industry. Establishments do not demand skilled labour nor do they participate in the skilling process
- ▶ Some challenges that hampers the effective implementation of the reform measures still exist. A lack of awareness, a lack of clarity on progression pathways, the absence of integrated credit framework, and the non-availability of training infrastructure remain the main questions.

▶ Findings from studies and recommendations for apprenticeship and other work-based learning India

Year	Study	Major challenge	Recommendations
June 2021	ILO Questionnaire A, filled by MSDE	<ul style="list-style-type: none"> • Need to make apprenticeship aspirational to youth • Outreach to conducted to all establishments in the country and awareness to be created about the Apprentices Act. • Need to engage MSMEs in apprenticeships • A lack of awareness among employers about the positive returns of apprenticeship • Formalization of informal apprenticeships 	<ul style="list-style-type: none"> • Flexibility in legal frameworks • Strong communication strategy • Support and hand holding for MSMEs by the Government • Expansion of TPA networks to enhance outreach to establishments • Unified and efficient portal for management of apprenticeship
July 2021	Evaluation study on National Apprenticeship Promotion Scheme	<ul style="list-style-type: none"> • A lack of proper target setting and target monitoring • Absence of capacity building • Different assessment norms and certification under optional and designated trades • Lack of a proper monitoring mechanism • Multiplicity of courses/agencies/schemes/processes 	<ul style="list-style-type: none"> • Digital trainings should be encouraged • Local demand and supply aggregation to be done at the district level • A unified portal acting as a single window for the programme as far as the stakeholders are concerned to be implemented, ensuring that it runs efficiently. • Consider expanding eligibility to include part-timers, which would be conducive to those pursuing higher studies and those seeking re-skilling. • The usefulness and effectiveness digital/online training was felt during the COVID-19 pandemic; a lot of SSCs have been suggesting basic training for apprenticeship online and even on-the-job training for a few IT-based job roles and virtual trainings. These suggestions may be considered under apprenticeship and permitted under NAPS too - the content can be NSQF aligned.

Year	Study	Major challenge	Recommendations
June 2021	Skill Assessment and Anticipation Study – Manufacturing Sector by the MSDE		<p>Movement towards digital capabilities:</p> <p>There is a strong inclination to build a skilled workforce for the future with digital capabilities and can work in automated facilities. Firms clearly envisage that their production process will be more automated and use of robots and digital technologies will increase. Larger firms are gearing up towards application of artificial intelligence and Internet of Things in production processes. Skill sets for basic data management, computer literacy and handling digital machines shall be required for the workforce on the shop floor.</p> <p>Another common feature across sectors is that firms feel that their stock of low-skilled workers would reduce over time. All employees would therefore have exposure to skill development. Continuous up-skilling and lifelong learning will be the keys to sustain competitiveness.</p>
May 2021	INDIA'S EMPLOYMENT CHALLENGES AND THE DEMAND FOR SKILLS ³⁹	As production processes have, increasingly, become more automated, the challenge is to impart transferable skills to workers that can enable them to ride through the wave of automation and any resulting structural shifts in the labour market.	<p>Options to address the skill shortages:</p> <ul style="list-style-type: none"> • Train unemployed youth and those who have dropped out of the labour market by giving them the skills they lack, focusing on higher levels of both cognitive and non-cognitive skills that can enhance the adaptability and employability of workers. • Formally recognize workers with skills acquired through informal and non-formal learning, and enhance the opportunities for such workers by providing them potential pathways into the formal labour market. • Incentivize on-the-job training, not only in large firms, but also in micro, small, and medium industries (MSMEs), and building greater awareness on the returns to skilling.
6 April 2021	Draft "Concept Note On Amendment In Apprentices Act, 1961".	<ul style="list-style-type: none"> • The first and larger challenge to the Indian apprenticeship system is to get more and more willing youth to opt for apprenticeship. 	<p>A need for apprenticeship training in new-age technological courses</p> <p>Lack of awareness amongst trainees (or potential apprentices)</p>

39 INDIA'S EMPLOYMENT CHALLENGES AND THE DEMAND FOR SKILLS NCAER Skilling India Working Paper (9 May 2021) Pallavi Choudhuri, accessed at file:///C:/Users/anita%20sharma/Downloads/1623155418WP-121_NCAER_Skill_Working_Paper.pdf

Year	Study	Major challenge	Recommendations
		<ul style="list-style-type: none"> A higher proportion of students graduating from private ITIs (72.9%) and non-private ITIs (55.1%) than the private ITIs (29.9%) have reported a non-availability of options for pursuing the apprenticeship training scheme. Similarly, a higher proportion of students graduating from non-private (55.9%) and private (64.4%) ITIs were not aware of apprenticeship training. 	
2019-20	DFID-Dalberg	<ul style="list-style-type: none"> Lower participation of MSMEs in apprenticeship Lack of awareness around the returns from apprenticeship Multiplicity of schemes, governing bodies, portals and trades creates confusion Employers face challenges in the quality and quantity of apprentices Several employers feel incoming apprentices lack basic foundational skills (technical and soft). Some companies also experience high non-completion, diluting their returns and affecting HR planning 	<ul style="list-style-type: none"> Need to encourage the participation of MSMEs in apprenticeship
Ghosh 2019	The three biggest challenges for India's future, 2018	<ul style="list-style-type: none"> The education system do not integrates tangible skills that ensure employability More than 80% of jobs comes from informal sector Disparities in employment generation at the state and regional levels Low participation rates of working-age women 	<ul style="list-style-type: none"> Efforts to be made to provide right skills and gainful employment Average reskilling needs (share of workforce) <ul style="list-style-type: none"> Less than 1 month: 13% 1 to 3 months: 13% 3 to 6 months: 9% 6 to 12 months: 9% Over 1 year:10% No reskilling needed: 46%
2018	Skill development and productivity of the workforce	Highlighted the challenge of huge informal economy	<ul style="list-style-type: none"> Using the cluster development approach to address the challenges of the informal economy Development of competencies within and between firms
2018	Tracer Study of ITI Graduates – Final Report.	<ul style="list-style-type: none"> Lack of awareness about apprenticeships among the youth As per the study, only 8.5% trainees took up apprenticeship training Lack of clarity on progression pathways after the completion of apprenticeship Absence of integrated credit framework for horizontal and vertical mobility in apprenticeship 	<ul style="list-style-type: none"> Government should have proper guidelines to direct public-sector undertaking to appoint/provide employment opportunities to ITI graduates.

Year	Study	Major challenge	Recommendations
	Apprenticeships in India: Evolving ecosystem and the need for sustained promotion	<ul style="list-style-type: none"> <li data-bbox="587 452 911 524">Lack of framework for apprenticeship in the informal sector 	<p>Advocacy and awareness: How can we reach out to students and organizations? A campaign must be implemented in mission mode to let everyone know about the advantages of apprenticeship. A majority of companies, SMEs and MSMEs, do not know anything about them. Though a large number of good initiatives have come under these schemes, unfortunately, awareness in India has not enough for people to really understand the concept.</p>

Annexure 3

▶ Experiences from the Mukhyamantri Apprenticeship Yojna (MAY Scheme), Gujarat⁴⁰

Gujarat is one of the top performing states in apprenticeship training in India. In 2016-17 and 2017-18, the state engaged 23,049 and 21,939 apprentices respectively and contributed less than 10 per cent of the total national tally of apprentices. However, with focused communication and the organization and monitoring of the apprenticeship system in the state, the achievements recorded were almost 2.5 times greater than compared to 2016-17 and 2017-18. The state reported 58,631 engaged apprentices in 2018-19 and 50,085 in 2019-20, contributing almost 25 per cent of the national tally of apprentices engaged, becoming one of the top performing states in India for apprenticeship training.

Gujarat has achieved largest apprenticeship potential amongst all the states and union territories, which is at 76 per cent (2018-19). The state then had 17,136 active establishments, which was the largest in the country.

Women's participation in apprenticeships had also increased from 1,252 in 2017-18 to more than 9,000 women apprentices in 2018-19. Similarly, more than 35,000 apprentices were from the SC/ST/OBC categories as compared to approximately 15,000 apprentices in 2017-18.

There has been an increase in the number of trades covered under apprenticeship as well. In the designated trades, the number of trades increased from 135 in 2017-18 to 165 in 2018-19. In the optional trades, the number of trades covered increased from 10 to 79 over the same period.

All this data and the increased number of women apprentices makes Gujarat a success story to be studied.

▶ 1. Apprenticeship training: Gujarat

Apprenticeship training is one of the most efficient ways to develop skilled manpower using the training facilities already available in establishments without incurring the additional financial burden of setting up training infrastructure. Moreover, apprentices have exposure to working in industrial environments and can easily adapt at the time of regular employment. The National Policy for Skill Development and Entrepreneurship (2015) focuses on apprenticeship as one of the key programmes for creating skilled manpower in India.

The Apprenticeship Act, 1961, makes it obligatory for employers to engage apprentices in designated and optional trades. The Government of India has made comprehensive amendments in the Act to

⁴⁰ This study is based on the details provided by MSDE to the author and follow-up discussions with officials from the state of Gujarat:

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make it more attractive to both industry and the youth: the outdated system of trade-wise and unit-wise apprentice regulation was replaced with a mandate to engage apprentices in any trade to consist of 2.5 per cent to 10 per cent of the total workforce (including contractual workforce); optional trades were introduced to cater to the growing service sector; industries were allowed to outsource basic training; and stringent clauses like imprisonment for non-compliance were removed.

However, the number of apprentices registered in the country in August 2016 was only 230,000. The Government of India launched the National Apprenticeship Promotion Scheme (NAPS) to promote apprenticeship training and increase the engagement of apprentices with a cumulative target of training 5 million youth over a period of four years (FY 2016-17 to 2019-20). The target split over the period was as follows:

Financial year	2016-2020	2016-2017	2017-2018	2018-2019	2019-2020
Apprentices target (national)	5 million	500,000	1 million	1.5 million	2 million

The scheme provides financial incentives to employers by sharing the cost of basic training and stipends to be paid to apprentices.

Financial incentives provided to establishments under the NAPS

- ▶ Reimbursing 25% of the prescribed stipend, subject to a maximum of 1,500 rupees (~US\$ 20.5) per month per apprentice to employers
- ▶ Sharing of the cost of basic training with respect to “fresher” apprentices (who come directly for apprenticeship training without formal training) limited to 7,500 rupees (~US\$ 61.5) per apprentice for a maximum duration of 500 hours or 3 months.

Keeping objectives of the NAPS in mind, the Government of Gujarat launched the Mukhyamantri Apprentice Yojna⁴¹ (MAY) with the aim to engage 100,000 apprentices every year in PSUs and private establishments in the state.

▶ 2. Initiatives under MAY

The scheme was initiated by the highest level of political and administrative executives of the Gujarat state, ensuring a buy-in from all stakeholders within the government. It was launched on 1 May 2018 – Gujarat Gaurav Divas, the day of the formation of the state and an occasion of pride for residents of the State – by the chief minister of Gujarat. This gave a clear and strong message to all stakeholders about

⁴¹ The name of this scheme can be translated as the Chief Minister’s Apprenticeship Scheme.

the importance that the Government attached to apprenticeship. Some of the key innovations of MAY scheme are as follows.

a. Dovetailing with NAPS

The MAY scheme extended additional financial benefits to an establishment/employer to recruit apprentices. These were in addition to the benefits already being provided under the NAPS by the Government of India.

The financial incentives from the Gujarat Government are as follows:

- ▶ For registering apprentices who have completed a graduation degree, the establishment/employer was given 3,000 rupees (~US\$ 41) per month per apprentice.
- ▶ For registering apprentices who have completed a diploma, the establishment/employer was given 2,000 rupees (~US\$ 27.3) per month per apprentice.
- ▶ For registering apprentices who have completed an ITI certificate course, the establishment/employer was given 1,500 rupees (~US\$ 20.5) per month per apprentice.

To make the process simple, the MAY scheme followed the same criteria as the NAPS. This meant that an establishment which was eligible to receive benefits under the NAPS also received them under MAY. This scheme simply provided additional financial incentives to establishments over and above the benefit provided under NAPS scheme. This simplified the outreach to establishments and the procedure for processing their benefit.

The financial incentives under the MAY scheme were greater than those provided under NAPS, making the total package quite attractive for the establishment/employer.

b. Outreach to establishments

In the initial phase of implementation, extensive activities were conducted on a large scale at both the state and district level to reach out to private employers. A comprehensive strategy was adopted, which was:

- ▶ Employers with large potential to engage apprentices were addressed by the Chief Secretary of the state.
- ▶ Letters were written to more than 18,000 companies, informing them on the apprenticeship programme, and special awareness was created about the MAY scheme.
- ▶ District administrative heads, the district collectors, conducted outreach programs with industries and industrial associations of the district.
- ▶ The Administrative Secretary of the Labour and Employment Department, the Director of Employment and Training also conducted outreach programs at the state and district levels as well. The directorate also proactively arranged apprentice recruitment fairs to help industries and industry associations to find suitable apprentices. More than 1,500 apprentice recruitment fairs have been organized till date.
- ▶ Annual targets on apprenticeship registration were allocated to different departments and to the district skill committees. Virtual conferences with heads of the other departments and the District Collectors, chaired by the Chief Secretary, were held on a quarterly basis to review the progress of the target achieved. Such steering and direction from the highest level helped the state set the priorities for apprenticeship training.

c. Outreach to youth

With ambitious targets set for apprenticeship training, it was crucial for the state government to address the availability and willingness of the youth to participate in apprenticeships – the supply side of the apprenticeship system– the potential apprentices. A major challenge of the apprenticeship system in the general, and specifically in Gujarat state, is that there are not enough takers for the apprenticeship program. A major reason for this is the lack of awareness amongst youth about the apprenticeship system, and this is heightened for youth from rural areas.

The government, in the apprenticeship reforms, paved the way for youth from short-term skill training as well as freshers (those without any skill training) to register as apprentices. But there was nothing much done in terms of awareness raising, counselling etc. Hence, the state government included promotion and publicity as part of the MAY scheme and installed hoardings and banners promoting apprenticeship training in prominent places such inter-state bus terminals, railway stations, major road crossings, market points, etc. in order to inform and attract the potential apprentices.

Radio jingles and social messages on television were used to reach out to a larger number of youth, mainly from rural and suburban areas. Besides, sessions on apprenticeship training are conducted in government schools and at ITIs. Career guidance sessions are also held in school in a gap of every two-three months. Job fairs where industries can promote their apprenticeship programmes and the youth can interact with different industry representatives and make their decisions on apprenticeship training and/or job placements are also organized.

d. Decentralized implementation by districts

As the scheme envisaged a massive scaling up in the number of apprentices engaged by establishments, it was decided to decentralize implementation to the district level. Accordingly, the district skill committee, headed by the district collector and comprising representatives of all key departments (industry, training and employment, rural development, agriculture, education, mining, highway and road construction, drinking water and sanitation, etc.), was made responsible for promoting the registration of apprentices and monitoring the scheme.

Principals of the ITIs, who were also designated as ex-officio assistant apprenticeship advisors (AAA) played a key role in organizing meetings, conducting outreach programs with establishments of the districts and regular monitoring. To streamline the processing of claims by establishments/industry, the responsibility of processing these were given to the ITI Principals.

All of these were carried out under the leadership of the district collector.

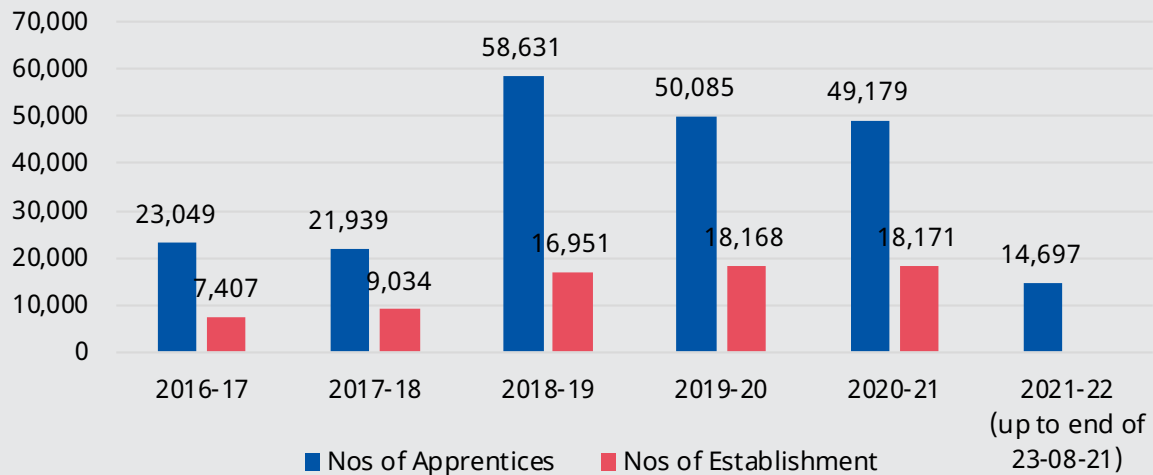
The decentralized implementation of skill development programs, including apprenticeship, with the district as a unit is one of the cornerstones of the scheme. This was formalized in the state in June 2019, when in accordance with the objectives of the World Bank-assisted SANKALP project implemented by the Ministry of Skill Development and Entrepreneurship (MSDE) launched in December 2018, the government issued a resolution for constituting district skill committees in the state. These are headed by the collector and are responsible for preparing district skill development plans and monitoring all skill development schemes being implemented in the district. The implementation of the MAY scheme in Gujarat is one of the first success stories of the decentralized implementation of a skill development programme in the country.

e. Recognition to performing establishments

Establishments performing exceedingly well under the MAY scheme were felicitated by chief minister of the state in Gandhinagar. Suzuki Motor Private Ltd., Pidilite Industries Limited and L&T India were recognized for their contribution on different occasions. The chief minister also interacted with apprentices engaged by them.

▶ 3. Achievements

Figure 1. Apprentices and establishments registered in Gujarat, 2016–22



- ▶ The Gujarat state showed significant progress in apprenticeship training after implementing the MAY scheme. The state, which was lagging behind many other states in the number of apprentices engaged, became second only to Maharashtra, contributing almost 25 per cent of the national total of apprentices.
- ▶ The number of apprentices engaged before the implementation of MAY in 2016-17 and 2017-18 was 23,049 and 21,939 respectively. After the implementation of MAY, the number of apprentices engaged in 2018-19 and 2019-20 has increased to 58,631 and 50,085 respectively. Thus, the number of apprentices engaged increased almost 2.5 times.
- ▶ At a national level, the state contributed less than 10 per cent of apprentices engaged in the year 2016-17. This was raised to 25 per cent in 2018-19 and 2019-20. Cumulatively, from 2016-17 to 2019-20, the number of apprentices engaged in the country were 816,715, of which Gujarat has engaged 153,246 apprentices i.e. 18.7 per cent; it now stands a close second to Maharashtra (168,303) on this parameter. Moreover, private establishments now contribute almost 65 per cent of the apprentices engaged in the state.

- ▶ Gujarat currently has 17,136 active establishments (with respect to apprenticeship) which is largest in the country. Moreover, the state has achieved largest apprenticeship potential amongst all the states and union territories which is at 76 per cent currently).
- ▶ Another significant achievement is that the MAY scheme benefitted women and disadvantaged groups as well. Women's participation in apprenticeship increased from 1,252 in 2017-18 to more than 9,000 women apprentices in 2018-19. Similarly, more than 35,000 apprentices were registered from the SC/ST/OBC categories as compared to the approximately 15,000 apprentices in 2017-18.
- ▶ There has been an increase in number of trades covered under apprenticeship as well. In designated trades, the number of trades covered increased from 135 in 2017-18 to 165 in 2018-19. In optional trades, the number of trades covered increased from 10 to 79 over the same period.
- ▶ Claims under the NAPS and MAY schemes have exceeded 1 billion rupees (~US\$13,637,780) in 2018-19 and 2019-20 cumulatively. In the two years preceding the implementation of the initiative, approximately 420 million rupees was utilized under the NAPS and Incentive Stipend scheme of the state government.

Some of the main reasons why the MAY Scheme was successful in the state of Gujarat may be seen as follows:

- ▶ Decentralized reimbursement of apprenticeship training cost
- ▶ Dissemination of information about the scheme to various stakeholders and industries through regular district skill committee meetings and apprenticeship review meetings by the collector
- ▶ Various apprenticeship melas are organized at the institutional level regularly, i.e. at the ITIs where the major industries and establishments are invited to hire apprentices and the information on this scheme is also provided

▶ 4. Hurdles on the road to success

- ▶ One of the biggest challenges faced by the apprenticeship system is that these programmes are not "aspirational" for the youth. Apprenticeship is somehow linked to "blue collar" jobs, which are not attractive to youth anymore.
- ▶ No guarantee of employment from the company after the completion of training also affects the attractiveness of apprenticeships.
- ▶ The youth do not find smaller companies attractive – they prefer to be at large companies, which normally gives them better facilities and more stipend.
- ▶ Surat, a city in Gujarat, is known as the diamond processing hub of the world. It has immense opportunities for apprentices, but diamond processing companies, who deal with a very expensive product, are hesitant to deal with fresher apprentices. They see this as a high risk.

Possible steps to improve the status of apprenticeship in the country

1. The recruitment rules in the public sector companies do not make apprenticeship training mandatory. If this change is brought in the rules, the quality of persons recruited will be better and apprenticeship will be seen in a more positive light.
2. Awareness programmes on apprenticeship training should be introduced from the school level, and it should also be implemented in the it is.
3. Industry should have a prominent role in assessing the apprentice. Also, the apprentice should get a certificate from the company on their training and experience.
4. The financial incentives under the apprenticeship programme are directed towards the industry. It is believed that the trainee should also be incentivized on the successful completion of the programme so that those who travel far away for apprenticeship training are able to cope with the living expenses (including boarding and lodging) during the apprenticeship period. Alternately, the employer or government should provide low-cost residential facilities to the apprentices.
5. An increased focus on the service sector and MSMEs will provide a much larger scope for apprenticeship training and benefit these sectors.

▶ 5. Way ahead

The state government of Gujarat envisages increasing the number of apprentice registrations as well as improving the course completion rate (by reducing the number of dropouts in the apprenticeship programme). To achieve this, (a) establishments will be encouraged to engage apprentices in areas required by industry, which would as optional trade apprentices; and (b) the quality of trainings being imparted under apprenticeship would be reviewed and industry would be encouraged to improve the same. To support these actions, the state government has recently onboarded the National Productivity Council (NPC).

To enable apprenticeships to be of great value, MSMEs have to be involved in apprenticeship on a large scale. The MSDE has launched the Industrial Apprenticeship Initiative (IAI) under the STRIVE project, which aims at increasing the capacities of industrial associations to support their MSME members in engaging apprentices. The state has launched a drive to register a large number of industrial associations under this project.

A short-term training programme under the World Bank-assisted project, SANKALP, was launched on 15 July 2020 to enable industrial associations to provide basic training to apprentices.

The MSDE has unified the front-end of the apprenticeship portal in April 2020. The state is already in the process of developing its back-end portal, which will make back end processes transparent and efficient. The portal was supposed to go live on 15 September 2020.

The success factors of the MAY scheme

- ▶ Strong political will and involvement, a clear and strong message to all stakeholders about the importance attached by the government to apprenticeship
- ▶ Higher financial incentives
- ▶ Well-planned outreach to establishments – adopting a comprehensive strategy for outreach programmes at multiple levels (district and state); use of different channels of communication (letters, webinars, visits, etc); annual target setting for upto district level and continuous monitoring and review
- ▶ Outreach to youth – promotion and publicity measures were encouraged, the use of hoardings and banners, radio jingles and social messages on television; sessions on apprenticeship training conducted at government schools and ITIs; counselling and guidance sessions were held in school every two-three months; job fairs were organized
- ▶ Decentralized implementation of the apprenticeship programme to district skill committees: This was done to effectively reach out to the rural youth (from DDU-GKY) and the small and micro-establishments, to promote the registration of apprentices and enterprises as well as monitor the scheme
- ▶ Recognition for performing establishments

Annexure 4

▶ Case study of the promotion and advocacy of apprenticeship training and the role of intermediaries

The role of intermediaries in apprenticeship training was recognized with the reforms undertaken to the Apprentices Act, 1961, in 2014 and the subsequent amendments to the Apprenticeship Rules in 2015 and 2019. To give impetus to these reforms, MSDE introduced the National Apprenticeship Promotion Scheme (NAPS) in 2016.

▶ 1. SSCs in apprenticeship training

SSCs operate as autonomous bodies and could be registered as a Section 8 Company or a Society. These are national partnership organizations that bring together all stakeholders: industry, labour and the academia. There are 38 SSCs in India representing different sectors of the economy.

In 2017, the MSDE appointed the CEO of SSCs as joint apprenticeship advisors (JAA), giving them a crucial responsibility. The JAAs are expected to proactively motivate industries to participate in the apprenticeship programme and promote the implementation of apprenticeship training in addition to performing their mandated functions.

These include:

- ▶ Advocacy of apprenticeship in their industry
- ▶ Identify employers and facilitate their registration on the apprenticeship portal
- ▶ Support the registration of contracts between the employer and the candidate by mapping preferred trades/subjects with the basic education and experience of the candidate
- ▶ Undertake capacity building for the employers' HR personnel responsible for driving apprenticeship engagement in their respective organization
- ▶ Taking over the responsibility of assessment and certification for courses under optional trades
- ▶ Undertaking assessment and certification in participation with employers as per the guidelines issued for the same
- ▶ Identifying job roles (in close coordination with NSDC), in which apprenticeship can be made compulsory and those where it should be optional
- ▶ Preparing new NAPS curriculum based on industry requirements
- ▶ Developing embedded and top-up apprenticeship curricula

- ▶ Supervising the implementation of the apprenticeship programme in their respective areas to protect the interests of their candidates

1.1 Automotive Skill Development Council: A case study

From laggards to becoming the SSC registering the highest number of apprentices

The SSCs for the automotive sector, the Automotive Skill Development Council (ASDC), has been promoted by the automobile industry through the Society of Indian Automobile Manufacturers (SIAM), Automotive Component Manufacturers Association (ACMA), and Federation of Automobile Dealers Association (FADA) with the Government of India represented by the Department of Heavy Industry and the NSDC.

The ASDC obtained approval to design apprenticeship curriculum in optional trades from the MSDE in end 2019, and by early 2020, the ASDC started focusing its efforts on apprenticeship training with industry.

The beginning was slow. However, when the country was under COVID-19 lockdown (end March 2020 to end July 2020), the ASDC used the opportunity to connect with industry members and TPAs on apprenticeship training. They organized two-hour webinars every Friday to inform the industry on apprenticeship training, the benefits company gets by implementing apprenticeship training, the support systems through SSCs and TPAs, etc. Such webinars were held regularly for almost 8–10 weeks. These seminars helped the ASDC to position itself and the TPAs as partners supporting apprenticeship training. These seminars led to conversion of about 50–60 per cent of the participants to apprenticeship training.

Soon, industry became interested in apprenticeship programme. This was probably the first time that industry was a direct beneficiary of the ASDC's activities. They had not seen much of their role in short-term skilling, which is what the SSCs were focusing on until the opportunity to participate in apprenticeship training was thrown open. Such interest from the industry motivated the ASDC to get deeply into the apprenticeship space and create new models to promote apprenticeship.

After the relaxation of the COVID lockdowns, the ASDC approached the three associations which are also their promoters, SIAM, ACMA and FADA. This was the only efficient and effective way to reach out to a larger number of companies. However, as most of the large automobile and vehicle manufacturing companies were already engaging apprentices, through designated trades, ASDC turned its focus on the dealership network (FADA) and the component manufacturing sector (ACMA).

Though there are about 25-30,000 automotive dealerships in the country, the ASDC realized that most of these dealership agencies are SMEs. On one hand, these small dealerships are not willing to participate in apprenticeship programmes, and on the other hand, potential apprentices do not find these small dealerships attractive. Hence, the challenge lies on both sides.

Orientation on apprenticeship training: A pilot initiative

One of the biggest gaps in the apprenticeship system is the lack of awareness on behalf of the MSMS industry as well as the potential apprentice. The SSCs and TPAs have been mandated to promote apprenticeship training amongst industry. However, a systematic initiative for raising awareness amongst potential apprentices is still not in place.

It is a common fact that the 'target group, the potential apprentices' are not aware of apprenticeship training. Even amongst those who have heard about it, very few understand the advantages of engaging in apprenticeship training.

The ASDC undertook this up as a challenge, and to address this gap, they designed an orientation programme on apprenticeship training and piloted the same in Uttar Pradesh. The programme aimed at

providing insights into apprenticeship training: the advantages of being an apprentice, the stipend and other benefits that apprentice gets, the possible job opportunities and career progression after training.

The orientation programme was offered in the form of a blended learning programme with an e-learning module of about 18 hours which was to be completed over a month. There would also be a one-day visit to the industry, where the participant would get to see a plant and its facilities and interact with the senior management.

The course was offered as a paid course to students of a polytechnic at Bagpat in Uttar Pradesh at a fee of 1,500 rupees (~US\$ 20.32). A hundred trainees from different disciplines enrolled for the programme, and for the industry visit, the ASDC tied up with three of its member companies. The students were divided into 3 batches, with each batch visiting one company. For most of the participants, this was the first time they had seen a manufacturing unit in operation, and it was very inspiring experience. From these 100 students, 60-65 did end up taking apprenticeship training.

An indirect benefit of the programme was that the companies, where the visits were made, found that the students would fit well as trainees and were happy to recruit many of these as apprentices.

These new apprentices were join their respective organizations soon after the COVID lockdowns was relaxed. The ASDC intends to monitor their progress to derive learning from the pilot initiative. Besides rolling out this course to a larger target group, the ASDC also plans to offer such orientation through the TPAs.

ASDC works closely with more than 30 TPAs. As the roles of the TPAs is to support the administration of the apprenticeship programme, the ASDC believes that TPAs can play a larger role in providing orientation to companies. Hence, the ASDC also intends to run a similar orientation programme through TPAs. From the network of about 30 TPAs, seven or eight have already shown interest in conducting these orientation programmes.

Major achievements: December 2019 to March 2021

To date, the ASDC is working closely with 50-60 large dealership companies and OEMs with more than 1,000 employees each. Over the period January to March 2021, the ASDC successfully generated more than 4,000 apprentice contracts per month. Of these, 70 percent were from companies registered for the first time.

Working with dealership networks was quite challenging. These organizations did not understand the value of apprentices. Also, potential apprentices did not see these dealership agencies as future employers. Hence, the ASDC had to put in extra efforts to make both the smaller dealerships and the youth willing to be part of the apprenticeship system.

To create awareness, the ASDC held several group webinars for various industry segments, such as ACMA members, dealer networks, auto component groups, and many individual interactions with establishments. From about 140 establishments registered on the portal in FY 2019-20, the number increased to more than 660 establishments registered in 2020-21. The amendment in the Apprenticeship Act, according to which, any unit with more than 30 workers (as against 40 workers which was the regulation earlier) was mandated by law to engage apprentices, resulted in more than 450 new establishments engaging apprentices.

From being a laggard, the ASDC has now moved to the top position with regards to number of apprentices registered under optional trades.

Sector	Contracts generated		
	in CFY 18-19	in CFY 19-20	CFY 20-21
Total no. of apprentices registered by SSCs under optional trades	12 019	69 517	165 463
Apprentices registered through ASDC	18	2 206	25 142
No. of apprentices registered by ASDC as % of the total	0.15	3.17	15.20

Challenges in the apprenticeship system

One of the major challenges, as per the ASDC, lies in getting MSMEs to participate in apprenticeship training. Because of their size, they have low bandwidth for training and monitoring it. They normally don't have dedicated trainers and or training resources.

Another challenge is has to do with the delays in claim disbursements. Even though the processes for claim disbursements as under NAPS are automated (all processes are implemented through the portal), the claims disbursements still take a lot of time.

Suggestions by the ASDC

1. Cluster approach: One of the common approaches, as seen in Russia and many other countries, is the cluster approach. The local association can become the training base to support apprenticeship training for its member companies. These associations can hire certified trainers who offers the required basic training and also accompany the apprentices in the small companies, helping in their training. If the SME is not able to cater to the required level and extent of training, the association may develop models of training, where the apprentices are sent to more than one unit for training.
2. Graded incentives: The large companies are normally not keen on getting 1,500 rupees (~US\$ 20.32) per apprentice from the government. So instead of incentivizing large companies, which have resources and gain more by deploying their CSR into training, smaller companies can be given a substantial amount so that they are able to provide comparable benefits to the apprentices. Such a strategy would also encourage the youth to join smaller companies for apprenticeship training, which is another big challenge we face.
3. Collaboration at the policy level: One of the suggestions to encourage the participation of SMEs in apprenticeship is to strategize collaboration at the policy level. The MSDE and MSME can join hands to offer incentives to MSMEs to engage apprentices in the future.
4. A greater role for TPAs can help MSMEs to come forward. TPAs do not prefer to engage with SMEs as the quantum of business is low and often not viable. Hence, graded incentives can also be considered in case of TPAs.

Success factors for the ASDC in apprenticeship

1. Effective coordination and collaboration with key stakeholders: the TPAs, the member companies and their networks
 - a. Realizing the challenges faced by companies in fulfilling compliances and conducting effective in-company training, the ASDC, since beginning of its journey in apprenticeship training, took TPAs onboard. The TPAs were seen as partners in this journey and not as competitors. This association

made it possible to reach out to a larger number of companies and offer them full support in implementing apprenticeship training.

- b. Using the FADA and ACMA as the means to reach out to a larger number of companies
2. Backward integration: Reaching out to the youth and converting them to apprentices
3. Systematic efforts to raise awareness: This was done with member companies, TPAs, potential apprentices, etc.
4. Innovative approaches

The ASDC success story: Lumax Auto Technologies

Lumax Auto Technologies is a publicly listed company, part of the D.K Jain Group. The company commenced operations with manufacture of two-wheeler lighting. Under the continuous leadership and vision of the group, Lumax Auto Technologies has carved a niche for itself in automotive products like intake systems, integrated plastic modules, two-wheeler chassis and lighting, gear shifters, seat structures and mechanisms, electrical and electronics components, etc. for the two, three and four-wheeler segments, their experience spanning over three decades.

In January 2020, the ASDC reached out to the Lumax group in Gurgaon and created awareness about the introduction of optional trades under the Apprenticeship Act. The Lumax Group's HR department first identified few plants for the pilot phase. During the pilot phase, the Lumax-Bidadi plant was shortlisted, and the ASDC helped them during the entire process of registration and contract generation. Once the pilot phase was successful, Lumax then rolled out the NAPS implementation notification for the entire group.

Currently, 12 establishments are registered on the portal with a total employee strength of 7,500, and they have generated 693 contracts to date.

The way forward

The ASDC sees a large potential in apprenticeship training with dealer networks and will continue to build these. It envisages to pilot apprenticeship with OEMs, where the OEMs can offer a basic training course and the apprentices can be engaged by authorized dealers.

1.2 NASSCOM: A case study of the IT-ITeS SSC



VISION

NASSCOM is the SSC for the IT-ITeS industry. As per NASSCOM, the industry should consider hiring apprentices to meet the skilled manpower requirements arising from fast-changing technology in the industry. In such a dynamic environment, it makes sense to pick up young people and train them on the job. Apprentices can particularly be valuable to an organization if there is high employee turnover or have a predominantly older workforce.

Thus, through the apprenticeship programme, the industry:

- ▶ can build a steady source of young talent that costs less than hiring from campuses
- ▶ can receive financial support from government to cover the cost of running the program
- ▶ maintain compliance with the law

- ▶ help apprentices gain real skills for their lifetime by providing quality training, that ultimately makes the country more productive

Many of NASSCOM member companies have been recruiting graduate apprentices.

The IT/ITeS companies recruit almost 20-25,000 freshers each year and make them job worthy. However, since 2017, when the CEO of NASSCOM was designated as a JAA, and the SSC was given an additional mandate of promoting apprenticeship training, NASSCOM started promoting the NAPS.

NASSCOM member companies welcomed the NAPS and found it attractive, especially as it provided them an economical business model to hire apprentices. NASSCOM has developed 20 apprenticeship curricula, which are being implemented by these companies. The curricula follow the international standards, especially as youth trained for the IT-ITeS sector are expected to be ready for the global market.

Over the last three years, the number of NAPS apprentices have been growing. As on date, NASSCOM is able to facilitate the registration of almost 1,000 apprentices per month in optional trades, and the figure is continuing to increase.

Sector	Contracts generated	Contracts generated	Contracts generated
	in CFY 18-19	in CFY 19-20	CFY 20-21
Total no. of apprentices registered by SSCs in optional trades	12 019	69 517	165 463
Apprentices registered through NASSCOM	1 155	5 464	13 734
No. of apprentices registered by ASDC as % of the total	9.61	7.86	8.30

The major challenges that still exist include:

- ▶ IT/ITeS companies, especially those dealing in hi-tech areas, prefer to engage youth with at least a Class 12 certificate from STEM backgrounds. However, these youth mostly aim at higher education and do not take up apprenticeship.
- ▶ There is poor linkages with higher education, and the possibility of furthering qualifications post apprenticeship is quite bleak. This becomes an inhibiting factor for the youth to take up apprenticeships.
- ▶ Apprenticeship is not seen as aspirational by the youth. The stipend is not commensurate with inflation. Rather than providing subsidies to large companies, systems which can make apprenticeship aspirational should be explored. A clear career progression on the completion of apprenticeship can make the system attractive.
- ▶ Both the industry and the potential apprentice get lost in the multiplicity of the apprenticeship system. A well designed, coordinated framework should be implemented to promote apprenticeship training.

The Skill Assessment and Anticipation Study: Manufacturing Sector, conducted by the MSDE in June 2021 revealed that “There is a strong inclination to build skilled workforce for the future which has digital capabilities and can work in automated facilities. Firms clearly envisage that their production process would be more automated, and application of robots and digital technologies shall increase. Larger firms are gearing up towards application of AI and IoT in production processes. Skill-sets of basic data

management, computer literacy and handling digital machines shall be necessarily required in the workforce at the shop-floor." (MSDE 2021b)

Future Skills Prime: NASSCOM addresses the emerging skill needs in digital capabilities

Having felt the need to enhance digital capabilities for the youth, NASSCOM created an portal-based facility called the Future Skills Prime (FSP) for the skilling, reskilling and upskilling of youth above the age of 18, on 10 emerging technologies (AI, big data, cybersecurity, IoT, RPA, etc.) and 10 professional skills (communication, collaboration, problem solving, project management, etc.).

The NASSCOM FSP portal was launched in cooperation with the Ministry of Electronics and IT (MEIT), Government of India, as a Team India effort to make India a global hub for talent in emerging technologies. The FSP is a learning platform built by the government together with the IT Industry for the people of India.

Through FSP, the NASSCOM and MEIT aims to reskill and upskill around 400,000 professionals in next three years to propel India into a leadership position in the digital world. The platform is supported by an entire ecosystem of industry players, technology providers, academic institutions and training partners. Access to the FSP portal is available at no cost to all Indian citizens above the age of 18.

FSP can be accessed from the following links:

FutureSkills Prime (<https://bit.ly/3rjz5Rh>);

Artificial Intelligence Foundations (<https://bit.ly/2O3p3W2>)

Big Data Foundation (<https://bit.ly/38d4RI0>)

Foundation on IoT (<https://bit.ly/3c5a2e9>)

To meet the skilling demands of the entire workforce and create basic awareness about key technologies, NASSCOM also formulated a module called Digital 101. These modules are available within an open group named Campus to Corporate [[link](#)]. There are many more high-quality courses available on the platform at no-cost that one can explore.

Advantages for the learner

- ▶ Free and short learning pathways of ~30 minutes duration curated by industry experts for both technological and non-technological workers that ensure relevance to what learners really need to know on-the-job.
- ▶ Micro-credentials: Learners can take a quiz at end of each learning pathway to check understanding and win badges every time they successfully complete a piece of learning, with the ability to post it to their social networks.
- ▶ Courses aligned to industry defined and government-approved curriculum
- ▶ Enhances employability by helping learners acquire skills aligned with market demands
- ▶ Gives learners access to masterclasses, webinars and much more
- ▶ Provides certification on foundation-level skills, and Digital 101 demonstrates the learner's ability and willingness to acquire new skills. Learning agility has become a key aspect that recruiters look for in candidates.

Skill courses on the FSP can also be used effectively to upskill the current workforce integrating with individual development plan.

▶ 2. TPAs in apprenticeship training

TPAs have a vital and crucial role in apprenticeship training, which includes:

- ▶ Acting as a bridge between (a) the apprenticeship implementing agency (NSDC, DGT, RDSDE, etc) and industries/ establishments; and (b) industries/establishments and the potential candidates
- ▶ Aggregating apprentices to facilitate the employer in engaging apprentices and to help employers meet their statutory obligations under the Apprentices Act, including the filing of returns
- ▶ Increase women's participation in apprenticeship
- ▶ Selecting more than three establishments for on-the-job/practical training for apprentices by studying the infrastructure facilities available with individual employers, such that the combined facilities available with selected establishments meets the requirement of prescribed curriculum of the trade. TPAs can organize on-the-job/practical training for apprentices in these selected establishments in coordination with employers.
- ▶ Assisting the establishment in:
 - ▶ Establishing linkages that are beneficial for apprenticeship training in particular and the entire skill development ecosystem in general
 - ▶ Arranging the basic training under the Apprenticeship Act through basic training providers for fresh apprentices in case the establishment wants to outsource basic training
 - ▶ Getting approval for BTCs in case these are not in the panel of approved BTCs under the DGT/ NSDC, as the case may be
 - ▶ Designing courses under the apprenticeship programme and getting them NSQF-aligned (in case the establishment opts for the NAPS)
 - ▶ Conducting assessment and issue certificates as well as coordinate with assessment authorities as required for designated trades and the NAPS
- ▶ On behalf of the establishment, the TPA may:
 - ▶ Upload contracts of apprenticeship on the apprenticeship portal for registration by apprenticeship advisor
 - ▶ Upload the syllabus with duration of apprentices' courses
 - ▶ Furnish all the returns on the portal
 - ▶ Submit reimbursement claims towards the stipend paid to the apprentices
- ▶ Helping apprentices register on portal
- ▶ Ensuring compliances of all formalities by the apprentices for appearing in assessment examinations as and when required

Who can become a TPA?

An institution or organization fulfilling the following criteria can apply for empanelment as TPA:

- a. Must be registered as a company/partnership or proprietary firm/trust/society/NGO/industry association/chamber
- b. Possess a minimum of five years of experience of working in the area of industrial training/ skilling/ education/placement/non-profit activities/or as registered industry association/chamber
- c. Should have a registered office and a team of experts, sufficient infrastructure as required to coordinate the implementation of the apprenticeship programme and have courses/curriculum designed in its domain area
- d. Must have exposure in mobilizing men, women and youth for education, skilling interventions, facilitating wage and/or self-employment, or be involved with non-profit activities pertaining to social/ community development
- e. Possess letters of support from at least 20 establishments wanting to engage apprentices and stating that they are willing to appoint the applicant institution/organization as a TPA
- f. Should not have been blacklisted by any organization

2.1 Yashaswi Academy for Skills: A case study**The Yashaswi Academy for Skills was the top performer in terms of apprenticeship contracts generated in 2020-21.**

Before 2016, the Yashaswi Academy for Skills (YAS), Pune, was a registered facilitator for two schemes: (a) Learn and Earn – a scheme of the State Government of Maharashtra and (b) NEEM (National Employment Enhancement Scheme) with the AICITE. Realizing that being a TPA was close to their existing functions, the YAS was amongst the first few agencies to be registered as a TPA for apprenticeship training in 2017.

The Yashaswi Academy for Skills, Pune (India) was founded in 1984 as a civic and social organization, The YAS had received the Best Skilling Initiative Award from the NSDC when it was a young organization. It has a team of more than 500 employees and specializes in implementing and facilitating skill development schemes which involve cooperation with industry.

The YAS has taken huge and rapid strides in the past decade in areas of placement services, education, engagement, employment of the rural poor and underprivileged, and they are also engaged in manpower supply to various industry segments. These Schemes are well in alignment with the prime minister's launch of the National Skill Development Mission.

The YAS established the Maharashtra Skill Development Centre at Ambad, jointly with Maharashtra State Board of Technical Education (MSBTE) and was approved by Government of Maharashtra, to provide skill development programmes in much-needed areas. Currently, more than 16,000 students in over 186

industries are proud beneficiaries of the various schemes supported by the Yashaswi Institute of Skill Development (YISD).

The YISD was founded in affiliation with MSBTE to support the Learn and Earn Scheme being implemented with wider industrial segments such as pharmaceuticals, food, supply chain logistics, retail and hospitality.

Yashaswi is recognised as a training partner by the NSDC, and it has also signed an MOU with Director General of Training, MSDE, for the implementation of “high employment potential courses for specific needs of Industries through flexi MoUs”.

Besides, Yashaswi, jointly with Cummins Foundation is implementing skill development programmes under CSR and is a training partner of the bihar urban development authority and is imparting skill training to 800 students in welding and plumbing.

Yashaswi works closely with 10 SSCs, which are the Apparel made-ups Home Furnishings Sector Skill Council (SSCAMH); ASDC; Beauty and Wellness Sector Skill Council (BWSSC); Capital Goods Skill Council (CGSC); Food Industry Capacity & Skill Initiative (FICSI); Healthcare Sector Skill Council (HSSC); Rubber Skill Development Council (RSDC); Security Sector Skill Development Council (SSSDC); Tourism and Hospitality Skill Council (THSC); Telecom Sector Skill Council (TSSC) and Life Sciences Sector Skill Development Council (LSSSDC).

2.2 Amass Skill Venture: A case study

Amass Skill Venture was set up in 2010 as a consulting organization for corporate training programme. In 2013, Amass entered the area of skill development and became a training partner of the NSDC to implement the Star Scheme, skilling 300-400 trainees per annum. With the launch of the PMKVY in 2014, Amass became a PMKVY training partner and also signed partnership with the Haryana state schemes.

Introducing TPAs has been a positive decision. The companies have their own priorities. All the compliances, regulations and documentations, etc. hinders the participation of the establishment in apprenticeship training.

Realizing the challenges faced by the industry in meeting the compliances of the apprenticeship training, Amass, in 2015, moved for industry integration. With the launch of the NAPS in 2015, Amass was amongst the first few TPAs to be registered with MSDE.

Amass Skill Ventures Pvt Ltd		
Year	No. of clients	Apprentices engaged
2017-18	3	30
2018-19	10	1200
2019-20	12	1500
2020-21	15	2000

Amass’ apprenticeship business has shown a progressive increase over the last few years. Amass focuses its’ support in two sectors: health and automotive. It has already supported new apprenticeship contract for more than 2,000 apprentices in the health sector and over 1,000 in automobile sector. These include mainly ITI graduates, diploma holders and fresher candidates. On average, Amass supports 2,500 apprentices’ contracts each year. Amass ’ target was 5,000 new contracts each year by the end of 2021. The TPA business model is based on payment by the company on a per-candidate per-month basis. Therefore, the viability rests on the (a) number of apprentices in a particular establishment and (b) length of the apprenticeship.

An establishment having less than 300-500 workforce is not seen as lucrative by the TPAs as the investment to be made by the TPA, especially in terms of assigning a certified trainer with the batch, does not make business sense.

As per the TPAs, the following concerns still exist in the apprenticeship system.

Both Amass and Yashaswi, like many other TPAs, provide services beyond signing of apprentice's contract. These include all the services required over the life-cycle of apprenticeship training, which are:

- ▶ Awareness raising and counseling the youth from the school onwards
- ▶ Mobilizing candidates and supporting their registration on the portal
- ▶ Mobilizing companies and supporting their registration on the portal
- ▶ Matchmaking between the candidate and establishment
- ▶ Fulfilling all the compliances on behalf of the establishment as required by the apprenticeship training
- ▶ Where required, deputing trained and certified trainers, to support
 - ▶ Basic training of candidates, and
 - ▶ In-company training of apprentices
- ▶ Supporting the registration of apprentices for examinations, and
- ▶ Filing request for financial incentives on behalf of the establishment
- ▶ Delays in the reimbursement of stipends and basic training expenses (and other incentives) under the NAPS:
 - ▶ Delays in the processing and disbursement of reimbursements, whether it is to establishments or BTPs or the payment of incentives to TPAs or SSCs.
 - ▶ There are no timelines set for reimbursements, and the reimbursements for designated trades are still being processed manually by RDSEs and SAAs.
- ▶ The system of engaging apprentices is unwieldy as the portal does not offer seamless processes.
- ▶ Industry issues are not resolved within the stipulated tie-frame.
- ▶ Awareness about the NAPS is lacking, especially amongst the youth.
- ▶ Other than the PMKVY Scheme, where the candidate registered for apprenticeship is treated as placed, no proper awareness raising and counselling is extended to potential apprentices.
- ▶ There is no budget for awareness raising.
- ▶ Apprenticeship courses have not been modified for a long time, and this should be done at the earliest possible to reduce the mismatch

Recommendations for improving the apprenticeship programmes:

The process of registration and managing apprentices on the portal should be simpler and friendly.

- ▶ The reimbursement process needs to be simplified – the reimbursement often take more than a year.
- ▶ Small companies, where the requirement of apprentices is low, should be given more incentives to promote their participation in apprenticeship training.
- ▶ Apprentices are completely missing from the agriculture sector. A system of engaging apprentices in this sector should be worked out. The possibility of consolidating a number of units together to engage apprentices should be permitted.

The incentives to the TPAs should be graded in terms of the size of unit they support – the smaller the unit, the greater the incentive.

▶ 3. Conclusion and recommendations

Both SSCs and TPAs have played a significant role in stepping up the pace of rolling out apprenticeship contracts. TPAs have smoothened the implementation of apprenticeship training, facilitating establishments to fulfil compliances required under the Apprentices Act; and, where required, assigning certified trainers to support training at the shop-floor level, ensuring that the expectations from the curricula are met. The SSC have been able to use their industry connections to ensure that their sectoral industry partners are aware of the apprenticeship programme, the legal provisions and the support system for implementing apprenticeship.

The innovative pilots and the good practices undertaken to bridge the gaps and promote apprenticeship should be analysed in detail to cull the successful practices and bring the same in the larger reforms of the apprenticeship practices.

Recommendations for improvements in the apprenticeship programme

The TPAs and SSCs have made the following recommendations for improvement of the apprenticeship programme.

- ▶ The process of registration and managing apprentices on the portal should be simplified and made user-friendly
- ▶ The reimbursement process needs to be simplified – the reimbursement often takes more than a year.
- ▶ Apprentices are completely missing from the agriculture sector. A system of engaging apprentices in this sector should be worked out. The possibility of consolidating a number of units together to engage apprentices should be permitted.
- ▶ The incentives to TPAs should be graded in terms of the size of unit they support – the smaller the unit, the greater the incentive.

- ▶ The apprenticeship programme should be made “aspirational”.
 - ▶ Positioning it as part of the qualification framework:
 - Establishing a connection between apprenticeship training and higher education, providing both lateral and vertical mobility to apprentices
 - Creating levels within the apprenticeship programme, providing a qualification pathway, encouraging the youth from various levels of education to find their way to the appropriate level of apprenticeship training
 - ▶ Reviewing and revising the stipend and financial subsidies:
 - The stipend is not commensurate with inflation.
 - Rather than providing a subsidy to large companies, systems which can make apprenticeship aspirational should be explored. A clear career progression path on the completion of apprenticeship can make the system attractive.
 - Large companies are normally not keen on getting 1500 rupees (~US\$ 20.32) per apprentice from the government. So, instead of incentivizing large companies, which have resources and gain more by deploying their CSR into training, the smaller companies can be given a substantial amount so that they are able to provide comparable benefits to the apprentices. Such a strategy would also encourage youth to join smaller companies for apprenticeship training, which is another big challenge.
 - Small companies, where the requirement for apprentices is low, should be given more incentives to promote their participation in apprenticeship training
- ▶ Synergy, coordination and collaboration should be done at the highest levels.
 - ▶ Multiple stakeholders: Both the industry and the potential apprentice gets lost in the multiplicity of the apprenticeship system. A well designed, coordinated framework should be in place to promote apprenticeship training.
 - ▶ Collaboration at the policy level: One of the suggestions to encourage the participation of SMEs in apprenticeship is to strategize collaboration at the policy level. The MSDE and Ministry of Micro, Small and Medium Enterprises can join hands to offer incentives to MSMEs engaging apprentices in the future.
- ▶ The participation of MSMEs should be promoted.
 - ▶ Cluster approach: One of the common approaches, as seen in Russia and many other countries, is the cluster approach. The local association can become the training base to support apprenticeship training in its member companies. These associations can hire certified trainers who offer the required basic training and also accompany them to the small companies, helping them in their training. If the SME is not able to cater to the required level and extend of training, the association may develop models of training, where the apprentices are sent to more than one unit for training.
- ▶ The top achievers in both the SSC and TPA spheres should be recognized and awarded, creating a sense of healthy competition.

Apprenticeship curricula needs to be updated and new emerging

Annexure 5

The Dual System of Training- A Case Study

This case study is focussed on a programme, which supports extended work-based learning in traditional school-based vocational training at Industrial Training Institutes in India. This work-based learning programme called the “Dual System of Training (DST), came into effect in 2016 and is being implemented in Industrial Training Institutes (ITIs). This case study attempts to put together the experiences of this new initiative where the practical training at the institutes is replaced by on-the-job learning in real work environment.

▶ 1. Introduction

India has over 15,000 Industrial Training Institutes (ITIs) of which 85 per cent are run by the private sector and 15 per cent are government funded. As per skill gap reports⁴² it is estimated that from 2013- 2022 there will be an incremental demand of 100 million skilled workers i.e. an average of 10 million skilled workers every year. All ITIs put together have only 250 thousand seats per annum. While capacity is a constraint, industries which employ ITI pass outs do not find the quality of training imparted to the students up to their standards. To bridge this disconnect between ITI trainees’ learning outcomes and the industry requirements, the Ministry of Skill Development & Entrepreneurship (MSDE) introduced the scheme “Dual System of Training” (DST) with effect from August, 2016.

The DST is an amalgamation of theoretical training imparted through ITIs and practical training imparted through the industry. It helps enable Industry linkages and provide hands on experience to students on industries latest/ updated technologies. Under the DST scheme, on-the-job training is conducted in an industry environment, while the theoretical component is covered by the ITI. The students appear in regular examinations under Craftsman Training Scheme (CTS) and are awarded an E-Certificate under CTS like other ITI students. DST is applicable in all affiliated ITIs and covers all existing trades offered under CTS. After completing the training, the trainees under the scheme have an edge over regular ITI graduates in terms of employability and employment opportunities in industry.

The objective of DST scheme is to enable industries and establishments to partner with Government and Private ITIs for conducting training programmes under high employability courses so as to fulfil their skilled manpower requirements.

The Dual System of Training (DST) aims to

- ▶ create linkages between industries/establishments and ITIs, so as to provide high employability courses to trainees, whereby trainees gain theoretical training in the ITIs and practical training through hands on exposure in the industries. Hence, the trainee gets exposure to the latest/updated technologies and machinery making them more industry ready.
- ▶ bridge the disconnect between ITI trainees’ ‘learning outcomes’ and the ‘industry requirements’ so as to have a positive impact on industry readiness of trainees, thereby enhancing trainees employment opportunities and fulfilling the industry requirement.

42 NSDC Sector Skill Gap Reports released by MSDE in 2015. Click link below for the reports: <https://www.nsdcindia.org/industry-reports>

The DST introduced in August 2016 targeted only the large companies and was rigid in its implementation - the number of months for practical work-based learning in industry was fixed and was operational only in 17 trades. To promote participation of industry, DST was linked with NAPS (National Apprenticeship Promotion Scheme) - the establishment/industry which registered for implementing the DST were given the financial benefit and trainees received stipend, as eligible under NAPS. However, the rigid conditions in the initial phase of DST made it difficult for the ITIs to attract industry partners. Basis the feedback from the key stakeholders, the DST guideline were revised in July 2017 and later in August 2018.

▶ 2. Revisions in the guidelines of Dual System of Training

To promote the participation of industry and especially of small and medium-sized companies in the scheme, the DST scheme was revised⁴³ in 2019. Under the revised version:

- ▶ The minimum number of employees and annual minimum turnover for eligibility has been lowered considerably.
- ▶ The duration of work-based learning has been made more flexible. The ITIs, together with partners from industry have freedom to choose the training pattern as per mutual understanding and suitability. In case of 2- year courses, each year may have at least one work-based learning block in industry of reasonable duration.
- ▶ The Dual System of Training has been delinked from NAPS wef. 1st January 2019, reducing the burden of the industry for paying stipend to the trainees. Though it is not compulsory to pay the trainees, the industry is encouraged to pay reasonable stipend to the trainees through Direct Benefit Transfer. Besides, the trainees are provided health and accidental coverage either by the Industry or by the ITI.
- ▶ The ITIs are allowed to sign MoUs with multiple Industry Partners to meet the required industrial training needs of a batch of trainees. The DST trainees can undergo training in multiple industries, provided the industry training blocks are synchronized with the foundation theory taught in ITIs. However, to maintain uniformity in learning, a complete batch of DST (batches/units) must be sent for on the job training together for specified duration as agreed in MoU.
- ▶ Trainees can undergo training in shifts if the industry where they are undergoing training is also running shifts i.e. general, morning and evening under supervision. The Principal should be informed beforehand while signing the MoU. Night shift is not recommended.
- ▶ The scheme has been expanded to all trades including service sector trades, and trades in new and emerging sectors. All courses under DST are aligned with the National Skills Qualification Framework (NSQF).
- ▶ DST was opened for implementation by all affiliated ITIs (Government and Private) in their relevant affiliated trade(s). To encourage the ITI participate in the scheme, ITIs running DST courses are given an advantage in the grading system introduced by DGT.

⁴³ https://dgt.gov.in/sites/default/files/Final_FAQDST27June.pdf FAQ on DST

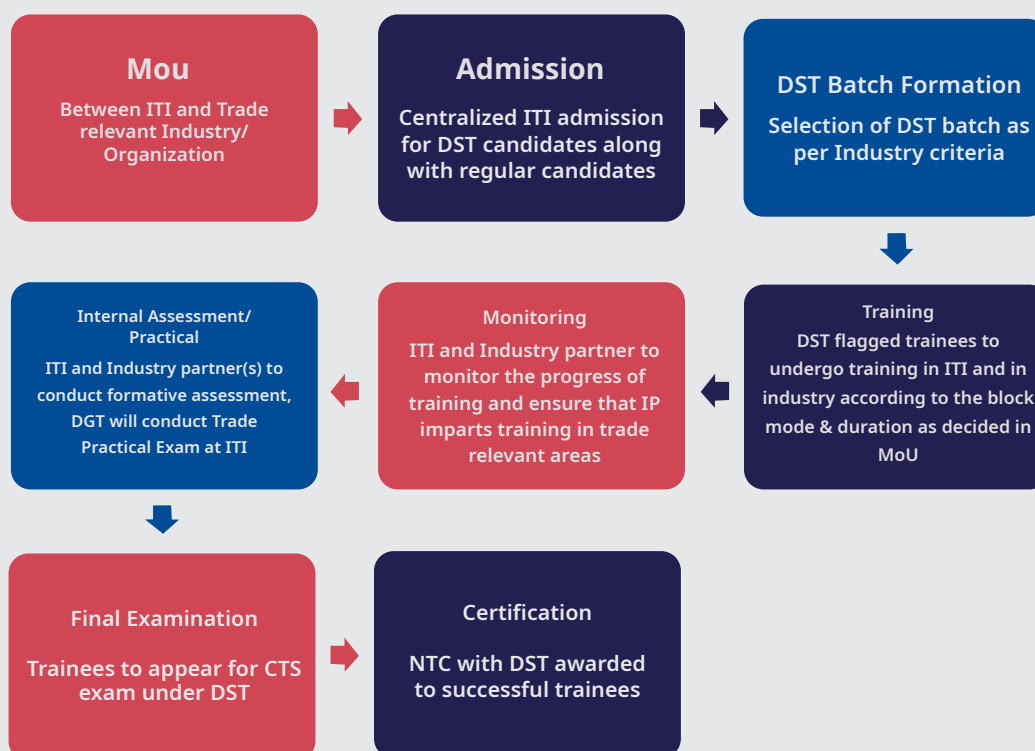
- ▶ ITIs are encouraged to leverage their tie-ups with multiple partners from industry, associations, chambers, small and medium enterprises, enabling their trainees to have the greatest benefit from distinct connections with industry.
- ▶ The industry partner may train the trainee at multiple locations and on multiple skills; for example in the automotive sector, a trainee may be exposed to the production/assembly line, repair/service workshop, as well as to the sales function at a dealership.

The changes in the guidelines of the DST is presented in table below:

S. No.	Duration of Course/ Trade	Duration of Industrial exposure / training (as per previous guidelines)	Duration of Industrial exposure / training (as per revised guidelines)
1	6 months	Not defined	1-3 months
2	1 year	5 months	3-6 months
3	2 years	9 months	6-12 months

S. No.	Parameter	Eligibility criteria (Earlier)		Eligibility criteria (Now)	
		Engineering Trades	NonEngineering Trades	Engineering Trades	NonEngineering Trades
1	Minimum no. of Employees in the Industry	200	200	40	6
2	Minimum Turnover of the Industry (in INR)	100 million/ year (For last 3 years)	100 million/ year (For last 3 years)	10 million/ year (For last 3 years)	100 thousand / year (For last 2 years)

Process flow in the Dual System of Training



Role and responsibilities of the Industry Partner in revised DST

The Industry Partner signing the MoU under DST must be

- a. MSME registered at least for 2 years, OR
- b. Industry/ establishment having valid registration with the State/ Central authority registered at least for 2 years. Establishments include entities registered with any government/local authorities/ shops covered under Factories Act 1948 and Shops and Establishments Act applicable for the concerned State, OR
- c. Industry Association, Industry cluster, Central & State Sector Industries/Establishments.

Industry should ensure availability of trade relevant tools, equipment and machinery for 'Industry Training' while signing the MoU with the ITI. The responsibilities of industries is to :

- ▶ Participate in selection of the trainee batches.
- ▶ Assign trainer(s) responsible for the Industrial training.
- ▶ Follow DST scheme trade curriculum and the schedule for industrial training prepared by ITI
- ▶ Ensure that 'Training Progress Diary' is maintained as per the schedule requirements.
- ▶ Provide on-job training in trade relevant domain skills.
- ▶ Allocate and supervise the trainee on trade relevant project, tasks or job.
- ▶ Assess part formative assessment and share corresponding marks with the ITI for uploading on portal.
- ▶ Provide health and safety facilities to the trainees as available for the workers of the Industry. In case of hazardous industries, before signing the MoU for DST, Industry is required to disclose the conditions such as minimum age and level of medical fitness (e.g. colour blindness) etc. as per the industrial safety norms applicable in the Industry. Also, ensure that trainee is informed about the health and safety facilities available to them.
- ▶ Record and submit attendance of trainee to the ITI for the period of training at the Industry.

Examination pattern for DST is aligned to the regular CTS trade. While formative assessment is done by both the ITI and Industrial Partner, the ITI are responsible for conducting Trade Practical. In case the trainee does training in multiple Industries, only the Industry where he/she has spent maximum time shall provide industry partner linked formative assessment marks. The trainee will be awarded the NTC only after he/she has completed his/her training in the respective trade and has also passed the All India Trade Test (AITT).

The **Memorandum of Understanding** signed between the partner in industry and the ITI for DST is in line with the government guidelines for DST. ITI principals has the authority to sign the MoU directly with companies without interference of governmental bodies. MoU is signed for a minimum of three years in case of engineering trades, and a minimum of two years for non-engineering trades, which can be extended as per mutual understanding of the parties. While signing the MoU, the mutually agreed duration of work-based learning in industry (out of the total duration of the course as prescribed in the syllabus), has to be mentioned. Both ITI and the partner from industry are to ensure that the course curriculum is covered as per syllabus, within the given duration of the course.

The acceptance of the DST by the ITIs, the industry partners and the trainees can be seen in the increasing number of MoUs signed under the DST scheme.

S. No	Category of MoUs under DST	No. of MoUs signed (as on 1st January 2020)	No. of MoUs signed (as on 1st January 2021)
1	Between National Skill Training Institutes under DGT and Industry Organizations	132	234
2	Between Government & Private ITIs of State & UT and Industry Organizations	448	608
3	Between Industry Clusters and ITI (Under STRIVE Scheme)	32	32
4	Earlier Existing MoUs of DST now revised under revamped Scheme	136	187
Total		748	1061

Source: <https://www.msde.gov.in>

► 3. Selected Initiatives under DST

1. DST MOUs in Haryana State

By September 2020, the Haryana Skill Development and Industrial Training Department⁴⁴ had signed a series of DST MOUs under which over 5,500 ITI students from about 60 Government ITIs would receive industry-oriented skill development training.

As per the agreement, 287 trade units in 41 different trades, along with 160 eminent industries will collaborate with 60 Govt. ITI. The Additional Chief Secretary of Haryana skill development department said that “It was a long-pending demand of the industry association as they had pointed out that ITI pass-outs don’t have the adequate knowledge about the latest machinery and are not conversant with the work environment of the industry”.

2. Maruti Suzuki India Ltd. (MSIL)

Maruti Suzuki India Ltd, (MSIL) has signed MoUs with 6 out of the 25 ITIs under which it offers dual training to students and later absorbs them into its own workforce. It further reported that the industry partnerships also help prepare students in soft skills and English speaking. ITI Bhilai, Pusa, Panaji, Gurgaon, Nalagarh, Kalamassery, Coimbatore and Varanasi have programs of in-plant training which help the students develop with the latest developments in their respective fields.

3. Daikin Air Condition Ltd.

In ITI Pusa, Daikin Air Condition Ltd. has set up RAC labs to train the students on the latest developments. In some cases, the partnering companies have trained instructors thus keeping the students updated with the current developments in their respective trades. Industry partnerships have not only helped the ITIs in placements but they have had an impact in introduction of job-oriented trades, training of instructors and other aspects as well.

⁴⁴ <https://www.skillreporter.com/2020/09/regional/haryana/5500-students-iti-students-to-get-industry-relevant-skills-under-dual-system-of-training/>

4. DST MOUs in Himachal Pradesh: State level implementation of DST

In Himachal Pradesh, a northern state in India, 10 government ITIs are implementing Dual System of Training in 8 trades, for 595 trainees. A list of the ITI with the trades and seating capacity for the Dual System of Training:

List of trades run under DST (Dual System of Training)

Sr. No	Name of ITI	Session	Trade	Intake Capacity
1	Govt. ITI Solan	2018-20	Electronic Mechanic	26
		2018-20	Fitter	21
		2018-20	Machinist	16
		2018-21	Welder	8
		2018-20	Turner	16
2	Govt. ITI Mandi	2019-20	Carpenter	24
		2019-21	Fitter (unit-5)	20
		2019-21	Fitter (unit-6)	20
		2019-21	Turner (unit-4)	20
		2019-21	Turner (unit-5)	20
		2019-20	Welder	20
3	Govt. ITI Nadaun (at Rail)	2019-20	Welder	20
4	Govt. ITI Garhjamula	2019-21	Electrician	20
		2019-21	Fitter	20
5	Govt. ITI Nehranpukhar	2019-21	Electrician	20
6	Govt. ITI Shamshi	2019-20	Basic Cosmetology	24
		2019-21	Fitter	20
		2019-21	Machinist	20
		2019-21	Turner	20
		2019-20	Welder	20
7	Govt. ITI Jogindernagar	2019-21	Electrician	20
		2019-21	Fitter	20
8	Govt. ITI Solan	2019-21	Machinist	20
		2019-21	Turner	20
9	Govt. Model ITI Nalagarh	2019-21	Fitter	20
		2019-21	Machinist	20
		2019-21	Machinist	20
		2019-21	Turner	20
		2019-21	Turner	20
10	Govt. ITI Mandi	2020-21	Welder	20
TOTAL				595



As per the Principal, ITI Mandi, the employability of the trainees taking the DST courses is comparatively higher than that of the traditional CTS course. The industry appreciates the engagement with trainees and mostly all of them provide stipend to the trainees.

5. Implementation of DST - Government ITI Kurukshetra, Haryana State

Dual Trade: Seat release and entry qualifications for session 2020-21⁴⁵

Sl no.	Name of trade	Engg/non engg.	1 Year / 2 year	Total seat	Entry qualification	Name of industry firm
1	Mechanic (tractor) dual mode	Engg.	1 Year	20	Passed 10th class examination with math and science	1. Kissan Tractors, Ladwa Road, Pipli KKR. 2. M/S Jaswant Singh & sons, Pipli Road, Kkr. 3. M/s Vishwakarma Automobiles Ladwa Road, Pipli Kkr. 4. M/S Dashmesh Tractor, KDB Road, KKR
2	Carpenter dual mode	Engg.	1 Year	20	Passed 8th class examination	1. M/s Balaji timber store, Plot. No. 84, Sector-2 Industrial Area KKR. 2. Incos Wood tech Ladwa, Mathana KKR.
3	Dress making dual mode	Non engg.	1 Year	20	Passed 8th class examination	1. Avi Matching Centre KKR.

45 http://www.gitikurukshetra.com/dual_system.html

6. Pilot projects: Initiatives of Industry Chambers in promoting DST in Karnataka

6.1 The Karnataka government has constituted a committee involving Karnataka Small Scale Industries Association (KASSIA), District Institute for Education and Training (DIET) and Regional Directorate of Skill Development and Entrepreneurship (RDSDE) and other skill development entities to implement the dual system in the state.

In this regard on Wednesday, KASSIA organized an interaction with the Commissioner and Director, Industrial training and employment, Government of Karnataka to discuss modalities and plan of action to implement the Dual System of Training (DST) of ITI graduates with the active involvement of industry in the state.

The commissioner for Industrial training and employment Dr Trilok Chandra, IAS, participating at the meeting emphasized the important role to be played by KASSIA in ensuring necessary coordination, guidance and handholding of industry and ITIs in making the program a success.

The 2-year program comprises 18 months of institutional training followed by 6 months of on the job training at an industry.

'KASSIA⁴⁶ would ensure facilitation of industry linkage to the trainees through a tripartite MOU between itself, ITI and the industry. KASSIA will also develop standard operating procedures for the smooth implementation of the DST besides tracking the implementation of the program and helping trainees to be absorbed by the concerned industry once apprenticeship is over. Several related points about skill training and industry institution interface were also discussed,' said the commissioner.

6.2 Implementing the Dual System of Training: A Pilot Measure by GIZ at Belagavi Cluster, Karnataka⁴⁷

Belagavi, which is known as a regional manufacturing hub in the state of Karnataka holds vast employment opportunities for graduates and jobseekers. However, the Indian vocational education and training (VET) system is struggling to deliver a workforce of adequate size and quality. As a consequence, many SMEs in the Belagavi region are unable to fill their job vacancies and lack the human resources to fully capitalise on their production potential.

With the support of the Indo-German Programme for Vocational Education and Training (IGVET), the "Bengaluru Chamber of Industry and Commerce" (BCIC) decided to take matters into their own hands: They addressed the lack of human resources in their Belagavi-based member companies by initiating two new training courses under the Dual System of Training (DST) scheme. A key success factor in this initiative was the creation of a strong partnership between BCIC and a local Industrial Training Institute (ITI).

In theory, the DST scheme provides a win-win solution to the lack of human resources. In Karnataka, however, only few ITIs have thus far made use of this opportunity and even fewer have done so in cooperation with SMEs. In the case of Belagavi, IGVET identified three major bottlenecks to the implementation of DST courses:

⁴⁶ <https://knnindia.co.in/news/newsdetails/state/karnataka-to-introduce-dual-system-for-iti-trainees-in-collaboration-of-industry>

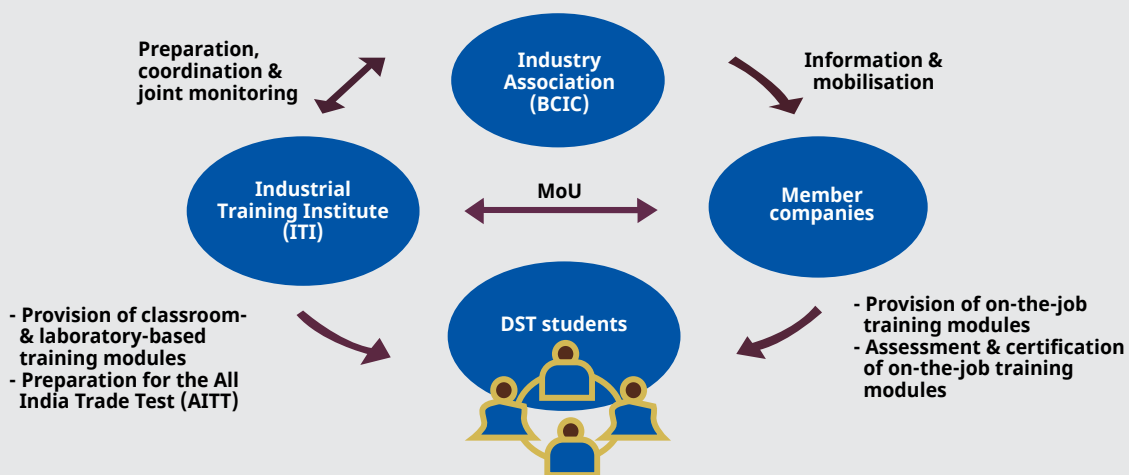
⁴⁷ https://www.giz.de/en/downloads/giz2019_en_Belagavi_per_cent20cluster_implementing_per_cent20the_per_cent20dual_per_cent20system_per_cent20of_per_cent20training.pdf

- ▶ The DST scheme is relatively new to both ITI staff and employers and only few SMEs are aware of its benefits and prerequisites.
- ▶ ITIs oftentimes lack the required linkages with the SME sector to initiate the implementation of DST courses.
- ▶ SMEs often find it difficult to carry the administrative burden that comes with the planning, implementation and monitoring of DST courses and therefore hesitate to partner up.

To address these bottlenecks, IGVET supported BCIC in:

- ▶ forging a partnership with a Belagavi-based ITI,
- ▶ establishing a task force to coordinate all administrative processes related to the implementation of DST courses,
- ▶ informing BCIC’s members about the benefits and prerequisites of the DST scheme,
- ▶ mobilising two of BCIC’s members as industry partners for the DST scheme,
- ▶ identifying two ITI courses for implementation under the DST scheme,
- ▶ determining a suitable training pattern to transform the identified ITI courses into DST courses,
- ▶ facilitating the preparation and signing of Memoranda of Understanding (MoUs) between the ITI and BCIC’s members,
- ▶ preparing ITI teachers and in-company trainers for their respective roles, and
- ▶ monitoring the implementation of the two new DST courses. Manthan Asukar Student of the first DST course

Our Stakeholder Map for DST Implementation



Key Achievements:

- ▶ 20 of the BCIC's member companies participated in stakeholder workshops focusing on the DST scheme
- ▶ 4 of BCIC's member companies were shortlisted as potential industry partners.
- ▶ 2 of BCIC's Belagavi-based member companies decided to become industry partners for the DST scheme.
- ▶ 2 ITI courses were selected for implementation under the DST scheme.
- ▶ 6 ITI teachers and 2 in-company trainers were prepared for their respective roles under the DST scheme
- ▶ 40 ITI students enrolled in the two DST courses and received high quality on-the-job training in two of BCIC's member companies.

Lessons learnt:

Creating a strong partnership between BCIC and a local ITI has proven to be a key success factor in facilitating the implementation of the two DST courses in Belagavi. While implementing this pilot measure, we learned that

- ▶ it takes a good mediator. BCIC not only played a key role in mobilising its member companies for the DST scheme, but also acted as a mediator between the expectations of the ITI management and the requirements and needs of the two industry partners. This enabled our task force to come to satisfactory agreements and to complete the planning process for the two DST courses in a relatively short period of time. ...
- ▶ trouble shared is trouble halved. Our task force successfully reduced the administrative burden on BCIC's member companies by jointly coordinating all processes related to planning, implementation and monitoring of the two DST courses. This has proven to be a strong argument in the mobilisation of the two industry partners, since many SMEs are finding it difficult to manage these processes on their own. ...
- ▶ one size does not fit all. The DST scheme allows ITIs and their industry partners to choose a training pattern that best fits their respective needs and requirements. In our case, our task force opted for a single block mode, which enabled the ITI to adequately prepare their students for the on-the-job training. Depending on the course at hand, it might however be more convenient to opt for a multiple block mode (several blocks of on-the-job training each followed by a block of classroom-based training) or a mixed mode (up to three days a week are dedicated to on-the-job training). ...
- ▶ leaders lead by example. Ashok Iron Works and Pragathi Engineering were the first SMEs in their region to register as industry partners for the DST scheme and to sign a Memorandum of Understanding (MoU) with a local ITI. In doing so, they set an example which inspired many other employers. With the support of their respective industry associations, 6 additional industries in Karnataka have forged linkages with local ITIs and 3 additional DST courses are currently in the planning

As on 1st December 2021, a total of 3,034 MoUs have been signed under the DST scheme by ITIs under State Directorates, NSTIs under DGT and by industrial clusters under STRIVE scheme. The details are given below:

S.No	Category of MoUs under DST	No. of MoUs signed
1	Between National Skill Training Institutes under DGT and Industry Organizations	303
2	Between Govt & Private ITIs of State & UT and Industry Organizations	2513
3	Between Industry Clusters and ITI (Under STRIVE Scheme)	32
4	Earlier Existing MoUs of DST now revised under revamped scheme	186
Total		3034

7. Recommendations

The DST provides considerably long work-based learning periods in industry, which is of great interest to all the stakeholders, including the trainees. The scheme is opening chances to strengthen existing or to create new linkages between ITIs and industry. It is considered that the DST scheme can piggy ride some of the existing structures, as low hanging fruits, to enhance its effectiveness and acceptance. These include:

1. One of the challenges for ITI is to approach the industry members and sign MOUs. As a support to the ITIs, the TPAs, which are already a prominent stakeholder and have strong connect with industry, may be effective in bridging this gap.
2. The local industry associations or chambers can be seen as a single point of contact for initial dialogue between the ITI and the industry. These chambers can extend communication with a larger number of industry units and aggregate training places as well as help in identifying training areas for the implementation of DST.
3. The District Skill Committees may be provided a role in promoting DST at the district level and monitoring the quality of training.
4. A structure for training of in-company trainers should be in place and one of the mandated criteria for selection of industry partner should be the availability of trained trainers or supervisors (as per the set criteria).

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The role of intermediaries in apprenticeship training was recognized with the reforms undertaken to the Apprentices Act, 1961, in 2014 and the subsequent amendments to the Apprenticeship Rules in 2015 and 2019. To give impetus to these reforms, MSDE introduced the National Apprenticeship Promotion Scheme (NAPS) in 2016.



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