DIAGNOSTIC REPORT: TRANSFORMATION OF GOVERNMENT ITIS IN UTTARAKHAND

ACKNOWLEDGEMENT

This Diagnostic Study has been a collaborative effort made possible through the guidance, support, and contributions of several individuals and institutions. The authors would like to extend their heartfelt gratitude to all those who played a role in enabling and enriching this study.

We are deeply thankful to Shri Vikas Kumar Yadav, former Secretary, Skill Development and Employment, and Shri Sanjay Kumar, Director, Training, Department of Skill Development and Employment, Government of Uttarakhand. Their vision, encouragement, and steadfast support were instrumental in initiating and steering this study. We are grateful for the opportunity to work on this important subject and for their continuous engagement throughout the process.

We sincerely thank the Principals, Instructors, and Students of the 31 Government Industrial Training Institutes (GITIs) across Uttarakhand, whose openness and cooperation made the fieldwork both insightful and meaningful. Their candid sharing of experiences, challenges, and aspirations provided critical perspectives that helped shape the findings of this study.

Our thanks are also due to the officials of the Department of Skill Development and Employment, Uttarakhand, for their facilitation and coordination support at various stages of the study. Their responsiveness and involvement made it possible to navigate administrative and logistical requirements smoothly.

A special word of appreciation goes to the team at Medha, whose commitment and on-ground support ensured the seamless execution of the study. From planning and organizing field visits to coordinating with ITIs and supporting data collection efforts, the Medha team played a key role in bridging institutional efforts with ground realities.

Lastly, we acknowledge the efforts of the research team from IIT Roorkee, whose academic rigor, methodological approach, and analytical insights shaped the direction and outcomes of this study. The office of Dean SRIC, IIT Roorkee and the Department of Humanities and Social Sciences provided the support structure for the success of

the project. The project was supported by a group of active students from IIT Roorkee, namely Harshal, Neeraj, Indrasen and Kapish.

This report is a result of collective learning and collaboration. We thank Dr. Tunga Tarodi for her copy-editing support that helped improve the overall outlook of the report. While many individuals have contributed to its success, any remaining errors or omissions are the responsibility of the authors alone.

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EXECUTIVE SUMMARY

Demographic advantage of India began around 2004-05 and India still has three decades to leverage this advantage. With 1.04 billion working age population by 2030, as per UN Population Statistics 2022, India has a chance to become the hub of skilled workforce and propel in the direction of economic development. The state of Uttarakhand also mirrors the same trend. As a matter of fact, by 2036 the projected median age of Uttarakhand will be 4 years younger than the national median age of 34.7 years.
To harness the youth advantage, Government of India has taken several measures and creating Industrial Training Institutes (ITIs), under the Directorate General of Training and Ministry of Skill Development is one such initiative. ITIs have been instrumental in providing vocational training to India's youth.

However, despite numerous measures to provide the best vocational education and training to capitalize on the population dividend, there still are several factors affecting the outcomes of vocational training institutions. In the case of Uttarakhand, the latest Skill Gap study highlights a significant need for a skilled and semi-skilled workforce to meet the market demand. Therefore, it becomes critical to understand the mismatch and the factors behind it.

Hence, this diagnostic study was undertaken by the Department of Humanities and Social Sciences, Indian Institute of Technology Roorkee. This study evaluates the performance of government ITIs, identifies the existing challenges, assesses the impact of the schemes, and shares transformative ideas for revamping the ITI ecosystem in Uttarakhand.

Out of 105 government ITIs across 13 districts in Uttarakhand, 32 ITIs were selected for the study including both nodal and regular, rural and urban, and ITIs from hilly and plain regions. The team piloted the tools at ITI Pithoragarh, ITI Askote, and ITI Dharchula. Post verification of the tool, the team conducted multiple visits to selected ITIs to conduct Interviews with stakeholders, focus group discussions, and observations. A detailed analysis was done of the primary and secondary data collected from the study and relative efficiency of ITIs were evaluated using Data Envelopment Analysis (DEA) methodology. This report presents comprehensive set of recommendations to transform the ITI ecosystem in the state. These recommendations, categorised as Short-term (Immediate Actions, 1-2 years) and

Medium-term (Foundational Reforms, 3-5 years) covers wide range of factors pertaining to enrolment, human resource, infrastructure development, capacity building of instructors, industry partnerships, market needs, and so on.

The recommendation in the report reflects the ongoing commitment of Government of India to enhance the skill development and employment opportunities of the youth.

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LIST OF ABBREVIATIONS

AE	Aggregate Expenditure
ATIs	Advanced Training Institutes
BHEL	Bharat Heavy Electricals Ltd.
CITS	Craftsman Instructor Training Scheme
COPA	Computer Operator and Programming Assistant
CPD	Continuous Professional Development
CSS	Central Sector Scheme
CSTARI	Central Staff Training and Research Institute
CTS	Craftsman Training Scheme
DEA	Data Envelopment Analysis
DGT	Directorate General of Training
DMU	Decision Making Unit
DSDE	Department of Skill Development and Employment
DST	Dual System of Training
EQF	European Qualifications Framework
GITI	Government Industrial Training Institute
GOI	Government of India
GSDP	Gross State Domestic Product
GVA	Gross Value Added
HEIs	Higher Educational Institutions
ILO	International Labour Organization
IO	International Organization
ITI	Industrial Training Institute
ITP	Industrial Training Partner
JACPO	Junior Apprenticeship, Counselling, and Placement Officers
JAPO	Junior Apprenticeship & Placement Officer
MEA	Ministry of External Affairs
MMV	Mechanic Motor Vehicle
MSDE	Ministry of Skill Development and Entrepreneurship
MSME	Micro, Small and Medium Enterprises

NAPS	National Apprenticeship Promotion Scheme
NCVET	National Council for Vocation Education and Training
NEP	National Education Policy
NIMI	National Instructional Media Institute
NSTI	National Skill Training Institute
ODTP	One District Two Products
OECD	Organisation for Economic Co-operation and Development
OJT	On-the-job Training
PCA	Principal Component Analysis
PMIS	Pradhan Mantri Internship Scheme
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PPP	Public Private Partnership
RE	Revised Estimates
SCVT	State Council for Vocational Training
SIIC	Skill India International Centres
SMEs	Small and Medium-sized Enterprises
STRIVE	Skill Strengthening for Industrial Value Enhancement Scheme
TCPC	Training, Counselling, and Placement Cell
UKWDP	Uttarakhand Workforce Development Project
UN	United Nations
VET	Vocational Education and Training
WAP	Working Age Population

CHAPTER 1

Introduction

India is a young country, and its demographic advantage commenced around 2004-05. It gives India an extraordinary advantage with a significant window of about five decades, since the start, to leverage its youth for economic growth. As per the UN Population Statistics 2022, the share of India's working age population (WAP) to total population will reach its highest level at 68.9% by 2030. In absolute numbers, this will amount to 1.04 billion working age population. In addition to that, by the year 2030, India's dependency ratio, which is the ratio of population aged above 65 years relative to total population, is projected to reach its lowest point at 31.2%. With a relatively young population (median age of 28.4 years), in comparison to 37 in China and the United States, 45 in western Europe, and 49 in Japan, India stands a chance to become the skill capital of the world.

The demographic advantage is prevalent not only nationally but across all the major states in India. In the case of Uttarakhand, the working age population currently constitutes about two-third of the total population and will remain young for an extended period. As per the population projections for India and states during 2011-2036, the projected median age of Uttarakhand will be 30.7 years by 2036 which would be lower than the national average of 34.7 years by 2036. On other hand, Uttarakhand's economy has been consistently growing over the years. According to the Economic Survey of Uttarakhand (2018), the gross state domestic product (GSDP) growth rate of Uttarakhand was 7.7 percent from 2011-12 to 2018-19, which is higher than the national estimates of 6.9 percent. A significantly young WAP along with a consistently growing economy of the state promises an optimistic future for the youth and the state. Upon comparing the data on above mentioned parameters nationally, the future looks promising as well. However, India is already two decades into having the enormous pool of WAP and it is estimated to be available for a couple of more decades. Therefore, to be able to produce skilled manpower, to be able to bear the pressure of providing innumerable jobs by creating employment opportunities nationally and globally, and to exponentially increase the economic growth of the nation, immediate and innovative interventions are needed.

Till date, significant efforts have been made to harness the demographic advantage that the country enjoys. The Government of India (GOI), acknowledging this demographic potential of the country,, has already been implementing numerous programmes and schemes. These were launched to focus on skill development, education, and employment opportunities, all aimed at empowering the youth and tapping into their potential. Even well before the onset of the demographic advantage, GOI created Institutions for vocational education and training (VET). Since then, several committees and commissions were established by the GOI, both pre- and post-independence era, to bring about wide-ranging reforms. Parts of the reforms were the establishment of Industrial Training Institutes (ITI) in 1950 and the first regulator with the formation of the National Council of Vocation Training (NCVT) in 1956. However, the National Council for Vocational Education and Training (NCVET), established in 2018 by subsuming the functions and responsibilities of NCVT, functions as an overarching regulator establishing regulations and standards to ensure quality (Niti Aayog, 2023).

ITIs, under the Directorate General of Training (DGT) and the Ministry of Skill Development and Entrepreneurship (MSDE), have been instrumental in providing vocational training to India's youth. These institutions have been set up with an objective of developing a skilled workforce that would join and contribute to the public and private sector, while also promoting self-employment amongst youth. They do so by running a range of vocational/skill training courses of one and two-years under the Craftsman Training Scheme (CTS) covering a large number of economic sectors. These courses are based on semester patterns and are designed to impart basic skills and knowledge in the trades.

These institutions emerged first, due to sudden demand from the growing industries for labour with basic technical capabilities and skills to operate simple tools and machines. Therefore, many courses (or trades) offered by such institutions are engineering courses albeit there is a plethora of non-engineering courses as well. Another reason for the growth of such institutions was the concurrent political economy landscape whereby the state actors aimed at reducing unemployment among those who were financially constrained and failed to afford higher education due to various reasons including poor performance and training at the primary school level, lack of interest in the basic education structure, limited capability in adapting to the needs of higher education from both cognitive and economical point of views, as well

as a sense of general exclusion in terms of caste, class and gender. There are studies exploring the growth and requirements for such institutions such as the study by Niti Aayog released in January 2023 exploring the required modifications and transformations in the existing scheme to make ITIs more meaningful and fruitful for the economy.

1.1 ITI ECOSYSTEM IN INDIA

In Figure 1 and Figure 2 below, we have briefly described how the "ITI ecosystem looks like". At the helm of affairs are the regulators at the country and state levels that are working in coordination to implement the vision of the government in enhancing skill among the youth. Noteworthy, the ITI ecosystem is important in realizing the outcomes envisaged under the National Skill Development Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), National Policy for Skill Development and Entrepreneurship 2015 and the Skill Loan Scheme. As evident from existing documents, vocational training began in the 1950s and different committees and advisory groups were constituted to assess the potential and gaps that limited the growth of such Institutions.

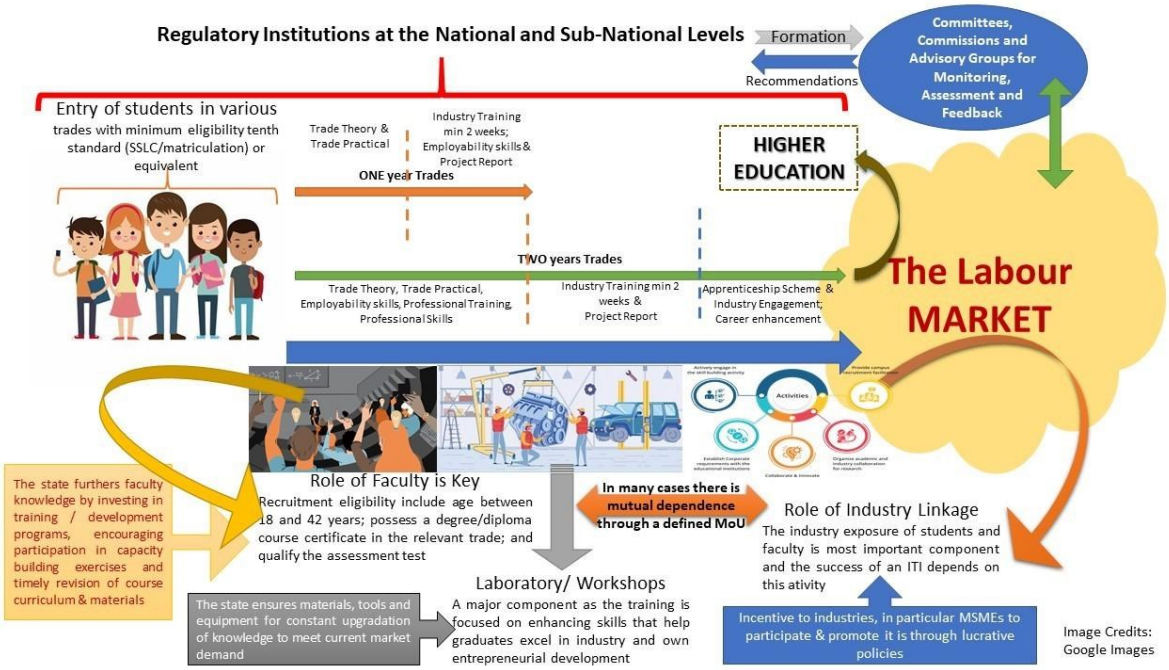

Figure 1: ITI Ecosystem in India

Figure 2: Structure of ITI Ecosystem in India

Directorate General of Training (DGT)

The Directorate General of Training (DGT) in the Ministry of Skill Development and Entrepreneurship is the apex organisation for development and coordination of programmes relating to vocational training at the National level.

The DGT is responsible for creating overall norms, policies, and standards for vocational training programmes, capacity building of instructors, and implementation of Apprenticeship Act, 1961.

National Skill Training Institutes (NSTIs)

The NSTIs are premier training institutes run by DGT, Ministry of Skill Development and Entrepreneurship, Government of India. The NSTIs under the Craftsman Training Scheme (CTS) and Craftsman Instructor Training Scheme (CITS), ensures continuous training and development of Instructors of the ITIs. Out of 33 NSTIs across India, 19 NSTIs are exclusively for women.

As per NCVT instruction in 2019, all the instructors must be trained at NSTI under CITS. However, out of 95000 plus instructors, only 15% have received the training (Transforming Industrial Training Institutes, NITI Aayog 2023).

Central Staff Training & Research Institute (CSTARI)

CSTARI is responsible to design curricula for the vocational training (CTS, CITS as per NSQF) in India. Since its establishment in 1968, CSTARI has developed about 82 Engineering, 63 non-engineering, and 5 visually impaired curriculums under CTS, 54 CITS curriculum, and 209 Apprenticeship training scheme curriculum. The research wing of CSTARI ensures to minimize the gap between constantly changing market and that of vocational training provided by periodically updating the curriculum.

National Instructional Media Institute (NIMI)

NIMI was setup in 1986 under DGE&T with the assistance of German Agency for Technical Cooperation to develop instructional materials of the syllabus finalized by CSTARI. NIMI publishes the books for all trades, used across all the ITIs nationally. These books are provided free of cost to students.

1.2 FUNCTIONING OF ITIs

The ITIs operate concurrently under the guidance of the Central and State Governments. The central government is responsible for development of training schemes, policies, setting training standards norms, conducting examinations, providing certification, etc. whereas the state is trusted with the day-to-day administration of ITIs. The curriculum and affiliation is within the ambit of the Centre under DGT. Currently, there are 14,789 DGT-affiliated ITIs across India (government and private).

For the improvement of the affiliated ITIs, several schemes are being conceptualized and implemented. CTS and CITS scheme are the foundational ones where the former focuses on the courses and the trades offered at the ITIs and the later focuses on the training and development of Instructors. Modernisation of ITIs are also prioritised by implementing projects and schemes such as Skill Strengthening for Industrial Value Enhancement Scheme (STRIVE) and Dual System of Training (DST). While STRIVE attempts to achieve the objectives through upgradation of equipment, addition of new trades, policy improvements at state level, etc., DST brings in Industries as a partner of ITIs to provide on-the-job training to students while they are enrolled in the trade.

The Government of India, from the mid-20th century up to the present, has taken several measures to empower and utilize the demographic advantage. However, the current situation shows a contrast in the objectives and the outcomes. In the context of Uttarakhand, a skill gap study highlighted a significant demand for a skilled and semi-skilled workforce in the state over the next few years. Key sectors such as manufacturing, education, healthcare, BFSI, and tourism are expected to require a substantial influx of trained professionals. However, the study also found that a very small percentage of the state's population has completed vocational training. As a result, many employers struggle to fill vacant positions due to a lack of candidates with the necessary skills and work experience. Thus, it becomes critical to find the reasons for such mismatch and to understand how the gap may be reduced so that the population dividend can help foster economic growth.

In light of this, a comprehensive diagnostic study has been carried out to understand better the performance and challenges faced by ITIs in Uttarakhand. The findings of this study aim to provide insights into how these institutions can be strengthened to serve the state's youth and industries, ultimately contributing to economic growth. The study focuses on the following key objectives:

1. To evaluate the performance of government ITIs in Uttarakhand, examining factors such as enrolment, human resources, courses offered, course structure, and placement outcomes.
2. To identify the challenges faced by ITIs, particularly those that result in low learning outcomes and limited placement opportunities for students.
3. To assess the impact of various schemes introduced in ITIs, such as the Craftsman Training Scheme (CTS) and Skill Strengthening initiatives, in line with DGT/NCVT norms.
4. To analyse the short-term and long-term viability of government ITIs in Uttarakhand, considering the evolving demands of the labour market.
5. To provide a comprehensive set of recommendations aimed at reducing the skill mismatch and enhancing the overall effectiveness of ITIs in Uttarakhand.

This report presents the findings of this diagnostic study, offering valuable insights into the current state of ITIs in Uttarakhand and suggesting actionable steps to address the challenges and harness the potential of the state's young workforce.

CHAPTER 2

Context

2.1 OVERVIEW OF UTTARAKHAND

Uttarakhand, a hill state with plains comprising only 10 per cent of its total geographical area, is situated in the northern part of India. It is divided into two regions – Garhwal and Kumaon and was recognized as the 27th state of India on 9th November 2000, after bifurcation of Uttar Pradesh. The state has 13 districts, 49 sub-divisions, 95 development blocks, 16,793 census villages out of which 15,745 villages (including forest settlements) are inhabited, and the remaining 1048 are un-inhabited.
Uttarakhand is primarily a mountainous state, and its northern part comprises the high Himalayas and the multiple glaciers whereas the lower reaches are covered with forests. The numerous glaciers provide perennial water to the downstream rivers including the mighty Ganga and Yamuna. With diverse topography that includes snow-capped peaks, glaciers, deep canyons, streams, lakes, and plains, the state is blessed to have all major climatic zones and hence conducive to Agri-horticulture.
Since its inception, Uttarakhand has been one of fastest developing states in India. The state's steadily progressing economy is one of the indicators. As per the Uttarakhand Economic Survey 2023-24, during the pre-covid period (2011-12 to 2019-20) the state's average growth rate was 6.4 percent, whereas during the post Covid recovery (2021RE- 2024AE), the average growth rate was 8.47 percent. The per capita income of the state (at current price) estimated to be Rs. 2,60,201 in 2023-24AE, was almost 40 percent higher than the corresponding national level per capita income of Rs. 1,85,854.

The state's economy is relying on the primary sector, including agriculture, forestry, fishing, and mining and quarrying. However, the reliance on this sector is disproportionate to its contribution to the state economy, which stands at a modest 9.98% (2023- 24 AE) of the total Gross value Added (GVA) of the state.

Agriculture alone contributes 8.96 percent of the state's GVA, making it one of the largest components of the primary sector. However, Uttarakhand's mountainous topography limits agricultural productivity, with only about 14% of the land being

cultivable. This dependency on a relatively unproductive sector has left large sections of the population economically vulnerable, leading to migration, especially from the hilly regions to the plains or other states, in search of better livelihood opportunities.

Over the past two decades, Uttarakhand has made considerable progress in diversifying its economy. The secondary sector, consisting of manufacturing, construction, electricity, and water supply, now accounts for nearly 50% of the state's GVA. This rapid industrialization, especially in districts like Haridwar and Udham Singh Nagar, has driven growth in the manufacturing sector, with manufacturing alone contributing nearly 80% to the secondary sector. The establishment of Special Economic Zones (SEZs) and industrial corridors has attracted investment from several large industries, particularly in the automobile, pharmaceuticals, and Agri-based sectors.

The tertiary sector, which includes services such as financial services, transport and communication services, public administration and other services, is also growing and contributes approximately 43.17 % to the state's GVA. Tourism, in particular, is a critical driver of employment in the state, with Uttarakhand being a major destination for religious, adventure, and eco-tourism. This diverse economic landscape presents both opportunities and challenges, particularly in terms of creating sustainable livelihoods for the state's young and growing population.

2.2 FROM YOUTH BULGE TO ECONOMIC ASSEST: CLOSING THE SKILLS GAP

The future of Uttarakhand's economic development lies in its ability to harness its demographic dividend. This youth bulge can be a tremendous asset if the state can enable its population with the contemporary skills needed to participate, contribute, and benefit from the growing economy. However, the state is currently facing a significant skill gap that stands as a roadblock in its sustainable economic potential. The Uttarakhand Skill Gap Study (2021) estimated that over the next five years, the state will need approximately 1.7 lakh additional skilled and semi-skilled workers in key sectors such as manufacturing, education, healthcare, tourism, and banking. And as mentioned earlier in the chapter, all these sectors are the top contributors in the state gross value added. This demand for skilled workforce is driven by the ongoing industrialization and expansion of service sectors in the state. However, there is also a

significant mismatch between the skills currently being imparted and those that are in demand.

According to the Skill Gap Study (2021), only 4.7% of Uttarakhand's population aged 15 and above has undergone vocational training, lesser than the national average of 5.4%. Furthermore, 57% employers often struggle to fill vacancies due to the unavailability of specific skills, practical experience, and industry exposure. 50% of the employers said they invest in in-house training of new recruits to be able to deploy them to the respective work. Analysing the existing workforce, it was found that 91% workers are either medium or low skilled. The study also highlights a stark gender disparity in skill development, with female participation in vocational training being even lower than the state average. Women, particularly in rural areas, face additional barriers such as limited access to training centres, socio-cultural constraints, and lower workforce participation rates, further exacerbating the skill gap.

This mismatch between the supply of skilled workers and market demand underlines the need for a robust vocational education system, particularly through institutions like the Industrial Training Institutes (ITIs), to ensure that Uttarakhand's youth—both men and women—are equipped for emerging job opportunities and can contribute to the sustainable economic growth of the state.

2.3 THE ROLE OF ITIs IN BRIDGING THE SKILL GAP

Industrial Training Institutes (ITIs), as mentioned in the previous chapter, play a pivotal role in addressing the state's skill development needs. Established as part of the national vocational education and training (VET) system, ITIs are designed to impart industry-specific technical skills to students, enabling them to either seek employment or start their own enterprises. The primary objective of ITIs is to align vocational education with market demands, thus reducing unemployment and underemployment by providing job-ready skills.

Uttarakhand currently has a network of **100 government and 84 private ITIs** (Tracer Study – Employment Outcomes of ITI Graduates in Uttarakhand 2023). However, it is noteworthy that many of these ITIs continue to be guided by the State Council for Vocational Training (SCVT) norms and guidelines. Currently, there are a total of **91 institutes under NCVET and 62 under SCVT**. In Table 1 and Table 2 below, we have

highlighted the district-wise details of such Institutions including their current status as to whether they are operational or not. It is to be noted that there are a significant number of private ITIs in the state.

	District	Currently Functioning		Not Operating		Total
		ITI	No.			
1	Almora	Almora, Bright End Corner, Jayanti, Daula, Khoont, Dhaulichina, Someshwar, Syalde, Danya, Machor, Masi, Binta	12	-		12
2	Bageshwar	Kanda, Kapkote	2	-		2
3	Nainital	Haldwani (Boys + Girls), Bhowali, Tandi, Betalghat, Okhalkanda, Dhokane, Kaladhungi, Ramnagar, Bindukhata	9	-		9
4	Udham Singh Nagar	Kashipur (Boys + Girls), Dineshpur, Gadarpur, Bazpur, Sitarganj, Jaspur, Khatima, V. Pantnagar	8	-		8
5	Champawat	Champawat, Khetikhan, Tanakpur	3	-		3
6	Pithoragarh	Pithoragarh, Askot, Dharchula, Munsysri, Raiagar, Bankote, Jakhpuran, Pankhu, Gangolihat	9	-		9
	Kumaon Division		43	0		43
7	Dehradun	Dehradun Boys, Dehradun Girls, Vikasnagar, Rajpur Road, Kalsi, Mussoorie, Tyuni	7	-		7
8	Pauri	Shrinagar, Thalisain, Dugadda, Saldmahadev, Pokhra, Kotdwar, Ekeshwar, Jayharikhal	8	-		8
9	Haridwar	Haridwar, Pirankaliyar, Khanpur, Delna, Narson, V. Haridwar, Laksar, Sikroda	8	-		8
10	Rudraprayag	Rudraprayag	1	Ukhimath (1)		2

11	Chamoli	Karnprayag, Gopeshwar, Gairsain, Tapovan, Pokhri, Narainbagar, Nandasain	7	Dewal (1)		8
12	Tehri	New Tehri (New Tehri + Bauradi), Chamba, Chamiyala, Thatyur, Rajakhet, Raurdhar, Munikireti, Devprayag	8	Anjanisain (1)		9
13	Uttar Kashi	Barkot, Purola, Chinyalisaur, Uttarkashi, Dunda, Mori	6	-		6
	Garhwal Division		45	3		48
	Grand Total		88	3		91

Table 1 : Status of NCVET ITIs in Uttarakhand

	District	Currently Functioning	Previously functioned but presently non-functioning	Currently Non-Functioning	Total SCVT
1	Almora	Sadarkourala (1)	Naini, Ranikhet, Bamsyu,Saraikhet, Daulaghat (5)	Bisaudpatti, Bhikiyasain, Basauli-Takula (3)	9
2	Bageshwar	Kathpudiachina (1)	Garuda, Nakuri (2)	-	3
3	Nainital	Bhimtal, Donpareva, Chorgalia (3)	-	-	3
4	Udham Singh Nagar	-	Kichha (1)	-	1
5	Champawat	Talladesh (1)	Digalichaud, Barakot, Bhingrada, Banbasa (4)	Regdu (1)	6
6	Pithoragarh	-	Gaurihat, Madmanle, Badawe, Jaurasi, Thal (5)	Devalthal, Chahaj, Nachni (3)	8
	Kumaon	6	17	7	30
7	Dehradun	-	Lakhamandal (1)	-	1

8	Pauri	Bungidhar, Gandkhal, Rikhdikhal, Yamkeshwar, Kanskhet, Paboo (6)	Dwarikhal, Pauthadi, Pauri (3)	-	9
9	Haridwar	-	-	Bandarjud (women) Bhagwanpur (1)	1
10	Rudraprayag	Chirbatiya, Basukedar (2)	Agastyamuni (1)	-	3
11	Chamoli	-	Ghat, Band, Mandal, Helang, Solnabachhed, Hapla (6)	-	6
12	Tehri	Jhinjhinisain, Nakot, Lambgaon (3)	Nainbagh, Thauldhar, Chaka, Bagsain, Ranakot, Pavkidevi (6)	-	9
13	Uttar Kashi	Banchaura, Brahmakhal (2)	Dhautari (1)	-	3
	Garhwal	**13**	**18**	**1**	**32**
	Grand Total	**19**	**35**	**8**	**62**

Table 2: Status of SCVT ITIs in Uttarakhand

These institutions offer a variety of one- or two-year training programs in trades such as electricians, fitters, mechanics, computer operators, and more. As noted by the report from Niti Aayog (2023), we observe that 'electrician' remains the trade offered by the maximum number of institutes in the state and therefore the seats are also naturally high on offer.

Electrician course is followed by fitter, electronics mechanic, swing technology, stenography (Hindi), wireman, welder, motor vehicle mechanic, draughtsman, civil, and computer operator and programming assistant (COPA).

2.4 PERFORMANCE OF ITIs IN UTTRAKHAND

As mentioned in the previous chapter, the Government of India has implemented various initiatives aimed at enhancing the functioning of Industrial Training Institutes (ITIs) across all the states in the country. However, several factors hinder the effective delivery of vocational education, notably the gap between the skills taught and those demanded by the job market. This skills mismatch is exacerbated by inadequate infrastructure - such as classrooms, workshops, and laboratories - which plays a critical role in the operational capacity of ITIs.

Performance levels among ITIs in Uttarakhand illustrate significant disparities, particularly between institutions located in the plains and those in hilly areas. Districts like Dehradun, Haridwar, and Udham Singh Nagar in the plains have a higher concentration of ITIs, whereas districts in the hills like Rudraprayag, Bageshwar, and Champawat have far fewer institutions. Also, ITIs located in the plains tend to perform better in terms of student enrolment, infrastructure, and job placement rates. This geographical imbalance limits access to vocational training in remote areas, exacerbating the skill gap between regions.

However, even the institutions in the plains are experiencing a decline in enrolment for certain trades, such as motor vehicle mechanics and welding, which were once popular. This decline emphasizes the importance of market relevance, as trades like electricians and computer operators are attracting more students due to their perceived alignment with immediate employment opportunities in growing sectors like construction and IT services. The narrow focus on specific trades, however, can limit the diversity of skills available in the workforce, which is crucial for fostering a dynamic and adaptable economy.

The disparities in performance are not solely geographical and market relevance of trades; many smaller ITIs in Uttarakhand lack basic infrastructure, as seen in examples like Gairsain (which is scheduled to move to a bigger campus), Narayanbagar, and Chiniyalisaur. These institutes often struggle with a limited number of trainers who possess only basic knowledge of their subjects. The situation worsens when trainers trained in one trade are assigned to teach unrelated topics, leading to student discomfort and hindering effective learning. To mitigate these issues, the government must prioritize recruiting new trainers and invest in their professional development

through targeted on-the-job training. Such improvements in teaching quality are essential for enhancing overall educational outcomes.
Low enrolment is also a factor that needs immediate attention. Although this report does not explore the reasons behind low enrolment rates in both larger and smaller ITIs in detail, it is vital to investigate the low enrolment trend across all institutions as well.
Other than the above-mentioned challenges, student's feedback reveals that the low societal reputation of vocational education poses a significant barrier to the sustainability of many ITIs. Many students also perceive the limited job opportunities in hill districts as a deterrent, prompting them to seek ITIs in the plains, such as those in Haridwar, Dehradun, and Udham Singh Nagar.

These challenges are immense and therefore the government's role in the effective delivery of vocational education is paramount at local, state, and national levels. Taking cognizance of the situation in the states, Government of India has launched several initiatives aimed at strengthening vocational education and bridging the skill gap. The Pradhan Mantri Kaushal Vikas Yojana (PMKVY), for instance, is a flagship scheme that has trained over 1.57 crore individuals under various components, enhancing their employability across diverse sectors. (pib.gov.in)

Additionally, the Pradhan Mantri Internship Scheme (PMIS), announced in the Union Budget 2024-25, aims to provide internship opportunities to one crore youth in the top 500 companies over five years. This initiative offers young individuals hands-on exposure to real-world business environments, thereby enhancing their practical skills and job readiness. (pib.gov.in)

Furthermore, the National Education Policy (NEP) 2020 emphasizes the integration of vocational education into mainstream education starting from the 6th grade, including internships. This policy aims to make vocational education more aspirational and accessible, thereby improving enrolment rates and societal perceptions. (pib.gov.in)
Still, it is crucial to prioritize the evaluation of ITI performance. While a continuous ranking of ITIs is underway, with two phases of grading already completed, it remains a policy challenge to leverage these evaluations for the overall improvement of vocational institutes. Drawing insights from the performance evaluations of other educational systems can help devise a more scientifically grounded methodology for

assessing why some institutes excel in various domains, including teaching quality and job placements, compared to their peers.

In conclusion, the challenges faced by ITIs in Uttarakhand—from infrastructure deficiencies and skills mismatches to societal perceptions and instructor quality—are interrelated and require a holistic approach. By identifying best practices and benchmarking against successful institutions, the government can more effectively address these challenges. Ultimately, without such efforts, investments in public and private ITIs may not yield the desired outcomes, underscoring the necessity for comprehensive reform in the vocational education sector.

2.5 COMPREHENSIVE EVALUTION OF ITIs

Government educational and training institutions are generally classified as non-profit organizations (Hansmann, 1980). Despite not having a profit maximization motive, their objective is to ensure efficiency and productivity with limited contributions from government or non-government organizations. Numerous studies have sought to measure the efficiency of educational institutions worldwide, particularly focusing on higher education. Notable research has emerged from countries including Vietnam (Tran et al., 2023; Kao et al., 2011), China (Qin et al., 2023; Chen et al., 2021; Liu et al., 2020), the United Kingdom (Glass et al., 2002; Sarrico and Dyson, 2000), and India (Kaur and Bhalla, 2017; Sreekumar and Mahapatra, 2011; Tyagi et al., 2009).

A study by Tran et al. (2023) attempted to estimate the efficiency of Vietnamese Higher Educational Institutions (HEI). Results show that public universities operate in the absence of market mechanism and so they tend to be less efficient than the private universities. Moreover, the study observed that the HEIs including the international programmes have higher efficiency scores rather than these without international programmes. Using number of students, income from patent sales, and number of published monographs and papers as output variables, while total number of teachers, total fixed assets, and funding as input variables Chen et al. (2021) found that one third of the universities are inefficient out of 52 universities due to inefficient use of resources.

In a similar study, Yang et al. (2018) measured the efficiency and productivity of 64 Chinese research universities. The results highlight that the productivity of the

universities increased over the period (2010-2013) and the productivity gains are primarily driven by improvement in the efficiency of the universities. Using Malmquist productivity index Barra and Zotti (2016) measured the efficiency and productivity of Italian higher educational institutions and found that science and technology sector are more efficient than humanities and social sciences department.

In India, several studies have explored the efficiency and productivity of higher education institutions. Kaur and Bhalla (2017) evaluated 15 government degree colleges in Punjab, finding them to be moderately efficient with significant input-output slacks. Their analysis highlighted that only one college ensured efficiency throughout the study period. Similarly, Sahney and Thakkar (2015) focused on technical higher institutions of national importance in India, while Tyagi et al. (2009) assessed the academic departments at IIT Roorkee, noting satisfactory performance in science departments but identifying inefficiencies in others.

Building on this existing literature, the current study seeks to identify the key inputs and outputs that define the production function of Industrial Training Institutes (ITIs). Following the methodology of the aforementioned studies, this research identifies admissions, job placements, and salary packages (In Rupees) as output variables, while considering student numbers, staff levels, and basic infrastructure as input variables. By doing so, the study aims to provide a comprehensive evaluation of the efficiency of ITIs, contributing valuable insights to the discourse on vocational education and training.

CHAPTER 3

Research Design & Methodology

3.1 PURPOSE OF THE STUDY

A comprehensive diagnostic study has been carried out to better understand the performance challenges faced by ITIs in Uttarakhand. The purpose was to examine the current status of ITIs on available physical and human resources, status of industry interface, challenges faced for achieving intended learning outcomes for students and propose solutions to navigate through the challenges.

The findings of this study aim to provide insights into how these institutions can be strengthened to better serve the state's youth and industries, ultimately contributing to economic growth.

The study was designed keeping focus on the following key objectives:

1. To evaluate the performance of government ITIs in Uttarakhand, examining factors such as enrolment, human resources, courses offered, course structure, and placement outcomes.
2. To identify the challenges faced by ITIs, particularly those that result in low learning outcomes and limited placement opportunities for students.
3. To assess the impact of various schemes introduced in ITIs, such as the Craftsman Training Scheme (CTS) and Skill Strengthening initiatives, in line with DGT/NCVT norms.
4. To analyse the short-term and long-term viability of government ITIs in Uttarakhand, considering the evolving demands of the labour market.
5. To provide a comprehensive set of recommendations aimed at reducing the skill mismatch and enhancing the overall effectiveness of ITIs in Uttarakhand.

3.2 RESEARCH DESIGN

The study employed a structured and mixed-methods approach to evaluate the performance, challenges, and opportunities within Uttarakhand's government ITIs.

The methodology was designed to combine quantitative and qualitative insights, ensuring a comprehensive understanding of the ITI ecosystem. The study was conducted in one year duration, from 2023 to 2024.

3.2.1 Pre-requisites of the Study

The research design and emerging recommendations were contingent on the following prerequisites:

- The availability of documents where institutional data is recorded and organised.
- The institutional heads are aware of data or have any kind of documentation processes.
- The students are able and willing to articulate their thoughts.
- The faculty members are aware and able to articulate their thoughts.

3.2.2 Sampling Process

Out of 105 government ITIs, 32 were selected in Kumaon and Garhwal divisions, from all 13 districts. The selected sample included a mix of urban and rural, nodal and general ITIs from hilly and plain regions.

3.2.3 Pilot Survey

- ITI wise secondary data was collected from Department of Skill Development and Employment [DSDE], Govt. of Uttarakhand and Uttarakhand Workforce Development Project (UKDWP).
- The research team also visited ITI Pithoragarh, ITI Askote, and ITI Dharchula to pilot the tools. The phase helped in preparation, cleaning and verification of tools for data collection.

3.3 DATA COLLECTION METHODS AND RESPONDENTS OF THE STUDY

For data collection, three groups were targeted – Principals, Faculty members and Support staff, and students.

The data was collected using both primary and secondary sources:

Primary Data:

- Stakeholder Interviews:
  Semi-structured questionnaires were developed for interviews with students, faculty members, principals to understand on-ground realities.
- Focus Group Discussions (FGDs):
  Group interactions were held to gather collective insights on ITI performance, challenges, and potential improvements.
- Field Visits:
  Observations of facilities, teaching methodologies, and resource utilization across a representative sample of ITIs using a checklist.

Secondary Data:

- Data from national-level sources such as the Directorate General of Training (DGT), Uttarakhand Workforce Development Project (UKWDP), and ITI-specific records have been utilized.
- Examined reports from previous studies like the Uttarakhand Skill Gap Study (2021) and Transforming Industrial Training Institutes by NITI Aayog (2023).

3.4 DATA ANALYTICAL FRAMEWORK

This section outlines the context of ITIs, the nature of the research problem, data collected and why and how Data Envelopment Analysis (DEA) was employed to analyse the data.

To determine if any process is reaching a socially desirable outcome, one is to understand the process that delivers these outcomes . A 'production function' is one such process that tells us what are the different inputs that are required to produce socially desirable outputs.

For example , if it is a bank, then how many depositors and borrowers are being catered, is a socially desirable output. In case of hospitals, how many in-patients and out-patients can it treat is a determiner of output.

Similarly, in context of any educational institution the learning outcomes of the students is a key socially desirable output. Whether a process is profit-oriented or not-for-profit, a production process defines every such activity.

In the literature, process of production function has been used to analyse the performance of different entities which decides how many and which kinds of inputs are required to produce a given level of output.

3.4.1 Visualizing production process in Context of ITIs

In the context of ITIs, which is an educational institution, it is evident that the production process would rely on number of faculty and staff, number of trades (and/or seats per trade) offered, infrastructure including number of classrooms, workshops, laboratories, etc., availability of scholarships, number of past placements or proportion of students placed to total enrolled (representing the experience of past students and incremental effect on future students) and overall reputation of the institute and may be considered as inputs.

In monetary terms, other than scholarships and stipends, the total expenditure of the institute including spending on upgrading or laboratories/workshops, and the capacity of faculty is also an important factor input.

Though the technology may be assumed to remain the same, it also varies from big and small institutes. By 'big' we imply institutes having better computer laboratories, advanced machines, learning is enabled through visual-aid, etc.

The training part remains a "black-box" because though the syllabus remains the same it is the humane part and abilities that determine the learning outcomes. Therefore, even if we assume that an ITI is a decision-making unit (DMUs), using inputs rationally, its efficiency would be determined by the overall performance of the manager who is deciding the correct mix of inputs to reach the production goals. In this case, the production outcomes are summarized as the outputs.

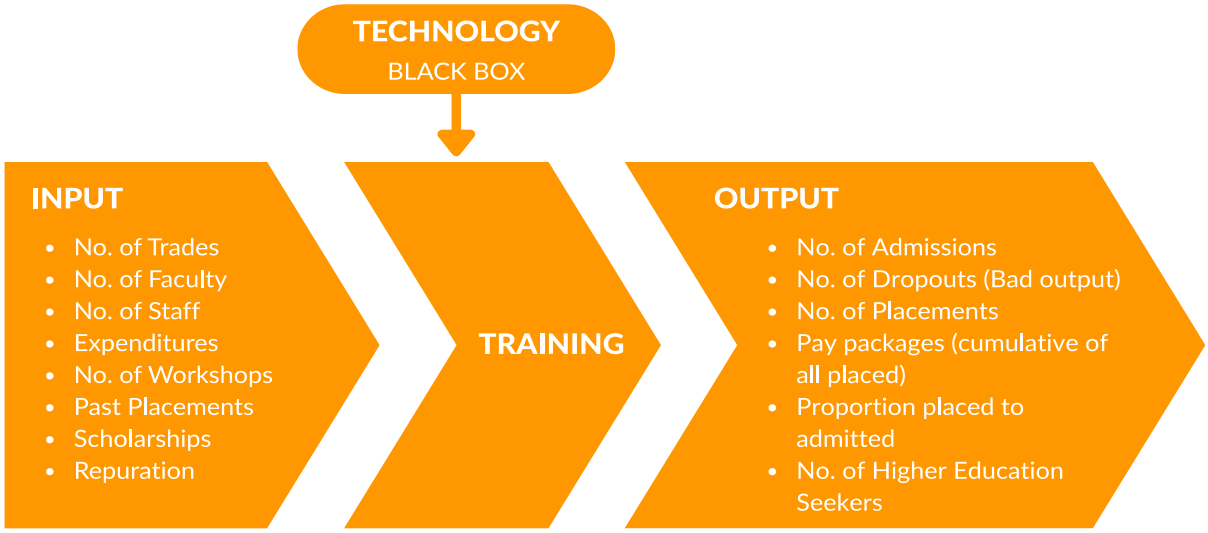

Figure 3: Visualising Production Process in Context of ITIs
SOURCE: Authors' own representation

The outputs in this production process are fairly easy to identify and some important ones are:

- Number of admissions across different trades
- Total number of current placements
- Average salary drawn by a graduate from the instate/trade
- Number of students choosing to move for higher education or entrepreneurial venture

Since we are considering total number of admissions as an output, in the Data Envelopment Analysis (DEA) literature, it is a good output. Every production process has both good output and wastages, referred to as a bad output. Dropouts, in this case is a bad outcome because the seat vacated could have been potentially filled and benefiting a needy student, now remains vacant for the entire duration of the course.

3.4.2 Data, Inputs & Outputs

The study's analysis was underpinned by the Data Envelopment Analysis (DEA) methodology, a non-parametric approach to evaluating the relative efficiency of decision-making units (DMUs). ITIs were treated as DMUs, with efficiency determined by the input-output relationship.

Inputs Considered:

1. Faculty and staff numbers.
2. Infrastructure, including classrooms, laboratories, and workshops.
3. Number of trades offered and corresponding enrolments.
4. Total operational expenditure.

Outputs Measured:

1. Admission rates and total student enrolments.
2. Placement outcomes, including employment rates and average salaries.
3. Number of graduates pursuing higher education or entrepreneurial ventures.

Efficiency Determinants:

1. Dropout rates as a negative output indicator.
2. Industry linkages and access to on-the-job training opportunities.
3. Geographical accessibility and infrastructure quality.

3.4.3 Techniques of Data-Analysis and Statistical Tools

Super-Efficiency DEA Models:

1. Applied advanced DEA models to differentiate between ITIs performing at the efficiency frontier and those exceeding it.
2. Identified the most and least efficient ITIs for targeted recommendations.

Normalization and Composite Indices:

1. Normalized performance indicators to construct composite indices for ranking ITIs.
2. Used Principal Component Analysis (PCA) to reduce dimensionality and highlight key performance drivers.

Cross-Comparative Analysis:

1. Conducted comparisons between hill and plain districts to uncover regional disparities.
2. Benchmarked ITI performance against national standards.

3.5 LIMITATIONS OF THE STUDY

While representative, findings are limited to surveyed ITIs and may not fully reflect statewide trends due to following constraints:

Data Quality

Inconsistent or incomplete records from some ITIs posed challenges during analysis. Data related to operational details was either incomplete or unavailable. In addition, even if the data was available, there was no uniformity in nature and kind of data collected and record keeping which posed a challenge for standardisation of data.

Process Owners

For data, there is no custodian of data recording and management. In ITI ecosystem, in many cases, there was no specific personnel for various processes and functions, so the research team could not access complete and correct information, and/or could not visit labs and workshops. Faculty and staff were either unwilling to share details or ignorant of working with lab, despite the fact that each member performed multiple tasks.

Temporal Constraints

Field visits were conducted over a limited timeframe, potentially restricting observations of seasonal variations in enrolment and training practices.

Ability of students and faculty to communicate

Most faculty members and students were hesitant and underconfident to interact and respond to questions and participate in Focussed Groups Discussions. This impacted the participation and hence the quality of data. To address this, research team also included some students to engage with ITI students.

Lack of Clarity

The personnel at ITIs were unclear about the budgetary allocations for different functions of institutions. Details around what is annual institutional expenditure, how much total fees have been collected were unavailable.

Inconsistent Data

There were many instances where the data collected at the institutional level was inconsistent with data provided by the departments. This comprehensive

methodological approach provides robust insights into the functioning of ITIs in Uttarakhand, laying the foundation for actionable recommendations in the subsequent chapters.

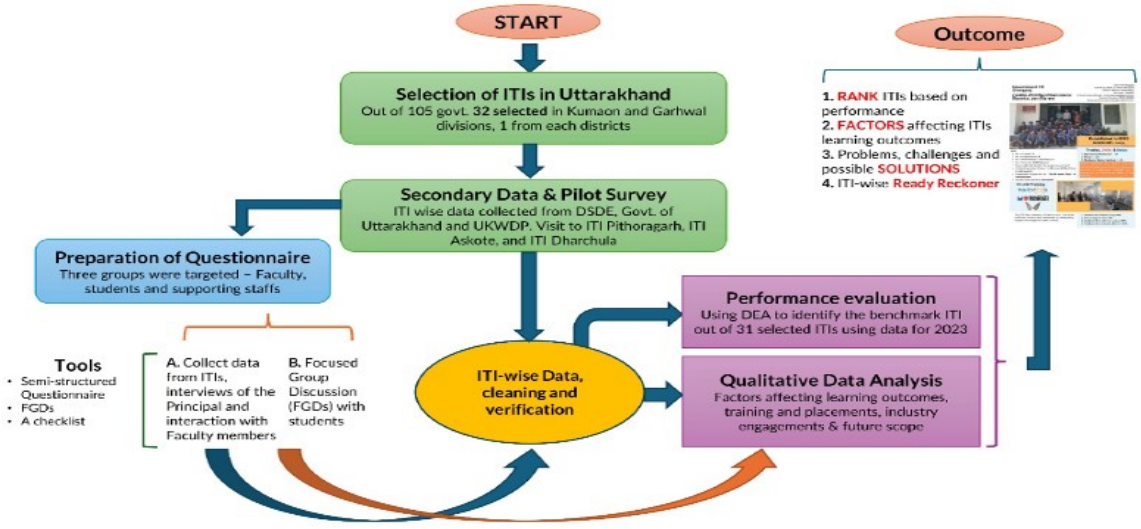

Figure 4: Overview of Methodology

CHAPTER 4

Key Insights from the study

This section focuses on the challenges faced by the students at ITIs and improvements required to enhance their learning process and make them more employable. The challenges in the learning process have a direct effect on the students' learning outcome.

The 2017 European Qualifications Framework (EQF) defines learning outcomes as '…statements of what an individual should know, understand and/or be able to do at the end of a learning process, which are defined in terms of knowledge, skills and responsibility and autonomy.' Thus, measuring learning outcomes requires measurement of knowledge, skill acquired, and the learning process. So how do researchers measure learning outcomes?

The common methods employed are test-based measures, self-reporting, and grades. The latter (includes class assessments and exams) is the traditional way of measuring learning outcomes and researchers (such as Yorke, 2011) have doubted their efficacy and reliability.

An alternative to grades is the use of test-based measures (includes open-ended or multiple-choice questions). These tests are often involved in testing the attainment of skills (both generic and discipline specific) related to writing, communication, analytical abilities, among others.

However, the researchers (such as Zlatkin-Troitschanskaia et al., 2015 and Douglass et al., 2012) argue that tests are often time consuming and clearing them does not signify improvement in learning outcome.

The final method is self-reporting where information is collected from the students directly. Most of the surveys employ self-reporting methods to assess the learning outcome and also to highlight any learning gap in the process.

A few research studies (such as Bowman, 2014) are of the opinion that the students cannot evaluate their own learning progress and seldom underestimate their performance. On the other hand, Braun et al. (2011) reported that the students' self-assessment has allowed them to lead a better life in the future.

4.1 LOW LEARNING OUTCOME

Using the information in the previous section, the current project used the self-reporting method to understand students' perceptions and ways to improve the learning environment.

The reason for not selecting the other two methods is lack of variation in the grades received by the students. Majority of the ITIs surveyed, have reported that on average the students obtain marks between 60-80% whereas a few students receive 80% and above marks.

So what are the reasons for low learning outcomes? One reason could be outdated syllabus. But according to the Minister of State in the Ministry of Skill Development and Entrepreneurship[1], the syllabus revision is a continuous process where new trades are added, obsolete/old trades are discontinued, and improve existing trades.

In fact recently, the Directorate General of Training (DGT) has circulated a notice[2] informing the introduction of new age/futuristic courses under Craftsmen Training Scheme (CTS) which will begin from the Session 2023-24.

Some of the courses to be offered are 5G Network Technician, Drone Pilot (Junior), Fiber to Home Technician, Industrial Robots and Digital Manufacturing, etc. Thus, given syllabus revision occurring quite frequently, low learning outcome could be due to other factors related to pedagogy, machines and equipment, practical training, less skilled instructors, among others.

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[1] *LOK SABHA UNSTARRED QUESTION NO. 3554. Retrieved from* https://sansad.in/getFile/loksabhaquestions/annex/173/AU3554.pdf?source=pqals

[2] *Retrieved from* https://dgt.gov.in/sites/default/files/Introduction_of_new_age_trades_DGT.pdf

In each ITI, the survey team interacted with enrolled students (30-40% on average) to identify the factors that students perceive on enhancing their skills. To make the students comfortable, only the survey team (consisting of IIT Roorkee students) was present in the classroom and moderated the discussions.

In ITIs (exclusively for girls), the survey team ensured the presence of a girl in the team so that the female students did not feel awkward. Some of the pictures from the interaction are inserted in the below table.

ITI Almora | ITI Dehradun (Boys) | ITI Chinyalisaur | ITI Karnprayag

Figure 5: Survey team interacts with students at various ITIs
SOURCE: Photographs owned by the PI, taken during the field visits

The structured questionnaire had 9 options linked to the learning outcome. The options (measuring both input and output side of learning) are old pedagogy, less hands-on training, limited industry experience, frequent disruption of institute activities, unavailability of trade specific faculty, faculty with limited industry exposure, aspirational reasons, limited laboratory facilities, and peer effects.

The responses of the students in different ITIs are graphically shown with the help of 100% stacked column graphs. Out of the sample 31 ITIs, in majority of the ITIs the students experience learning challenges.

It is not surprising to observe from Figure 6 that lack of training facilities, low industry exposure, old pedagogy, and poor laboratory facilities severely affects the learning outcome of the students.

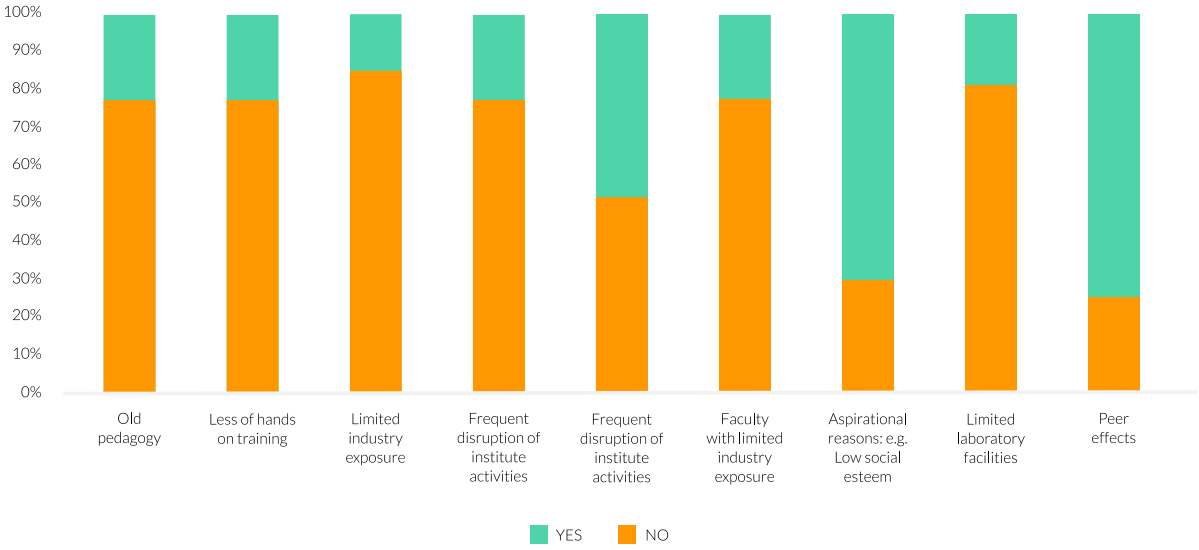


Figure 6: Factors affecting learning outcomes
SOURCE: Data from primary survey

Around 80% of enrolled ITI students believe that their limited industry exposure significantly hampers learning outcomes. One of the reasons students enrol in ITI is to get vocational training in respective trade which enhances skills for better prospects.

But, if the students are not being exposed to industry standards, then this shortcoming seriously affects their learning process. The ITIs can make efforts like On-the-Job Training (OJT), industry visits, invited guest lectures from leading industry experts to help the students to get more exposure.

Similarly, more than 75% of students feel that frequent disruption of institute activities and faculty with limited industry exposure adversely affect their learning outcome. The frequent disruption of institute activities includes absence of principal (or one principal in charge of multiple ITIs), or instructors getting administrative/election duties hampers both theoretical and practical classes.[3, 4] Absence of principals from branch ITIs significantly affects the day-to-day working of the institute which directly affects the students and their learning process. In case of election deputations, if the

[3] https://timesofindia.indiatimes.com/city/meerut/students-fume-as-over-80-of-iti-instructors-are-sent-on-election-duty/articleshow/60873978.cms
[4] https://www.abplive.com/states/up-uk/lucknow-iti-students-are-facing-difficulties-as-their-instructors-have-been-sent-for-election-duty-ann-2271033

particular instructor has no substitute in the institute, then the students are the ones to suffer. These disruptions are ubiquitous and students in different ITIs in various states have experienced this kind of learning loss.

Also, students suffer if there are instructors with limited industry experience. The survey questionnaire included questions related to faculty experience. After analysing the responses, it was found that only 14 ITIs (see Figure 7 below) have reported that one or more of their instructors have industry experience.

In 13 ITIs (more than 40 percent of the sample ITIs), the industry exposure of the instructors reported is nil. Remaining ITIs (around 15 percent of the sample ITIs) have decided not to respond so there is a probability that in these ITIs also the instructors lack industry experience.

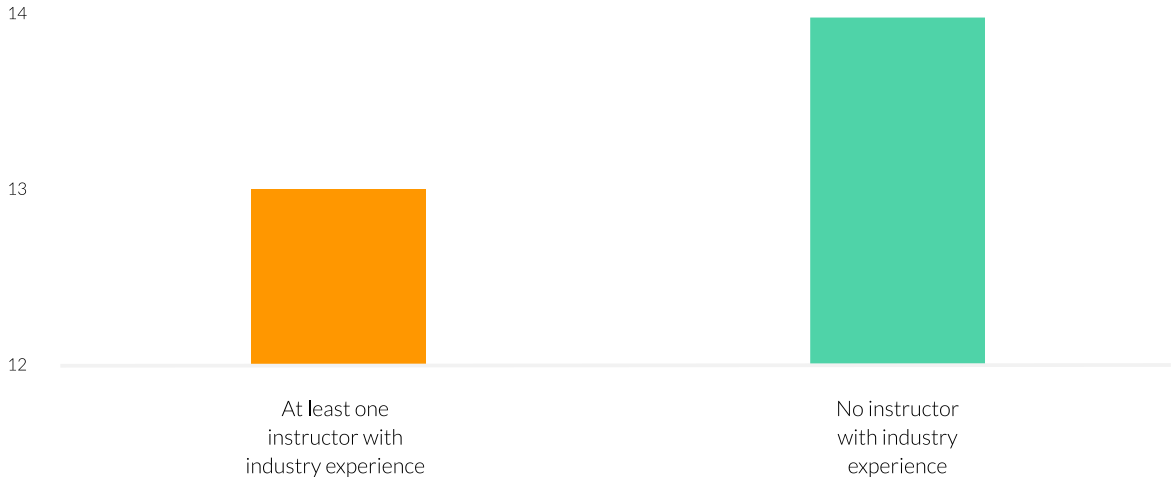


Figure 7: Whether instructors have industry experience?
SOURCE: Data from primary survey

Do all the instructors in each of the 14 ITIs have industry experience? Figure 8 shows that the share of instructors having industry experience varies by ITI (minimum share is 6 percent and maximum share is 100 percent).

Across the 14 ITIs, on average 61 percent of instructors have industry experience. Only 3 ITIs (Chinyalisaur, Gairsain, and Mori) reported that all their faculty members have industry experience.

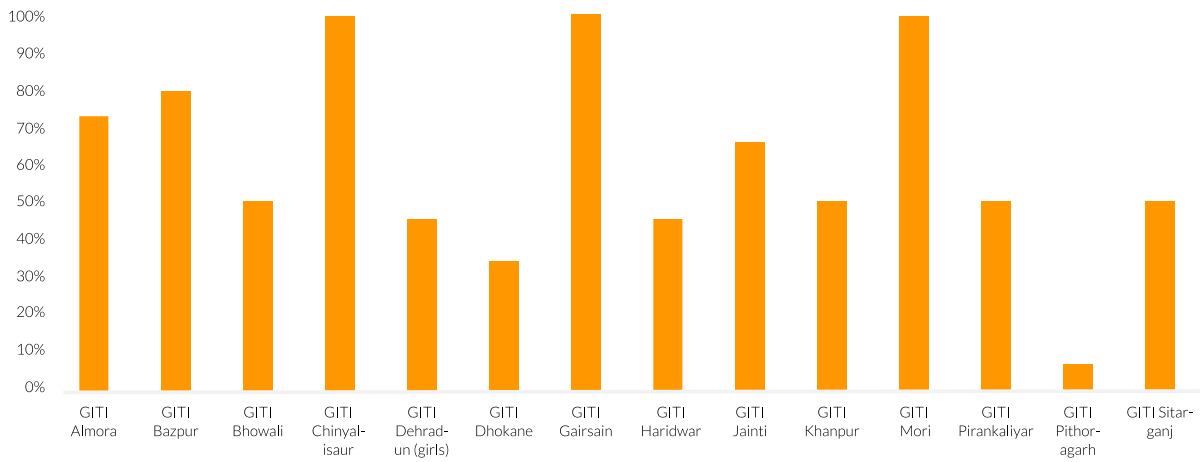


Figure 8: Share of instructors with industry experience (by ITI)
SOURCE: Data from primary survey

The industry experience varies by instructor as well. Thus, it is critical to identify the duration of such experience. Using Figure 9, the study finds that in a few ITIs, the instructors have more than 50 months of experience. However, here again, it is observed that there are large variations in exposure reported by the instructor in different ITIs.

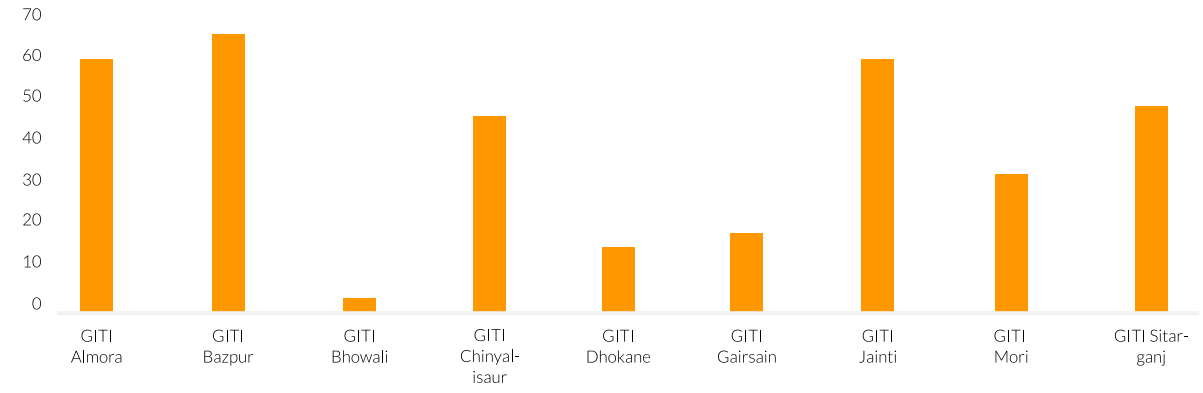


Figure 9: Instructor's industry experience (in months)
SOURCE: Data from primary survey

One way to overcome this limited exposure problem is to organise faculty development/training programmes regularly to make them aware of the developments happening in the industry with particular reference to new-age technology and industry needs.

Trainings have been taking place since 2020-21 where the instructors have been encouraged to travel to places like Delhi, Chandigarh, Noida, Indore, and Bangalore to get hands-on-training in trades such as Fitter, Employability Skills, MMV, Drawing Mathematics, Electronics Mechanic and Sewing Technology.

Thus, if faculty training programmes are being conducted regularly, then why do the students feel that instructors lack industry exposure? One possible answer based on the different faculty responses was the difference in infrastructure and equipment available in the classroom from those in the training programmes.

The equipment observed by the instructors in the training programme are advanced as compared to outdated ones available in the classrooms. This creates a gap between training and teaching.

In some ITIs, the instructors are taking initiatives to show these latest advancements through YouTube videos and other social media channels. Thus, given the rapid technology disruption in different industries, it is critical for these ITIs to embrace the latest technologies and increased digitalization to enhance the skill set of the students.

ITI Dunda | ITI Pirankaliyar | ITI Sitarganj

Figure 10: Poor conditions of classroom/workshop

Another important concern is limited laboratory facilities. Around 80% of students from the survey believe that this aspect significantly impairs their learning process. There are several ITIs which are using old equipment or no equipment (instructor draws on the walls) in the workshop.

Given that the students enthusiastically register to get training, using old machines does not help them to be industry ready. As shown in Figure 10, the situation of selected laboratories in ITIs, the environment in which the students are encouraged to learn is not at all conducive for their overall development. The industry uses much more advanced machines in which students get no prior training. This has also been corroborated by the instructors.

According to them, in the training programmes, the equipment that they observe or work on is quite advanced and as they do not have them in the ITI they are not able to demonstrate them in front of the students.

The different International Organisations (IOs) play an important role in higher education, lifelong learning and designing large-scale international assessments (such as Programme for International Student Assessment).

However, their role in vocational education and training (VET) is still unclear and understudied. Klassen (2024) conducts a thorough literature review of 174 published papers on the role of different IOs such as World Bank, International Labour Organisation (ILO), and Organisation of Economic and Co-operation and Development (OECD) in VET. For instance, Niemann (2022) and Comyn (2022) have highlighted the role of ILO in enhancing the work of teachers by organizing various capacity building programmes.

Similarly, the World Bank provides funds to different VETs in Africa to elevate skill levels and reduce youth unemployment. Even in Uttarakhand, the World Bank has recently funded 24 selected ITIs to revamp classrooms, improve infrastructure, and purchase the latest equipment.

From Figure 11, it is clear that intervention has improved the overall outlook of the ITIs and may also garner more respect from the society. It is too early, but if these improvements have a positive impact on learning outcomes, then such changes need to be made in other ITIs as well.

Without World Bank Intervention	With World Bank Intervention
 Building Condition (ITI Khanpur)	 Building Condition (ITI Bazpur)
 Equipment Condition (ITI Dhokane)	 Equipment Condition (ITI Kaladhungi)

Figure 11: Comparison of building and equipment (with and without intervention)
SOURCE: Data from primary survey

The study observed that the peer effects have significant effects on the learning outcomes. In the literature, peers may be class friends, acquaintances, and next-door neighbours. The level of interaction with each peer will be different and the effect on learning outcome will also vary. Existing literature (Hoxby (2000), Black et al. (2013), Angrist and Lang (2004), and Garlick (2008)) provides mixed evidence of the relationship between peers and learning outcome.

The reason behind the ambiguous relationship is due to the presence of heterogeneity and unobserved factors affecting the relationship. In case of ITI, a student may not be friends with others in the class which reduces social interaction time. Lower interaction time will also lower the possibility of any quality time that students could have spent together. In these cases, the onus is on the instructors and ITI administration to conduct different group activities regularly including sports which would allow the students to collaborate with each other and eventually leading to better bonding. In a recent paper, Ajithkumar and Pilz (2018) have found that the low

status of ITI is changing over time and slowly the students graduating out of an ITI are also getting their due recognition.

However, in society, the attractiveness of the ITI is still low and steps such as higher wages may attract more individuals to choose as a career option and improve societal recognition. In our survey also we find that students do not consider aspirational reasons a barrier to learning outcome.

Scope for improvement

The students were also asked to suggest aspects which require improvement. Again, they were given several options like classroom facilities, laboratory facilities, technical staff, etc. The students were asked to rate from 1 to 10, where 10 is the urgent requirement and 1 being the least improved area required.

The aggregate summary is given in Figure 12. Around 90% of the students emphasize on industry visits. It is the most important component of the vocational training and serious attempts are to be made especially in the hill regions where the industries are absent.

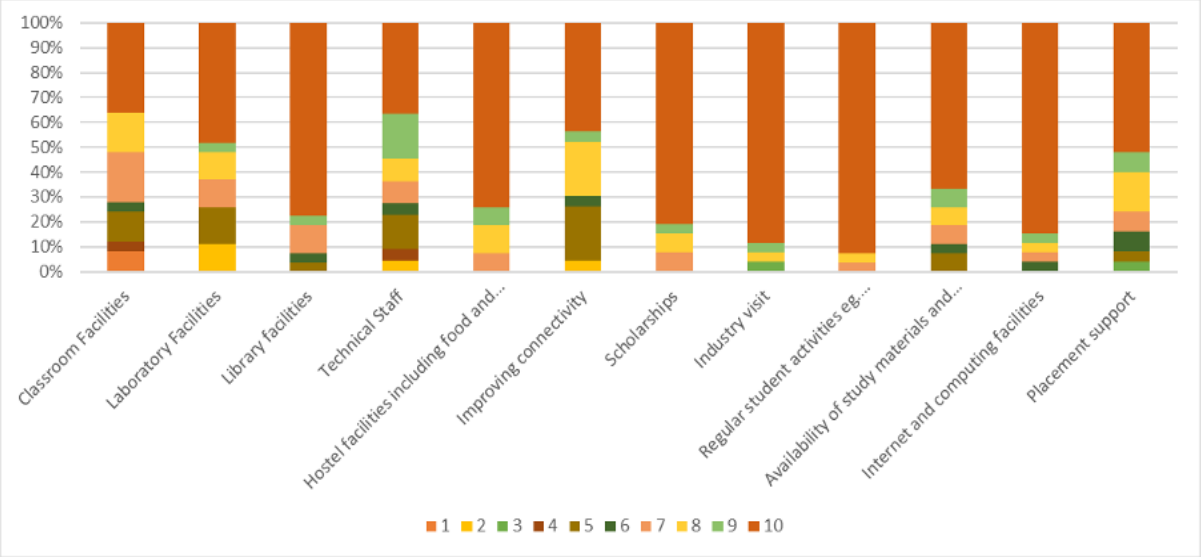


Figure 12: Identified areas for improvement
Source: Data from primary survey

As in the previous paragraphs we found an insignificant effect of peer effects on learning outcomes. This may be improved by organizing regular activities like sporting events, debates, and other group activities. More than 90% of students have given this a rating of 10. Apart from theoretical and practical sessions, regular group activities should be conducted to student-student and student-instructor interaction. Similarly, students also feel that internet and computing facilities must be given importance. Dahalan et al. (2022) through systematic literature review, highlighted the role of digital learning platforms and simulation games in upgrading academic performance, stimulating critical thinking, and motivating the VET students. During the team survey of selected ITIs, it has been observed that several ITIs have reported absence of computer labs or do not provide access to WiFi. Given the world that we are living in, the requirement of internet facility is a necessity and ITI must provide such services. However, proper monitoring is also required to see the students are not misusing these facilities.

More than 80% of students have also suggested the presence of library facilities. Apart from their regular textbooks, the students must also be encouraged to read books related to fiction/non-fiction. These habits should be slowly inculcated for overall development of the student. Scholarships are also an important aspect. Recent hike in fees have discouraged several prospective ITI students from getting enrolment (especially girls). Efforts must be made to provide scholarships to students coming from poorer backgrounds.

More than 50% of students believe the placement support must improve. Majority of ITIs surveyed do not have proper and functional placement cell. The Parliamentary Standing Committee on Labour & Skill Development took cognizance of the employment prospects of ITI students at the national level and suggested establishment of separate placement and entrepreneurship cell within each ITIs. The committee also recommended the amalgamation of ITIs with small and medium-sized enterprises (SMEs). One of the countries that has achieved success by integrating vocational training and SMEs is Germany. Here the SMEs contribute more than half of the country's output and employ around 82 percent of interns with vocational training background.[5] The ITIs must take appropriate steps to appoint Junior Apprenticeship &

[5] https://www.bmwk.de/Redaktion/EN/Dossier/sme-policy.html

Placement Officer (JAPO) along with selection of student representatives in the cell. To highlight, JAPO should be a separate appointment (not from the existing set of instructors) and the person hired must have the required connections to improve the placement drive.

4.2 IMPROVING PLACEMENT OPPORTUNITIES – A SHARED GOAL

We now turn our focus on how to increase/improve the placement opportunities? To be able to find a solution, it is important to first identify what the student is willing to do after the ITI course? The career options post-ITI are many but in the absence of guidance, there is a vacuum. The students may choose to go for higher studies like diploma courses or register for short-term courses in Advanced Training Institutes (ATIs) focused specifically on industry requirements or take an All India Trade Test (conducted by NCVT) which would provide a certificate. Similarly, post-ITI, the students may get several jobs ranging from joining a public sector undertaking or in the private sector, or even jobs in foreign countries in the backdrop of rising cross-border negotiations for semi-skilled labour exchanges and migratory patterns.

According to the Tracer Study-Employment Outcomes of ITI Graduates in Uttarakhand (2023)[6], around 65 percent of students graduated with OJT, experience a higher chance of being employed. Thus, it is critical to encourage more students to participate in OJT. For increasing OJT opportunities, the institutes may sign MoUs or have an increasing tie-up with industries. These opportunities will allow the students with practical skills required to excel in their fields.

However, apart from industry connect or MoUs, there are several other factors that may affect the students enrolling for OJT.

4.2.1

First factor is the distance **of the industry**. According to the Uttarakhand Skill Gap Study (2021), more than 55 percent of respondents (see Table 3) are looking for jobs

[6] https://dgt.gov.in/sites/default/files/Final_Tracer_Study_Report_Uttarakhand.pdf

within the district they reside in. 65 percent of these respondents are female who do not wish to relocate to another district or state in search of jobs.

Willingness to migrate	Male	Female	Transgender	Total
No, I want job within my district	50.8%	65.3%	0.0%	55.7%
Yes, outside my native district but within Uttarakhand	30.0%	27.8%	100.0%	29.3%
Yes, outside Uttarakhand but within India	16.5%	6.0%	0.0%	12.9%
Yes, outside India	2.7%	1.0%	0.0%	2.1%
Total	100.0%	100.0%	100.0%	100.0%

Table 3: Willingness to Migrate
SOURCE: Uttarakhand Skill Gap Study, Department of Rural Development, Govt. of Uttarakhand[7]

In Uttarakhand, majority of the industries are located in the three plain districts of Haridwar, Dehradun, and Udham Singh Nagar. So, a student from Pithoragarh may be unlikely to travel to the plain districts for OJT as this would mean spending a significant amount on travel and lodging.

The Tracer Study (2023) reports that more than 50 percent of respondents have reported a family income (monthly) of around Rs. 5,000-15,000. And for an average family size of 4, this monthly income is too low and the average student finds it difficult to fund his/her travel for OJT. One possible solution is if the individual ITIs provide funds/assistance for OJT. The assistantship could be in the form of travel and lodging reimbursement, or providing travel and accommodation support, or stipends during the OJT period to cover their expenses. Stipend or remuneration will motivate more students to undertake OJT.

Another possible option is receiving funding from the industry. Depending on the number of students willing to do OJT, the companies may decide on the amount to be spent.

[7] https://ukrdd.uk.gov.in/wp-content/uploads/2022/08/Skill-Gap-Report_Uttarakhand.pdf

4.2.2

In our primary survey, several ITIs have reported lack of industries in the area as an important factor behind low employment in the region. According to the Uttarakhand State Employment Generation Strategy's (2023)[8] report, for sustainable livelihood there are two major growth-driver sectors- transforming hill agriculture with horticulture and promotion and strengthening of tourism. To increase employment, the Micro, Small, and Medium Enterprises (MSMEs) sector will be linked with growth driven sectors. As can be observed from Table 4, around 44 percent of total MSMEs are situated in the plains but the government of Uttarakhand is also taking steps like implementing One District Two Product (ODTP) with special focus on the hilly regions.

District	Total MSME Industries	Total Employment in MSME
Haridwar	10616 (16.7%)	93591
U.S. Nagar	8221 (13%)	66007
Dehradun	8824 (13.9%)	54857
Pauri	6244 (9.9%)	22292
Nainital	4454 (7%)	21061
Tehri	4555 (7.2%)	13273
Almora	4171 (6.6%)	9833
Pithoragarh	3224 (5.1%)	7402
Uttarkashi	4172 (6.6%)	8176
Chamoli	3331 (5.3%)	7372
Champawat	1694 (2.7%)	4571
Rudraprayag	2007 (3.2%)	5295
Bageshwar	1870 (3%)	4176

Table 4: District-wise distribution of MSME in Uttarakhand (up to 2019)
SOURCE: Uttarakhand State Employment Generation Strategy (2023)

To take advantage of growth-driving sectors, the ITIs in specific districts may offer sector unique trades. For instance, Mussorie attracts a large number of domestic and

[8] https://cppgg.uk.gov.in/wp-content/uploads/2024/04/Uttarakhand-State-Employment.pdf

foreign tourists, so GITI Mussorie may offer trade related to the tourism industry such as Photographer, Tourist Guide, and Travel & Tour Assistant. Similarly, Champawat is popular for herbal aromatic products so here trades such as Floriculture & Landscaping, Agro Processing may be offered.

Employment may be generated by linking the MSME with area specific trade. Thus, absence of big companies like Tata Motors or Ashok Leyland from the hills does not necessarily imply that the region has no industry. Appropriate steps are to be taken to offer region-specific trades in each ITI (especially hill districts) which will motivate the local youth to stay in the hills and contribute to the local economy.

4.2.3

A dedicated placement and counselling cell must be incorporated in various ITIs. In our survey, only a few ITIs have reported establishing a dedicated placement cell but they are not yet functional. According to the Tracer Study (2023), around 83 percent of the respondents have acknowledged the different services of Training, Counselling, and Placement Cell (TCPC) in getting placements. The TCPC must be given a dedicated space in the ITI and to increase the placement opportunities includes members such as respective ITI principal, JAPO/group instructor, and trade specific instructor.

Some of the services offered are organising job fairs, mock interviews, training on using the computers, CV writing, personality development, English speaking, and guidance on career opportunities. A functional TCPC in the ITIs may enhance the employability of the ITI graduates in the state.

4.2.4

Creating a strong alumni network also helps the students with placement. The present scenario offers several ways to connect with the passed-out students. The ITIs may use social networking sites like LinkedIn to track the past students and during recession/downturn the ITIs may seek their help in placements. Several big institutes like IITs/IIMs tap their alumni network to place their current students during desperate times.[9] However, the ITIs interviewed for the diagnostic study, have

[9] Refer the link: https://economictimes.indiatimes.com/jobs/fresher/iims-tap-alumni-for-graduates-job-placement/articleshow/107301061.cms?from=mdr

reported no such connections. Several ITIs in the sample do not even know what the students are doing after completing the course.

4.2.5

As the job market is dynamic and full of uncertainties, it is critical to conduct skill gap mapping regularly to identify the sectors hiring more workers, and if a skill gap exists, then TCPC must provide training to the trainees.

The skill gap study will also help in to understand the trades that are outdated and replace them with the newer ones. Figure 13 below highlights the different sectors where the respondents prefer to get their skills. It is interesting to find that the respondents prefer the service sector and offering trade in such sectors will increase employment opportunities.

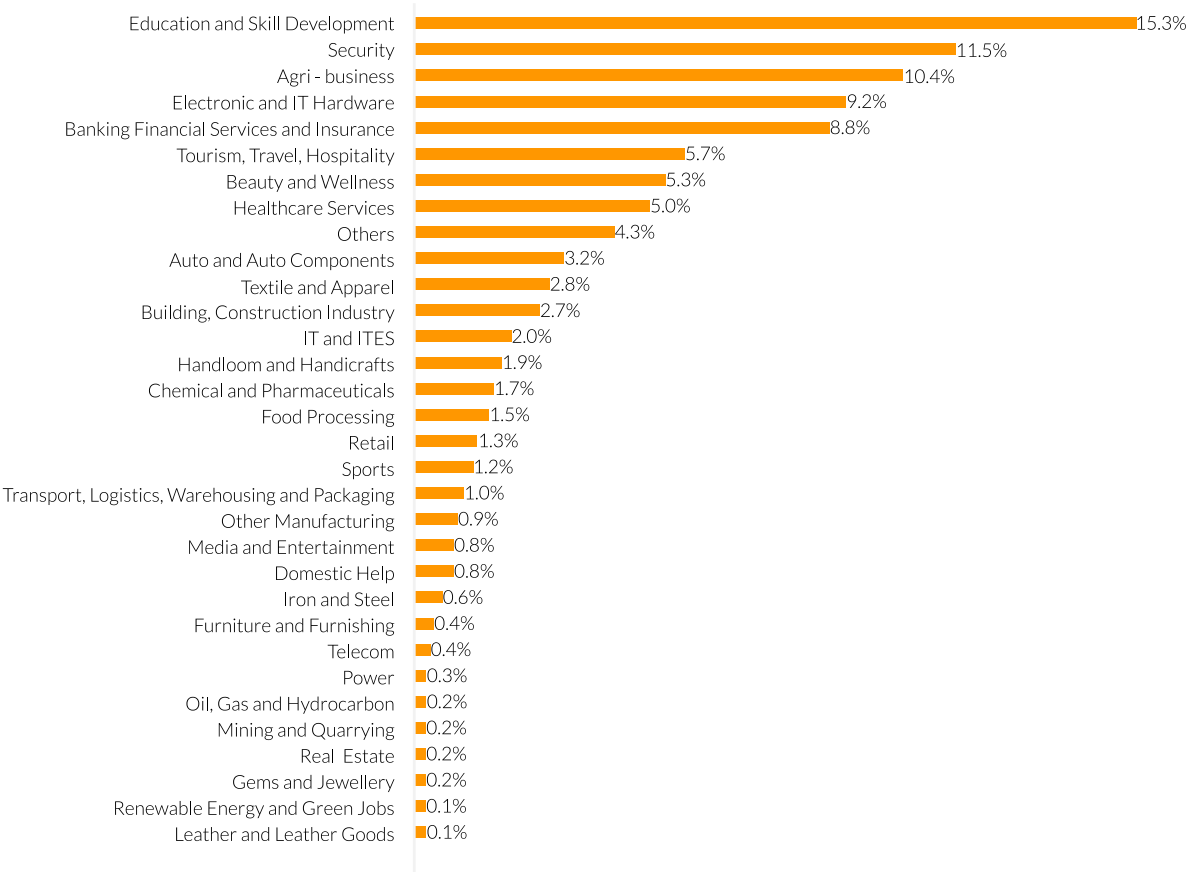


Figure 13: Sectors preferred for skill training
SOURCE: Uttarakhand Skill Gap Study, Department of Rural Development, Govt. of Uttarakhand

The 56th Parliamentary Standing Committee on Labour, Textiles and Skill Development in its report highlighted the global skill gap especially in 16 developed and Gulf co-operation countries which would create around 3.5 million jobs.[10]

The committee has urged the Ministry of Skill Development and Entrepreneurship (MSDE) to work closely with the Ministry of External Affairs (MEA). These jobs are in sectors such as healthcare, science, IT, construction, tourism, among others. The candidates should be 10th pass, ITI graduate, and diploma in specific trades.

To increase employment and smooth international mobility, the 2023-24 Union Budget announced the setting up of 30 Skill India International Centres (SIIC). One such SIIC is in Varanasi which has till date deployed 2,813 individuals abroad.

4.3 ASSESSMENT OF SCHEMES: FOCUS ON CRAFTSMEN TRAINING, SKILL STRENGTHENING ETC.

The DGT has considered different schemes and introduced new initiatives to improve the skill environment. Some of the important schemes and their features are discussed below:

4.3.1 Craftsmen Training Scheme (CTS)

The scheme was introduced in 1950 to guarantee skilled workers in the domestic industry, improve quality of craftsmen over time, and to make the youth more employable.

This scheme has a list of 152 NSQF compliant trades. The duration of the trades varies from 6 months to two years, and the qualification requirement varies from 8th class pass to 12th class pass. In CTS, more emphasis is given to practical training (which consists of 70-80% of the duration) as compared to trade theory and science and engineering drawing.

Apart from providing trade related information, the scheme also attempts to enhance the overall personality development of the trainees by introducing a module on

[10] Available at: https://eparlib.nic.in/bitstream/123456789/2975913/1/17_Labour_Textiles_and_Skill_Development_56.pdf

"Employability Skill." Over time several new initiatives have been taken to help the trainees acquire new skills and improve job prospects.

4.3.1.1: Flexi MoUs have been signed with Industrial Training Partner (ITP) and DGT. ITP will train candidates as per their skill requirements which will make the trainees industry ready.

4.3.1.2: Dual System of Training (DST) combines theoretical training from ITI and practical training from the industry. Apart from providing trade related information, the scheme also attempts to enhance the overall personality development of the trainees by introducing a module on "Employability Skill."

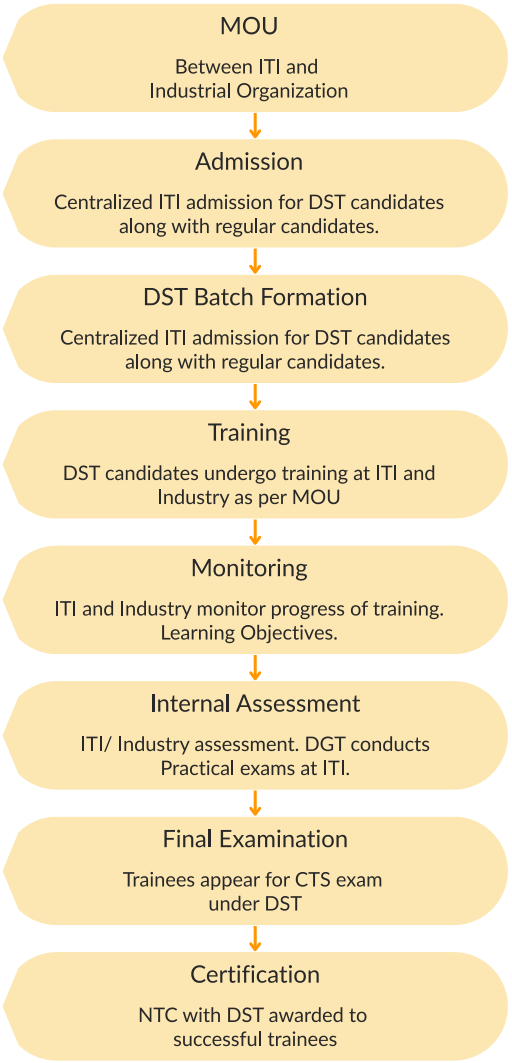


Figure 14: Process Flow of DST

Figure 15 below shows the total number of courses offered under different durations. For instance, there are 11 trades with one- year duration (1200 hour+150 hours of OJT/Group Project).

To encourage industry participation, this scheme has undergone revision such as reducing the minimum employment criteria for both engineering and non-engineering trades (for engineering trade, earlier requirement was 200 employees and now it is 40) as well as minimum turnover of the industry (for engineering trades it is Rs. 1 crore annually, and Rs. 10 lakhs annually for non-engineering trades).

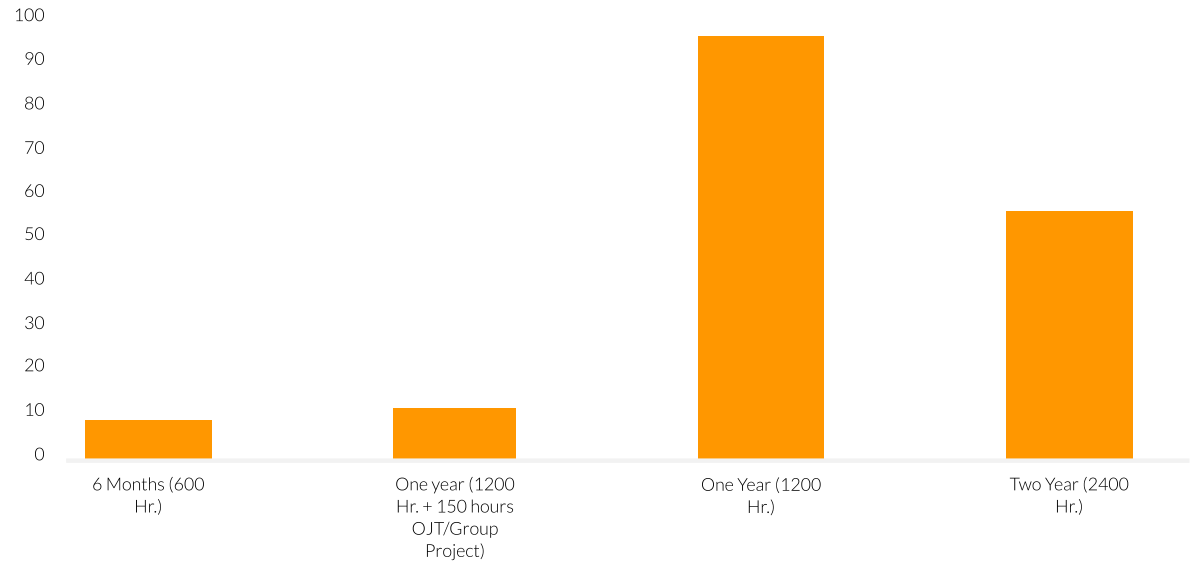


Figure 15: Number of Courses under DST (duration-wise) at the National Level
SOURCE: Authors' illustration using data from https://dgt.gov.in/Dual_System

4.3.2 Craft Instructor Training Scheme (CITS)

CITS trains vocational instructors for ITIs. This allows the prospective instructors the necessary skills to train the prospective trainees for the industry. NCVT has mandated that all instructors must have CITS training. Using CITS dashboard[11], it is seen that between 2018-19 and 2021-22, around 456 trainees appeared for the exam in the

[11] CITS Dashboard (https://lookerstudio.google.com/reporting/1efc5dc4-b386-41a1-ab67-72bc8dc711e3/page/p_wk0y9ukb1c)

state and 360 of them cleared it. Out of 456, 73.3 percent were male and 26.7 percent were female.

The popular trades in which the trainees took the exam were Fitter, Electrician & Wiremen, Machinist & Operator Advance Machine Tool, and Mechanic Motor Vehicle.

Even though NCVT has mandated CITS, analysing the primary data reveals that barring a few ITIs, only 57 percent (on average) instructors have CITS training (Figure 16)

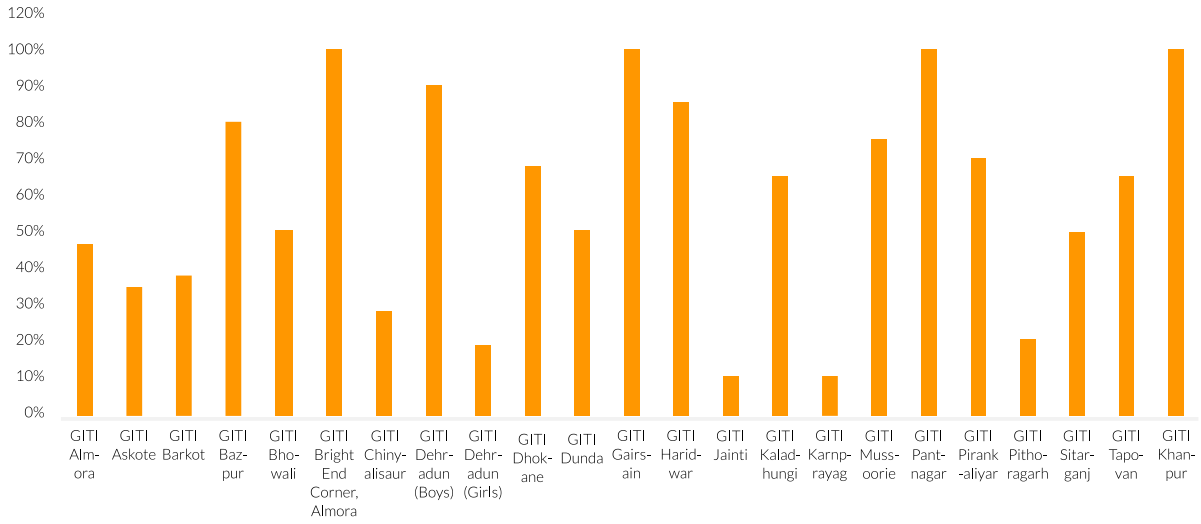


Figure 16: Share of Instructors trained under CITS
SOURCE: Data from primary survey

4.3.3 Upgradation of ITIs through PPP

MSDE is helping in modernizing and up-gradation of ITIs (especially Government ITIs) through public private partnership (PPP). As of 2017, a total of 43 Government ITIs in Uttarakhand is selected for up-gradation.

Under this scheme, an industry partner is associated in aiding as well as providing machinery and equipment to the ITIs for upgradation. The partner will also train the instructors and provide OJT opportunities to trainees. Such an arrangement allows the ITIs to improve vocational training and increase chances of employment. For the current study, there are 13 Government ITIs under the PPP mode.

They are GITI Jayanti, GITI Bazpur, GITI Sitarganj, GITI Dhokane, GITI Almora, GITI Barkot, GITI Bright End Corner, GITI Kalsi, GITI Mussoorie, GITI Piran Kaliyar, GITI Tapovan, GITI Karnaprayag, and GITI Delna.

Bharat Heavy Electricals Ltd. (BHEL) is the industry partner of GITI Bazpur. Post-PPP scheme, it is observed that GITI Bazpur has been able to open new trades like Draughtsman Mechanical, Painter General, and Fashion Design & Technology. These trades have also allowed them to significantly increase the seating capacity from 60 to 216.

4.3.4 Upgradation of Government ITIs into Model ITI

Model ITI scheme was launched in 2014 to upgrade an ITI in every state to develop as an institution of high-quality training delivery, best practices, and effective industry relationship with local industry.

GITI Haridwar has been selected as model ITI in Uttarakhand. The report of the Third Party Evaluation of Upgrading of existing Government ITIs into Model ITIs[12] finds that transforming an ITI into a Model ITI has a positive impact on seat utilisation, pass out, and placement.

4.3.5 Skills Strengthening for Industrial Value Enhancement (STRIVE)

STRIVE programme is a World Bank assisted Government of India project. It is a Central Sector Scheme (CSS) which covers the following areas:

i. Improving performance
ii. Improving teaching and learning
iii. Improving and broadening Apprenticeship training
iv. Improving capacities of state governments to support ITIs and Apprenticeship training

Around 500 ITIs from 34 states/UTs have been selected for the programme. According to DGT[13], a gender study has found a rise in female participation from 9.7 percent to

[12] https://dgt.gov.in/sites/default/files/Final_Model_ITI.pdf
[13] https://dgt.gov.in/Strive

20.5 percent. This programme has also trained 548 trainers in Drone Technology. The Tracer Study of ITI Graduates in Uttarakhand reports that ITIs under this programme have performed better in terms of providing information on specific careers and display of vacancies than non-STRIVE ITIs.

The same report also finds a higher proportion of unemployed graduates graduating from STRIVE ITIs. However, the graduates who find jobs have a higher chance of earning in the income bracket of Rs. 10,000-Rs. 14,999.

In Uttarakhand, GITI Haridwar and Kalsi has been selected for this programme. According to the annual financial details shared by GITI Haridwar, around Rs. 4,44,000 (in lakhs) has been spent on purchasing new machines in 2023. Similarly, in the same year Rs. 6,50,979 (in lakhs) has been used to purchase computers.

4.3.6 National Apprenticeship Promotion Scheme (NAPS)

MSDE launched NAPS in 2016 to promote apprenticeships training by providing financial incentives to the establishments. The scheme has two components:

i. Sharing of 25 percent of prescribed stipend subject to a maximum of Rs. 1,500 per month per apprentice with the employers.
ii. Sharing of basic training cost in respect of 20 percent of apprentices who come directly to apprenticeship training without any formal trade training.

The apprenticeship portal provides state-wise apprenticeship information. For Uttarakhand, it is observed in Figure 17 that since 2018-19 there has been a steady increase in apprentices engaged in NAPS.

However, there is a gap between apprentices engaged and completed which implies that a significant number of apprentices drop out of NAPS and the gaps widen in the last two years.

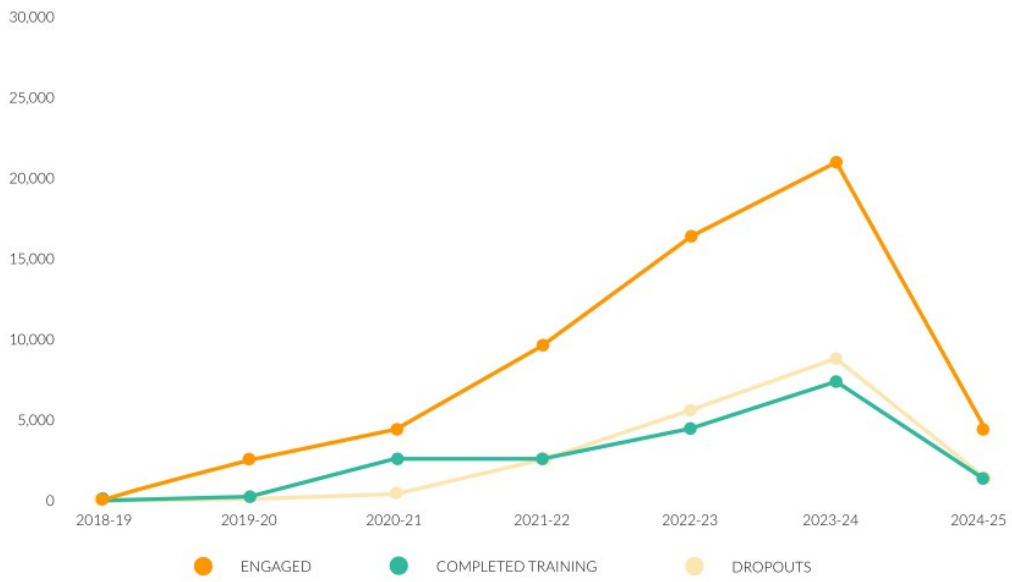


Figure 17: Apprentices Engaged vs Completed in Uttarakhand
SOURCE: https://dashboard.apprenticeshipindia.org/landingSummary.do

4.4 RANKING OF ITIS BASED ON DATA ENVELOPMENT ANALYSIS (DEA)

In this section we present the results obtained from the performance evaluation of 31 ITIs in the state out of the 32 selected for this study because one ITI is non-operational. The analysis started with considering 3 different outputs. The descriptive statistics of variables used in the analysis are presented in Table 5 below and the rankings of the institutions are presented in Table 6.

The number of admissions, the number of pass-outs and the grading provided to the institutions prepared by the DGT in two phases consisting of 43 parameters in phase 1 and 27 parameters in phase 2.

We could have used other significant variables as outputs in the service production process such as number of drop-outs (a bad output which should be controlled and minimized), total fees collected, number of placements each year and the total number of MOUs, OJTs, etc. However, we do not have information on all these variables for all

the institutes. In the June 2018 released grading of the institutions, 24 out of the 32 selected institutions were ranked and that number dropped to 21 in the January 2022 grading. Further, since the parameters are different in the two grading frameworks, it was difficult to combine them and use it as an output.

Therefore, although the grades are useful in decisions regarding STRIVE funding irrespective of the offering SCVT or NCVT curriculum-based certificates, increase in the number of trades and additions of units to existing trades, etc. their use for performance evaluation remains limited.

We present few suggestions in this report to improve data management systems so that the performance evaluation is a regular exercise and a holistic approach is useful to rank institutions.

	No. of Admissions	No. of Pass-outs	No. of Classrooms	No. of Laboratories	No. of Faculty
Mean	16	10	8	4	10
Std. Deviation	6	6	8	6	11
Minimum	3	1	1	0	1
Maximum	29	21	32	25	49
Count	31	31	31	31	31

Table 5: Descriptive Statistics
SOURCE: Authors' own calculations

	Radial		Non-Radial & Non-Oriented	
	VRS	CRS	VRS	CRS
Dunda	1	1	3	3
Narainbagad	2	5	5	2
Pithoragarh	3	22	2	18
Karnprayag	4	8	4	16
Gairsain	5	2	1	1
Dhulchina	6	3	8	3
Haridwar	7	23	7	24

Dharchula	8	6	8	6
Bhowali	9	17	16	19
Kashipur	9	4	8	3
Dehradun Boys	9	31	6	29
Dhokane	12	13	12	8
Sitarganj	13	10	13	10
Almora BEC	14	9	14	7
Kaladhungi	15	7	19	14
Delna	16	16	11	11
Chinyalisaur	17	18	20	15
Mori	18	14	18	13
Pantnagar	18	12	17	12
Khanpur	20	11	15	9
Jaianti	21	15	24	20
Mussoorie	22	20	21	17
Tapovan	23	19	25	21
Kalsi	24	21	22	23
Haldwani Boys	25	30	28	31
Piran Kaliyar	26	25	31	30
Bazpur	27	27	26	27
Askote	28	24	23	22
Almora	29	26	30	28
Barkot	30	28	27	25
Dehradun Girls	30	29	29	26

Table 6: Ranking of selected Industrial Training Institutes in Uttarakhand
SOURCE: Authors' own calculations

The selection of inputs involved choice between available variables such as number or trade, number of faculty, number of classrooms, number of workshops, total yearly expenditures, and public-private partnerships. Again, we do not have consistent data on expenditures and public private partnerships (with regard to sharing of costs and

investments to improve the learning). Therefore, we narrowed down to number of trades, faculty, classrooms and workshops.

However, it is a tautology that number of trades available in an institute determine the remaining inputs and therefore, we use it as a weight to scale the two outputs and our models considered have only three inputs.

The final models to assess the performance of the institutes consider two outputs, admissions as a ratio of number of trade and pass-outs as a proportion of number of trade and three inputs, number of faculty, workshops, and classrooms.

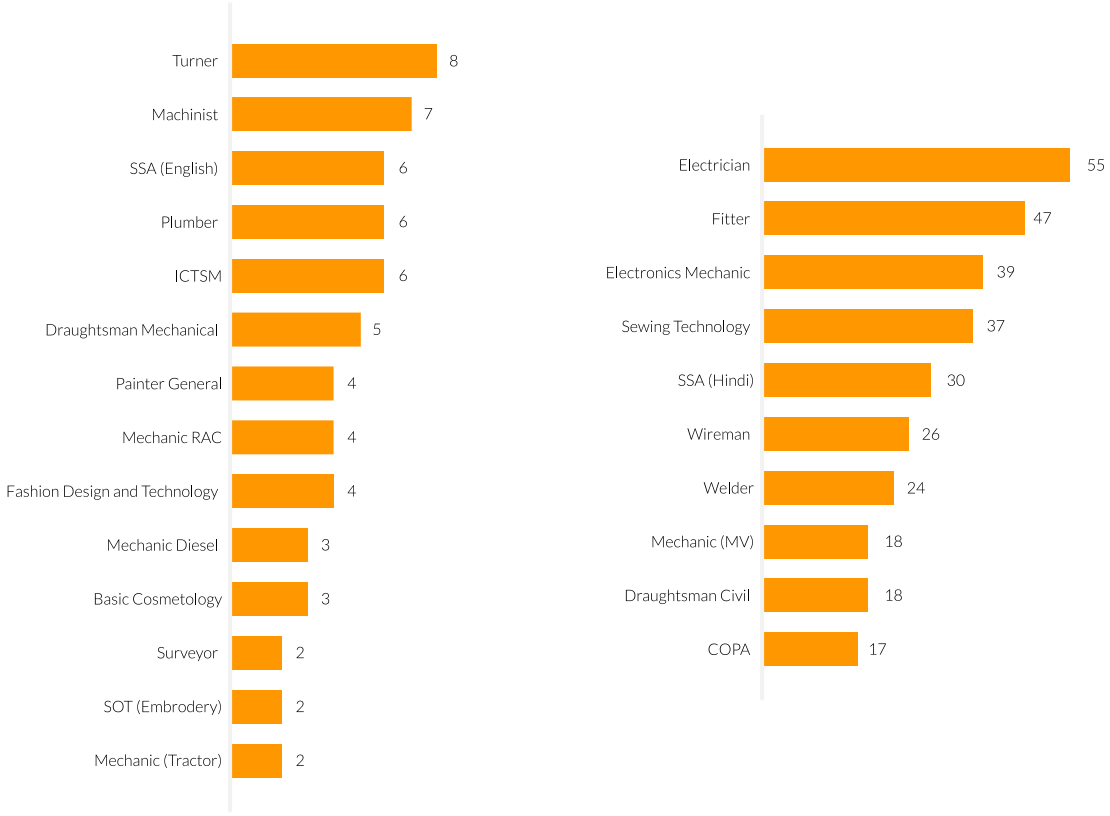


Figure 18: Trades that are offered in multiple ITIs in Uttarakhand
(No. of it is in parenthesis)

In Figure 18, trades that are offered by different institutions in the state of Uttarakhand are listed. The trade that is offered in maximum number of ITIs is Electrician followed by Fitter. There is high demand for two courses namely, COPA and Fashion Design and Technology. However, as the number suggest, only a few institutes

are providing the same. It would be rational to explore and identify institute and locations where the trades can be made available to cater to the local demand.

Another possible enquiry is to explore the reasons behind such trade offerings and whether these trades are successful in its delivery in terms of students enrolled and pass outs.

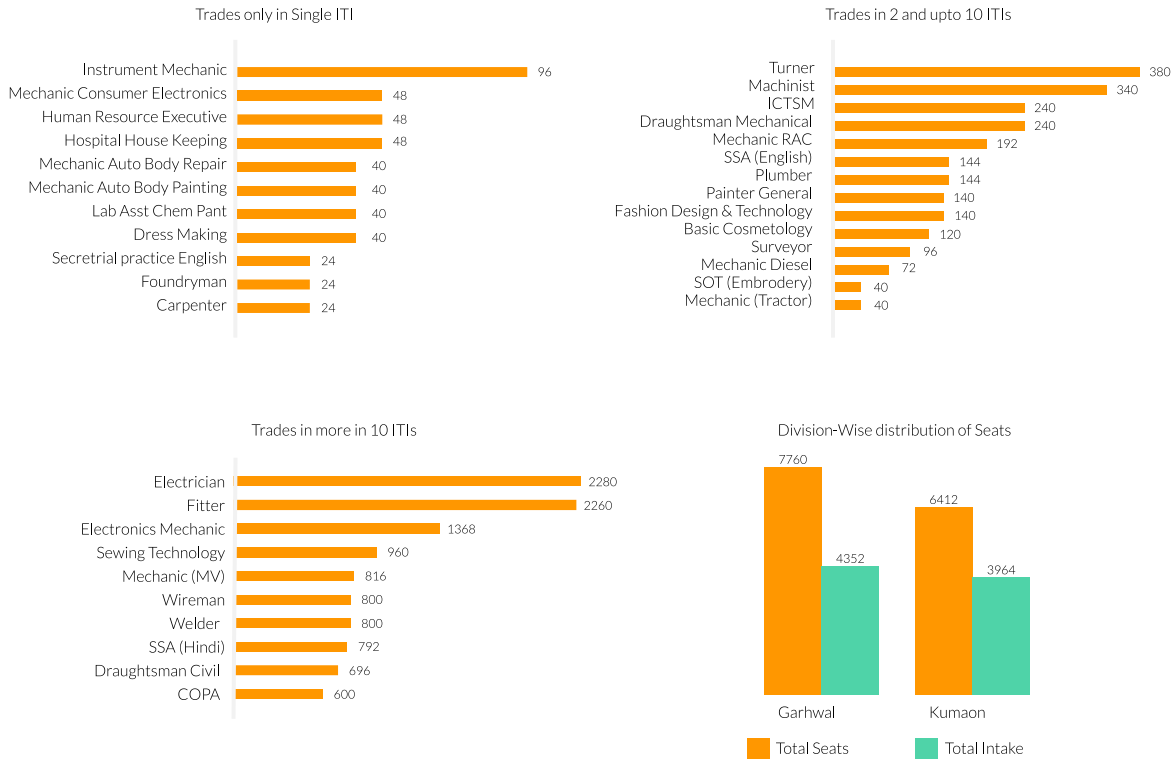


Figure 19: Trades that are offered in multiple ITIs in Uttarakhand (No. of ITIs in parenthesis)

In Figure 19 above, we see that there are many institutes that are offering training in only single trade.

These are smaller ITIs and have very limited infrastructure, human capital and capacity. It is also important to argue whether or not there is scope for enhancing the number of trades in such ITIs.

The location of such ITIs is detrimental for their growth as the demand for courses are typically low in remote parts of the state. This calls for innovation and further

development of the trades keeping in mind the locale specific demands and requirements. The total number of intake and seats are higher in Garhwal division than in the Kumaon division.

It may be concluded that proximity to major cities including the national capital and state capital, and supported by the growth of the industrial activities may be a reason behind this difference in number.

Figures 20 to 23 in the following pages presents trends of total admissions, pass outs, dropouts and number of trades in the 31 ITIs selected for this study. Further, for the sake of clarity and following the division-wise distribution of seats as shown in Figure 2 above, we have presented the division-wise data.

Garhwal has more seats than the institutes in Kumaon and therefore, the intake is also lagging in the later. During the COVID pandemic years, enrolment has dropped in mostly all ITIs and thereafter, there has been a sharp increase in a few.

For example, Karnprayag, Barkot and Dehradun Boys ITIs. But, Piran Kaliyar ITI has a different trend as is the case with Dhaulchina and Bazpur ITIs in the Kumaon division. Dropouts are low in Nodal ITIs such as Karanprayag, Haridwar, and relatively higher in smaller institutes.

A note here is necessary and that is with regard to the record keeping of number of pupils admitted, choosing to drop, actually passing the trade and if there is a case of changing the trade or joining another Institute. Lack of such data makes it practically impossible to draw broader conclusions from the data.

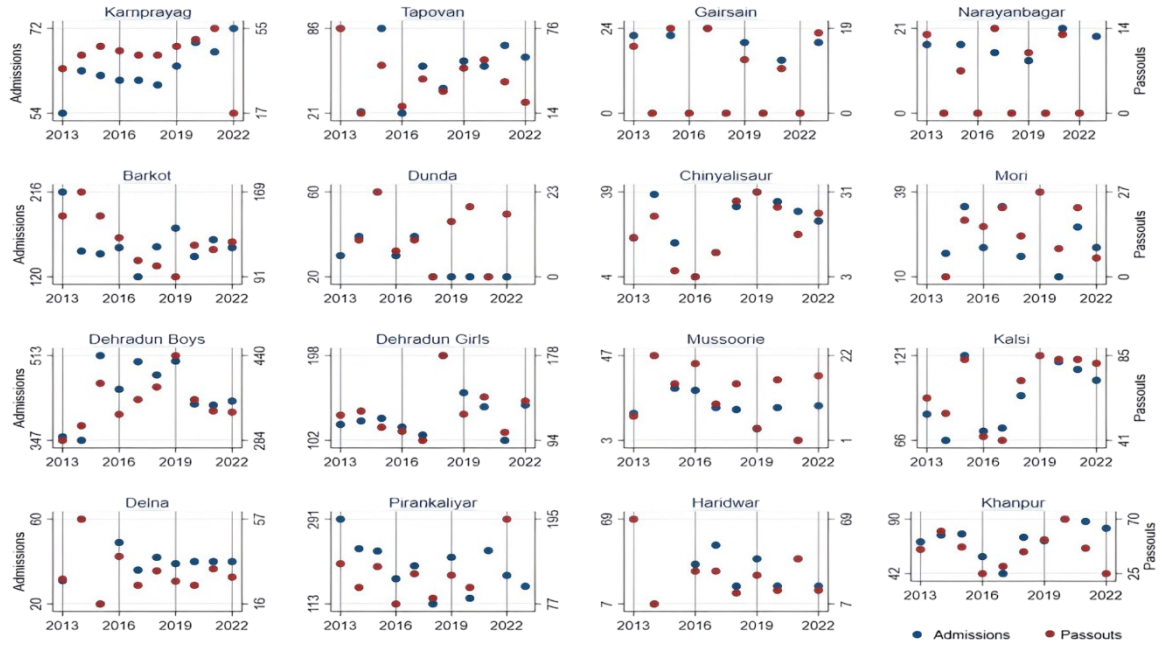


Figure 20: Trends in Admissions and Pass-outs in selected ITIs in Garhwal Division

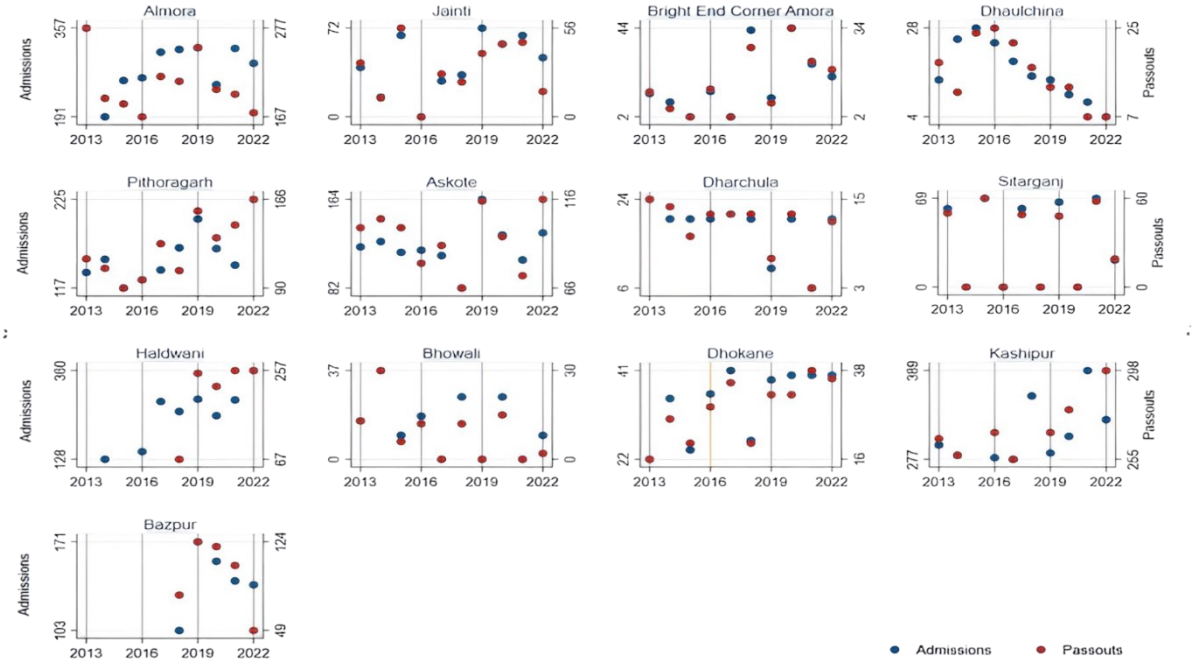


Figure 21: Trends in Admissions and Pass-outs in selected ITIs in Kumaon Division

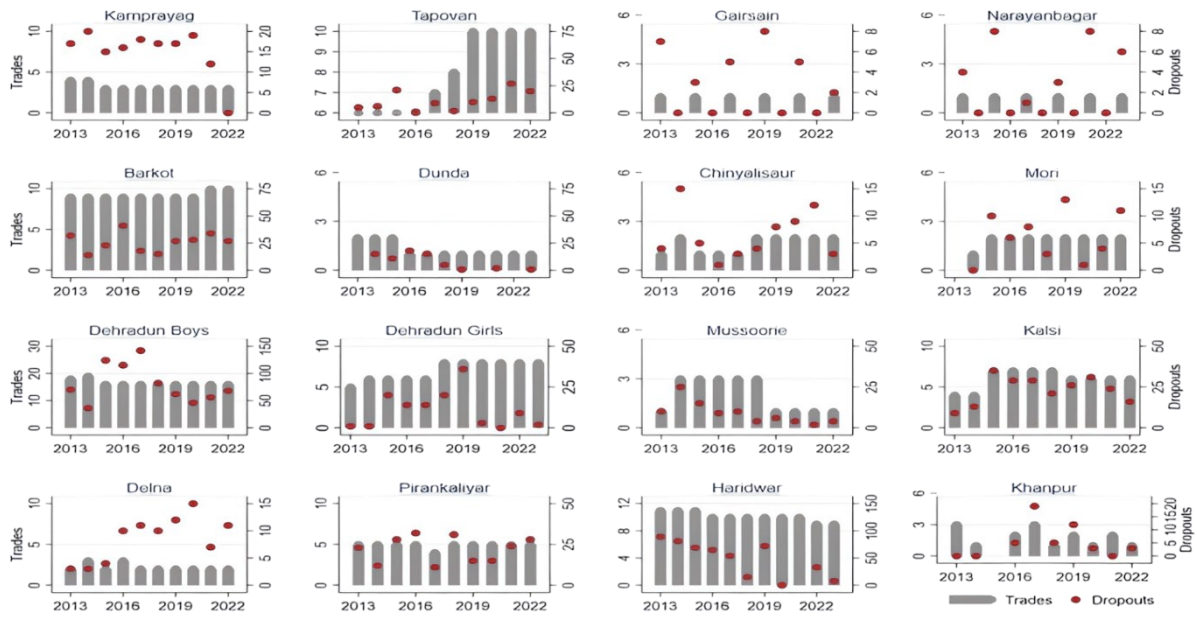


Figure 22: Trends in Dropouts and Number of Trades in selected ITIs in Garhwal Division

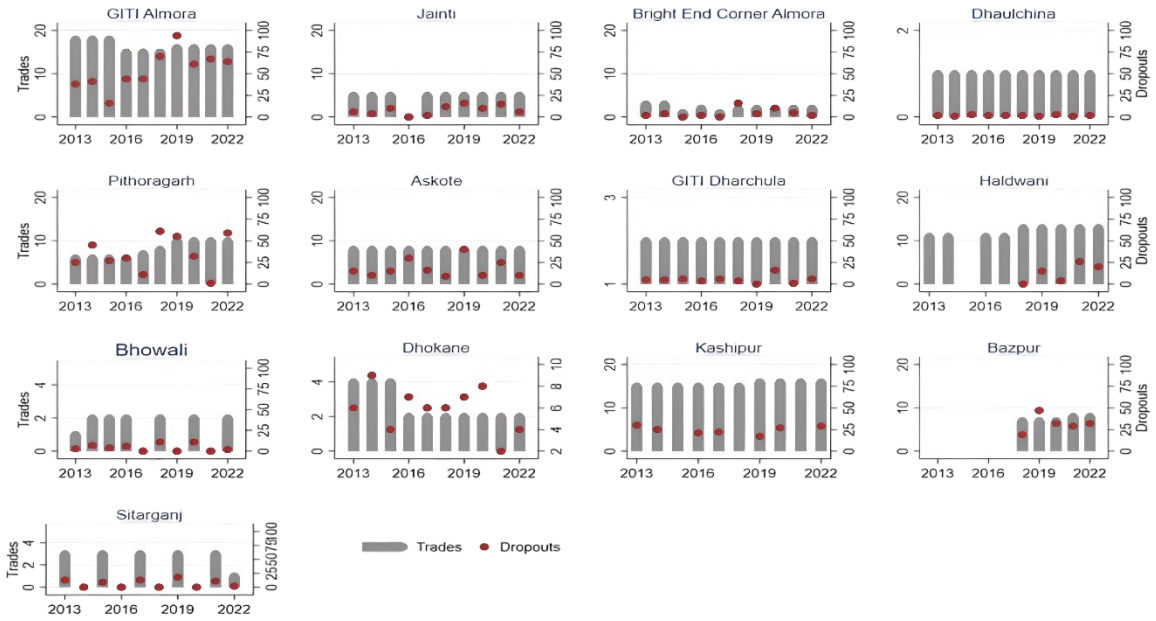


Figure 23: Trends in Dropouts and Number of Trades in selected ITIs in Kumaon Division

The results are surprising as the four different models presented almost similar rankings. Statistically, there is a high degree of concordance between the models as the Kendal's concordance index is high (an index of 0.83, closer to 1 imply concordance).

Therefore, interpreting results from any one model out of the four models estimated is sufficient to provide a statistically true picture. But, in our understanding and given the exposure and experience with the institutions, the results are puzzling and point out the need to re-allocate resources from few institutions that are surplus with inputs and those who may have too few of the identified inputs.

It is important to share that the assumption in the production process is that there are effective managerial decisions to control inputs but there is no possibility of influencing the outputs. Optimization is feasible only with reduction of additions of key inputs.

The results in Figure 24 may indicate that there are a few institutes that are too big to sustain and are inefficient. For example, GITI Almora, GITI Dehradun Boys and GITI Haldwani Boys with average annual student strength of 300.

It was observed that ITIs with relatively lower number of average students, such as Gairsain, Narainbagar, Karnprayag, Dunda and Dhulchina have performed better than the ones with higher number of average students, such as Barkot, Almora, Kalsi, Piran Kaliyar, Askote and Tapovan, among others.

It has also been observed that with a relatively lower number of average students per trade, classroom, labs and faculty have performed better than the ones with higher number of average students per trade, classroom, labs and faculty. Also, it was observed that institutes with low students-teacher average performed better than the one with higher students-teacher average.

Hence, it can be inferred that the performance of the ITIs can be enhanced reducing the pressure on the inputs. It was also expected that new ITIs would have performed better than the old ones or vice versa. However, there were mixed responses with respect to the year of establishment on the performance of the institutes.

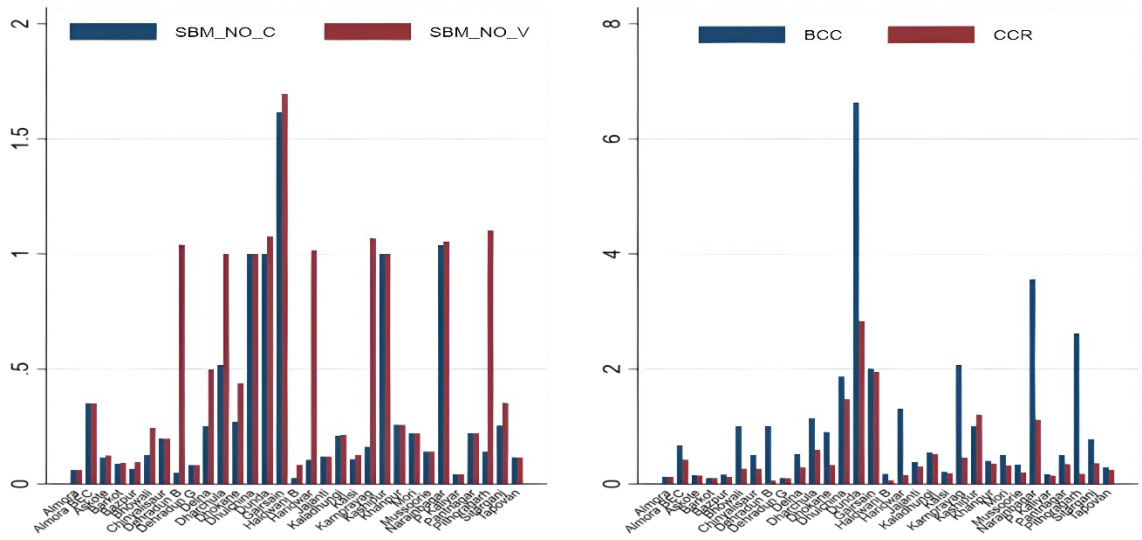


Figure 24: The Super Efficiency Scores of the selected ITIs
SOURCE: Authors' own representation using data as shared by the ITIs.

SBM_NO_C and SBM_NO_C are the non-radial, non-oriented super efficiency model results based on constant returns to scale and variable returns to scale respectively.

These are presented in the left panel. On the right panel, BCC and CCR are the input-oriented radial super efficiency model estimates under the assumptions of constant returns to scale and variable returns to scale.

4.5 POLICY PRESCRIPTION

For Students

The primary survey of selected ITIs reveal that students consider factors such as old pedagogy, less of hands-on training, limited exposure, and limited lab facilities for their low learning. Thus, it is critical to address these challenges to enhance learning outcomes and increasing employment opportunities.

At the Institute level

The institute must provide a conducive environment to enhance the learning experience. This includes student activities like organising sports tournaments, up-to-date equipment, skilled instructors, functioning placement and counselling cell, and

encouraging graduated students to visit the institute to meet the currently enrolled students.

For Key Stakeholders including DSDE

"One size fit all" theory will not work. It is critical to consider the local requirements and introduce new generation trades. Due to the presence of internet facilities, information availability has become very easy and students are aware of the changes that are happening.

Thus, with more exposure to information, the students are willing to enrol in trades like AI, Drone Pilot, and IoT Technician which has more relevance in the current world and may improve their chances of getting placed or help them to become entrepreneurs.

Apart from trades, the administration must ensure availability of skilled instructors. Efforts are required to ensure that the instructors are constantly seeking skill upgradation for continuous career progression. Because if the instructors do not have industry exposure then it will be difficult for them to train the students as per the industry requirement which is constantly changing.

Industry linkages

As has been highlighted before, industry linkages are an important part in employment generation as well as providing exposure to the industry requirement. Industry linkages can be enhanced by signing MoUs or inviting industry experts for guest lecture.

In Uttarakhand, there is a clear hill and plain divide in terms of industry presence. But, as seen earlier, MSMEs may be tapped for employment generation by offering location specific trade. This policy may also help in reducing out-migration. The central government has also considered the availability of job opportunities abroad.

The different ITIs in the state must ensure the availability of youth in the state for jobs in foreign countries. These opportunities will not only help the livelihood of these individuals and improve their family income, but will also help the economy of the country by increasing the foreign remittances inflow.

CHAPTER 5

Recommendations

Based on the study and the insights drawn from it, the following recommendations are made to transform the ITIs in the state of Uttarakhand. The recommendations are made considering all aspects viz, female student participation, staff availability, infrastructure, capacity building and training of instructors, collaboration with Industries, etc. that would influence the function of ITIs and hence the end results expected from these institutions. The recommendations are also categorised as short-term and medium-term actions to enable phased and structured approach to address existing issues.

5.1 SHORT-TERM (IMMEDIATE ACTIONS, 1-2 YEARS)

Hiring Ad-hoc Staff

To cater to the challenge of teaching and administrative staff shortage in the ITIs in the state, it is proposed that the department fills currently vacant positions on an ad-hoc basis. One effective strategy could be to leverage the ITIs' alumni network. Alumni, being familiar with the institution's culture and curriculum, can provide immediate and knowledgeable support as ad-hoc staff. This approach not only helps in quickly filling vacancies but also strengthens the connection between the institution and its former students. The department should develop clear guidelines and criteria for the selection and hiring of ad-hoc staff. This will ensure that the quality of education and administrative efficiency is maintained.

Strengthen the Framework for Continuous Professional Development for Instructors

With the rapid advancement of technology and the evolving needs of students, it is imperative that the department establishes a robust framework for Continuous Professional Development (CPD) for instructors. This framework should be designed to ensure that instructors remain proficient in both technical skills and educational methodologies throughout their careers. A well-defined instructor life cycle journey is essential. This journey should outline the various stages of an instructor's career and

provide structured opportunities for professional growth and development at each stage. The CPD framework must include regular training sessions, workshops, and seminars focused on the latest technological advancements and pedagogical techniques. Additionally, the framework should facilitate access to certification programs and advanced degrees to further enhance instructors' qualifications. Furthermore, the department should implement a mentoring system where experienced instructors can guide and support their less experienced colleagues. This system would help in the transfer of knowledge and skills, fostering a collaborative learning environment. Regular evaluations and feedback mechanisms should also be incorporated to identify areas where instructors need further development and to ensure continuous improvement. By investing in the continuous professional development of instructors, the department will not only improve the quality of education provided but also enhance job satisfaction and retention rates among instructors. This strategic approach is essential for maintaining a high standard of vocational training that meets the demands of a rapidly changing technological landscape.

Foster Industry Academia Partnership to promote work-based learning

The primary objective of Industrial Training Institutes (ITIs) is to supply skilled manpower to industries. However, with the rapidly changing market and technology, it becomes a necessity for ITIs and Industries to work together in co-creating the skilled workforce.

Central Government has launched many schemes like DST to ensure better collaboration between Industry-Academia. These schemes enable or equip students for having Work-based learning opportunities during the period of their course. Many states have experienced that students are better employable after going through on-the-job training. We recommend that Uttarakhand should promote on-the-job training opportunities as part of their ITI Curriculum and ensure that DST should be launched in the state, so that the students have better exposure and experience which enable them for better placements.

Similarly, there are processes such as Guest Lectures, Industry Exposure Visits, Training of Instructors on latest machinery & technologies, etc. to initiate the engagement between Industries and ITIs which would add significant value in developing a cadre of skilled workforce.

Creation of New Positions for Improving Employability Skills leading to better placements

To enhance the employability and placement outcomes of ITI graduates, it is essential for the state to create new positions focused on these objectives. Specifically, the introduction of Employability Skill Instructors (ESI) and Training, Counselling, and Placement Officers (TCPO) or Junior Apprenticeship, Counselling, and Placement Officers (JACPO) is recommended. These roles are critical for providing structured support in employability skills and ensuring robust placement processes.

Other states have successfully implemented such structures, enabling them to establish Standard Operating Procedures (SOPs) for imparting employability skills to students and facilitating better placements. The presence of TCPOs and JACPOs has been shown to significantly improve pre-admission counselling, career readiness, and placement rates. Employability Skill Instructors will focus on developing students' soft skills, resume building, interview preparation, and other critical employability skills.

TCPOs and JACPOs will oversee the entire placement process, from pre-admission counselling to post-placement support, ensuring that students are well-prepared for the job market. Implementing these positions will require a restructuring of the current framework to incorporate these new roles effectively. Clear job descriptions and responsibilities should be defined, and appropriate training provided to ensure these officers can deliver maximum impact.

By shifting to this proposed structure, the state can significantly improve the career readiness of its students and enhance placement rates, thereby fulfilling the primary objective of vocational training institutes. This strategic initiative is essential for aligning the state's ITIs with best practices and meeting the evolving needs of the job market.

5.2 MEDIUM-TERM (FOUNDATIONAL REFORMS, 3-5 YEARS)

Increase Female Participation across all trades in ITIs:

The female participation is low in ITIs and participation is higher only in a few trades such as COPA, Sewing Technology, and Stenographer & Secretarial Assistant (Tracer

Study, Uttarakhand). It is surprising to find that the female participation is low in engineering trades. As the DGT has introduced new age/future skills courses as per Industry 4.0 requirement, it is critical to encourage more female participation in trades such as Drone Pilot (Junior), Drone Technician, Industrial Robotics and Digital Marketing, among others. On the other hand, the Government of India has initiated different programmes in promoting gender equality in the fields of Science, Technology, and Engineering (STEM).

One such programme is Vigyan Jyoti which encourages girls to pursue higher education in STEM by organising various activities such as counselling, science camps, workshops, tinkering activities, and visits to knowledge partners/labs. Since 2019-20 this programme is implemented in 250 districts and around 25,000 meritorious girls of Class IX-XII have been enrolled. Thus, programmes in ITIs are required to be tailored as per STEM courses to align with industry demands offering specialised training to the students.

A comprehensive enrolment campaign needs to be designed focusing on making girl students studying in school aware about various scholarship schemes available for them highlighting the benefits of pursuing vocational education.

Provide required Infrastructure and enabling facilities at all ITIs:

The study provides a comprehensive assessment of the physical infrastructure in the state's Industrial Training Institutes (ITIs). It reveals that ITIs funded by the World Bank exhibit satisfactory conditions, including well-maintained buildings and essential amenities. These amenities encompass adequately equipped classrooms, teachers' rooms, toilets, and laboratories with the necessary tools and equipment for the streams they offer. In contrast, the study highlights a significant disparity in the infrastructure quality of other ITIs in the state. These institutions often lack fundamental facilities, adversely affecting their ability to deliver quality education and training. To address these deficiencies, it is recommended that the relevant department undertakes immediate and strategic measures to enhance the physical infrastructure of these ITIs.

Key improvements should include the construction and renovation of buildings to ensure they meet basic standards. Additionally, the provision of essential amenities such as functional classrooms, teachers' rooms, and toilets is crucial. Equipping

laboratories with the necessary tools and equipment for the various training streams is also imperative. These steps are essential to ensure that all ITIs can provide a conducive learning environment and deliver effective vocational training.

Rationalization of Administrative and Teaching Staff in it is and Approval for Hiring Ad-Hoc Staff

The study has highlighted a significant shortage of both teaching and administrative staff in the state's Industrial Training Institutes (ITIs). To address this issue, it is proposed that the department undertakes a rationalization of manpower across the state. This approach has been successfully implemented in other states, such as Rajasthan and Haryana, enabling them to maintain an optimal student-teacher ratio and ensure efficient operation of their ITIs. Rationalization involves a strategic redistribution of existing staff to align with current needs and demands. This may include transferring staff between institutions to balance workloads and improve the overall efficiency of the system. Furthermore, it is recommended to establish a framework for regular assessment of staffing requirements to anticipate and address future shortages proactively.

Introduction of Local Need-Based and New Age Technology Courses in ITIs of Uttarakhand

Our study highlights a significant gap in aligning ITI courses with Uttarakhand's local economic needs and emerging technological advancements. To ensure skill development remains relevant and impactful, it is crucial to conduct an in-depth needs analysis, identifying both traditional and new-age industry requirements. This will enable the Department to introduce courses that cater to the local job market while also preparing youth for future-ready careers.

The Department should prioritize understanding the vocational and technical skills demanded by key local industries, such as tourism, agriculture, and handicrafts, while also integrating technology-driven courses that align with global trends. Courses in areas like Artificial Intelligence (AI), Internet of Things (IoT), Drone Technology, Electric Vehicle (EV) Maintenance, and Solar Energy Systems can equip students with future-ready skills, making them competitive both locally and beyond. Simultaneously, non-engineering trades aligned with Uttarakhand's unique economic landscape—such

as Spa Therapy, Digital Photography, Video Cameraman, Tourist Guide, and Bamboo Works—should be introduced to support self-employment and entrepreneurship. Through various stakeholder consultations, a strong recommendation has emerged to introduce trades specific to local industries. For instance, GITIs Dhaulchina and Mussoorie have emphasized the need for tourism-related courses to capitalize on the region's booming travel sector. Similarly, ITIs in agriculture-dominant areas could benefit from courses in precision farming, organic food processing, and Agri-tech solutions.

To ensure maximum impact, awareness campaigns should be launched to promote these new courses among the local youth. By offering a combination of localized skill-based training and new-age technology courses, Uttarakhand's ITIs can play a pivotal role in reducing migration, enhancing employability, and driving regional economic growth. This strategic shift will not only empower youth with market-relevant skills but also strengthen Uttarakhand's economy by fostering local talent for both traditional and emerging industries.

ANNEXURES

Major Activities

DIAGNOSTIC STUDY - VISIT CALENDAR				
Sl. No.	**Name of District**	**Region**	**College**	**Date of visit**
1	Chamoli	Garhwal	GITI Karnprayag	17th September 2023 to 23rd September 2023
2			GITI Tapovan	
3			GITI Gairsain	
4			GITI Narayanbagar	
5	Uttarkashi		GITI Barkot	
6			GITI Dunda	
7			GITI Chinyalisaur	
8			GITI Mori	
9	Dehradun		GITI Dehradun (Boys)	10th July 2023
10			GITI Dehradun (Girls)	1st December 2023
11			GITI Mussoorie	
12			GITI Kalsi	21st December 2023
13	Haridwar		GITI Delna	4th December 2023 & 5th December 2023
14			GITI Pirankaliyar	
15			GITI Haridwar	
16			GITI Khanpur	
17	Almora	Kumaon	GITI Almora	17th September 2023 to 23rd September 2023
18			GITI Jainti	
19			GITI Bright End Cornor, Almora	
20			GITI Dhaulchina	
21	Pithoragarh		GITI Pithoragarh	5th July 2023 to 8th July 2023
22			GITI Askote	
23			GITI Dharchula	
24			GITI Gangolihat	Closed
25	Nainital		GITI Haldwani (Boys)	30th November 2023 to 2nd December 2023
26			GITI Kaladhungi	

27			GITI Bhowali	17th September 2023 to 23rd September 2022
28			GITI Dhokane	
29	Udham Singh Nagar		GITI Kashipur	30th November 2023 to 2nd December 2023
30			GITI Bazpur	
31			GITI Pantnagar	
32			GITI Sitarganj	

PROFILE OF SAMPLE / SELECTED ITIS

Government ITI Gairsain

राजकीय औद्योगीक प्रशिक्षण संस्थान, गैरसैण, चमोली

Govt ITI Gairsain
Town/City: Gairsain, Block/Tehsil: Gairsain
District: Chamoli
Pin Code - 246428
Official Email Address: itigairsain.uk@gmail.com
Contact Number:
Distance from nearest road (in Km): 0.1 km

Established in 1986
स्थापना वर्ष - १९८६

GITI

- No. of Trades: **1**
- No. of Classrooms: **1**
- No. of Workshops/ Laboratory: **1**
- No. of Multi-purpose Hall: **0**
- No. of faculty: **1 (1** Contractual**)**
- The ITI will soon shift to its new building
- No accommodation facility for students and teachers
- ITI Grading Under Phase 1: **1.05** (June 2018), Phase 2: **0.16** (Jan 2022)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Draughtsman (Civil):** 1 - 24

Courses Sanctioned (*Yet to be offered***):**

1. **Electronics Mechanic**
2. **Fitter**

Courses Closed:

1. **Mechanic Radio & T.V.**
2. **Wireman**
3. **Shorthand - Hindi**

On Job Training

उत्तराखण्ड शासन
Public Works Department

IRRIGATION DEPARTMENT UTTARAKHAND

The current facility is extremely poor, demand for new trades and short term courses exists. The ITI requires structured intervention, both financial & manpower.

1. Number of Students (Avg.): **18**
2. Percentage of Girls: **< 10%**
3. Students from 20 kms. radius: **30%**
4. Students from Outside district: **None**

Government ITI Narainbagar

राजकीय औद्योगीक प्रशिक्षण संस्थान नरायणबगर, चमोली

Govt ITI Narainbagar
Town/City: Narainbagar, Block: Narainbgar
District: Chamoli
Pin Code - 246455
Official Email Address: itigairsain.uk@gmail.com
Contact Number:
Distance from nearest road (in Km): 5 kms

Established in 2009
स्थापना वर्ष - २००९

GITI

- No. of Trades: **1**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: **2**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **1 (1** Contractual)
- Non-residential facility
- Have ground for students sports activities
- ITI Grading Under Phase 2: **0.00** (Jan 2022)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic:** 1 - 24

Sanctioned but NOT offered

1. **Fitter:** 1 - 24

GITI is highly neglected. The facility is almost invisible due to thick vegetation. No maintenance and limited opportunity implies that this is not the obvious choice for future students. **NEEDS immediate attention.**

On Job Training

Not Available

The GITI's location & limited transportation facilities have severe implications on the sustainability of the Institute. Both students and faculty lack motivation.

1. Number of Students (Avg.): **16**
2. Percentage of Girls: **0**
3. Students from 20 kms. radius: **20%**
4. Students from Outside district: **< 5%**

Government ITI Karnaprayag

राजकीय औद्योगीक प्रशिक्षण संस्थान कर्णप्रयाग, चमोली

Govt ITI Karnaprayag
Town/City: Karnaprayag, Block: Karnaprayag
District: Chamoli
Pin Code - 246446
Official Email Address: iti.karanprayag.ppp@gmail.com
Contact Number: 01375224117
Distance from nearest road (in Km): 1 km

NODAL ITI

- No. of Trades: **3**
- No. of Classrooms: **3**
- No. of Workshops/ Laboratory: **3**
- No. of Multi-purpose Hall: **1** (*Under construction*)
- No. of faculty: **9 (5** Regular, **4** Contractual**)**
- Student Hostel not operational since 2016
- ITI Grading Under Phase 1: **1.97** (June 2018) & Phase 2: **0.66** (Jan 2022)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic:** 1 - 24
2. **Mechanic (Motor Vehicle):** 1 - 24
3. **Stenographer & Secretarial Assistant (Hindi):** 1 - 24

Sanctioned but NOT offered

1. **Data Entry:** 1 - 24

A facility where girl students are motivated, there is scope for further improvement.

On Job Training

Not Available

MoU

रेल विकास निगम लिमिटेड
Rail Vikas Nigam Limited

MARUTI SUZUKI

The GITI has location advantage, have space for expansion, and should add more courses once the infrastructure is fully built. Student hostel need to be functional.

1. Number of Students (Avg.): **46**
2. Percentage of Girls: **10%**
3. Students from 20 kms. radius: **70%**
4. Students from Outside district: **< 2%**

Government ITI Chinyalisaur

राजकीय औद्योगीक प्रशिक्षण संस्थान चिन्यालीसौर, उत्तरकाशी

Govt ITI Chinyalisaur
Town/City: Barethi , Block: Chinyalisaur
District: Uttarkashi
Pin Code - 249196
Official Email Address: iti.chinalisaur.uk@gmail.com
Contact Number: 9412140119
Distance from nearest road (in Km): 0.75 km

Established in 1992
स्थापना वर्ष - १९९२

GITI

- No. of Trades: **3**
- No. of Classrooms: **3**
- No. of Workshops/ Laboratory: **1**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **8 (5** Regular, **3** Contractual**)**
- No faculty of student accommodation
- ITI Grading Under Phase 1: **1.45** (June 2018) Phase 2: **0.85** (Jan 2022)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic: 1 - 24**
2. **Mechanic (Motor Vehicle): 1 - 24**
3. **Sewing Technology: 1 - 20**

Sanctioned but NOT offered

1. **COPA**
2. **Mechanic Diesel**
3. **Mechanic Radio & T.V**

Highly Vulnerable to floods, rockfalls & landslides, wild animals.

On Job Training

UJVN Limited
(A Govt. of Uttarakhand Enterprise)

The GITI has the space for expansion but any investment should consider a detailed disaster vulnerability assessment. The premise needs a boundary and lacks proper communication.

1. Number of Students (Avg.): **54**
2. Percentage of Girls: **> 20%**
3. Students from 20 kms. radius: **55%**
4. Students from Outside district: **< 5%**

Government ITI Dunda

राजकीय औद्योगीक प्रशिक्षण संस्थान डुंडा, उत्तरकाशी

Govt ITI Dunda
Town/City: Dunda, Block: Dunda
District: Uttarkashi
Pin Code - 249151
Official Email Address: iti.dunda.uk@gmail.com
Contact Number: 8273599713
Distance from nearest road (in Km): 0.1 km

Established in 2013
स्थापना वर्ष - २०१३

GITI

- No. of Trades: **1**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: **NIL**
- No. of Multi-purpose Hall: **NIL**
- No. of faculty: **5 (4** Regular, **1** Contractual**)**
- Non-residential for faculty and students
- ITI Grading Under Phase 2: **0.50** (Jan 2022)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 1 - 20

Course NOT offered but under consideration

1. **Data Entry Operator:** 1 -24

Highly Vulnerable and high expoure to floods given its proximity to river Bhagirthi. The Intitute has alreay lost a significant area due to past flood events.

On Job Training

UJVN Limited
(A Govt. of Uttarakhand Enterprise)

उत्तराखण्ड पावर कारपोरेशन लि०

The GITI is in extremely poor condition and lacks initiative by the responsible stakeholder. The number of trades or units or both should be increased to meet the local demand.

1. Number of Students (Avg.): **20**
2. Percentage of Girls: **10%**
3. Students from 20 kms. radius: **65%**
4. Students from Outside district: **< 10%**

Government ITI Mori

राजकीय औद्योगीक प्रशिक्षण संस्थान मोरी, उत्तरकाशी

Govt ITI Mori
Town/City: Metrusa, Block: Mori
District: Uttarkashi
Pin Code - 249128
Official Email Address: iti.mori.uk@gmail.com
Contact Number: 9410967918
Distance from nearest road (in Km): 5.4 kms

Established in 2005
स्थापना वर्ष - २००५

GITI

- No. of Trades: **2**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: **2**
- No. of Multi-purpose Hall: **NIL**
- No. of faculty: **4** (**1** Regular, **3** Contractual)
- Non Residential campus for faculty & student
- ITI Grading Under Phase 2: **0.25** (Jan 2022)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Fitter:** 1 - 20
2. **Sewing Technology:** 1 - 20

If the location of this institute is a merit, poor & non-existent transport facility makes it inaccessible, especially in extreme weather conditions. This facility should be promoted, girl students should be motivated and more trades need to be added.

On Job Training

Not Available

Field Survey/ Industry Visit

एसजेवीएन SJVN

The GITI and stakeholders should take active interest in enhancing the OJT and increase MoU with potential recruiters actively.

1. Number of Students (Avg.): **32**
2. Percentage of Girls: **37%**
3. Students from 20 kms. radius: **75%**
4. Students from Outside district: **< 2%**

Government ITI Mussoorie

राजकीय औद्योगीक प्रशिक्षण संस्थान मसूरी, देहरादून

Govt ITI Mussoorie
Town/City: Mussoorie, Block: Sahaspur,Tehsil: Mussoorie
District: Dehradun
Pin Code - 248179
Official Email Address: iti.mussoorie.ppp@gmail.com
Contact Number: 7302663913
Distance from nearest road (in Km): 0.5 km

GITI

- No. of Trades: **2**
- No. of Classrooms: **4**
- No. of Workshops/ Laboratory: **2**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **6 (6** Regular)
- No residential facility for either faculty or students
- ITI Grading Under Phase 1: **2.39** (June 2018)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 1 - 20
2. **Information and Communication Technology System Maintenance (ICTSM):** 1 - 24

The Institute is in the premises of Ghannanand Govt. Inter College, Mussoorie and difficult to locate being hidden by wilderness. Transportation is a challenge for the students.

On Job Training

Not Available

NO MoU

The GITI should consider consider offering courses that have local relevance and demand. In particular, plumber, tourism related and COPA; few courses that attract more girl students

1. Number of Students (Avg.): **22**
2. Percentage of Girls: **5%**
3. Students from 20 kms. radius: **30%**
4. Students from Outside district: **< 65%**

Government ITI Kalsi

राजकीय औद्योगीक प्रशिक्षण संस्थान कालसी, देहरादून

Govt ITI Kalsi
Town/City; Block &Tehsil: Kalsi
District: Dehradun
Pin Code - 248158
Official Email Address: iti.kalsi.ppp@gmail.com
Contact Number: 9411519094
Distance from nearest road (in Km): 0.1 km

Established in 1989
स्थापना वर्ष - १९८९

GITI

- No. of Trades: **6**
- No. of Classrooms: **6**
- No. of Workshops/ Laboratory: **5**
- No. of Multi-purpose Hall: **Not Available**
- No. of faculty: **9 (9** Regular)
- Non-residential campus for both faculty and students
- ITI Grading Under Phase 1: **2.39** (June 2018)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician: 2 - 20**
2. **Plumber: 1 - 24**
3. **Fitter: 2 - 20**
4. **Electronics Mechanic: 2 - 24**
5. **Welder: 1 - 20**
6. **Sewing Technology: 1 - 20**

Courses being considered:

1. **Mechanic (Motor Vehicle)**
2. **Tractor Mechanic**

On Job Training

Not Available

MoU

UJVN Limited (A Govt. of Uttarakhand Enterprise)

UTTARAKHAND JAL SANSTHAN

SIDCUL Selaqui

The GITI highlighted the problems in getting students following the fee revision. Non availability of hostel facility is another limitation for the institute. The ITI has space for expansion.

1. Number of Students (Avg.): **150**
2. Percentage of Girls: **7%**
3. Students from 20 kms. radius: **80%**
4. Students from Outside district: **None**

Government ITI Piran Kaliyar

राजकीय औद्योगीक प्रशिक्षण संस्थान पिरान कालियार, हरिद्वार

Govt ITI Piran Kaliyar
Town/City; Block &Tehsil: Roorkee
District: Haridwar
Pin Code - 249402
Official Email Address: iti.pirankaliyar.ppp@gmail.com
Contact Number: 7302663914
Distance from nearest road (in Km): 1.2 kms

Established in 1987
स्थापना वर्ष - १९८७

GITI

- No. of Trades: **5**
- No. of Classrooms: **8**
- No. of Workshops/ Laboratory: **8**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **6 (4** regular, **2** Contractual**)**
- ITI Grading Under Phase 1: 1.51 (June 2018), Phase 2: 1.68 (Jan 2022)
- Financially Supported by: **World Bank Funding & Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician**: 2 - 20
2. **Electronics Mechanic**: 2 - 24
3. **Stenographer & Secretarial Assistant (Hindi)**: 1 - 24
4. **Sewing Technology**: 1 - 20
5. **Welder**: 2 - 20

On Job Training

Eapro Solar Global, Roorkee.

The GITI has both the infrastructure and capacity to introduce more courses.

1. Number of Students (Avg.): **100**
2. Percentage of Girls: **4%**
3. Students from 20 kms. radius: **60%**
4. Students from Outside district: **7%**

Government ITI Delna

राजकीय औद्योगीक प्रशिक्षण संस्थान डेलना, हरिद्वार

Govt ITI Delna
Town/City; Block & Tehsil: Roorkee
District: Haridwar
Pin Code - 247665
Official Email Address: iti.delna.ppp@gmail.com
Contact Number: 8077787920
Distance from nearest road (in Km): 0.95 km

Established in 2006
स्थापना वर्ष - २००६

GITI

- No. of Trades: **2**
- No. of Classrooms: **4**
- No. of Workshops/ Laboratory: **4**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **4 (4** Regular**)**
- Provision for faculty residency but not functional.
- ITI Grading Under Phase 1: **1.67** (June 2018), Phase 2: **0.90** (Jan 2022)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician**: 2 - 20
2. **Fitter**: 2 - 20

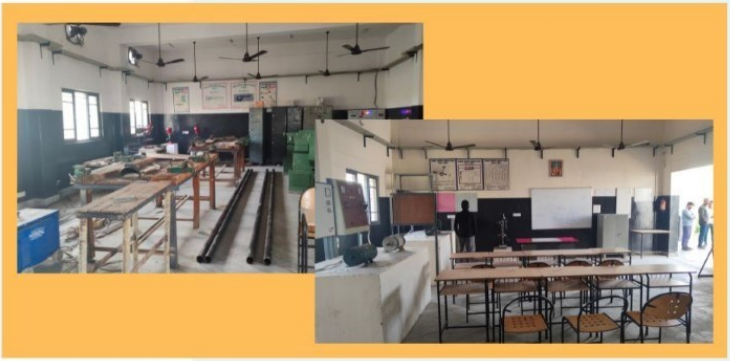
Trades Proposed:

1. **Turner**
2. **Welder**
3. **Machinist**

On Job Training

UJVN Limited
(A Govt. of Uttarakhand Enterprise)
CIN NO : U40101UR2001SGC025866

Uttarakhand Jal VIdyut Nigam Ltd.



This ITI has sufficient infrastructure and room for more courses, but unfilled vacancies lead to resource underutilization. Its location advantage is not fully reflected in OJTs and MOUs.

1. Number of Students (Avg.): **59**
2. Percentage of Girls: **12%**
3. Students from 20 kms. radius: **90%**
4. Students from Outside district: **< 5%**

Government ITI Khanpur

राजकीय औद्योगीक प्रशिक्षण संस्थान खानपुर, हरिद्वार

Govt ITI Khanpur
Town/City: Prahaladpur, Block: Khanpur,Tehsil: Laksar
District: Haridwar
Pin Code - 247663
Official Email Address: gitikhanpur@gmail.com
Contact Number: 9997097630
Distance from nearest road (in Km): 0.1 km

Established in 2004
स्थापना वर्ष - २००४

GITI

- No. of Trades: **2**
- No. of Classrooms: **3**
- No. of Workshops/ Laboratory: **2**
- No. of Multi-purpose Hall: **NIL**
- No. of faculty: **4 (4** Regular**)**
- ITI Grading Under Phase 1: **NA** (June 2018), Phase 2: **1.63** (Jan 2022)
- Financially Supported by - **under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 1 - 20
2. **Fitter:** 2 - 20

The ITI faces the problem of flooding every monsoon season and remains closed for any activity around this time of the year. It was reported that the laboratory facility was also damaged due to stangnation of water. This is a major challenge and a threat to the sustainability of the Institute.

On Job Training

Not Available

The GITI lacks adequate infrastructure, with waterlogging up to 3 feet during rainy periods, impacting both equipment and institute operations. Additionally, there are no signed OJT or MOUs.

1. Number of Students (Avg.): **57**
2. Percentage of Girls: **0**%
3. Students from 20 kms. radius: **90**%
4. Students from Outside district: **NIL**

Government ITI Haridwar

राजकीय औद्योगीक प्रशिक्षण संस्थान हरिद्वार

Govt ITI Haridwar
Town/City: Haridwar, Block: Bahdrabad, Tehsil: Jawalapur
District: Haridwar
Pin Code - 249408
Official Email Address: iti.haridwar.vtip@gmail.com
Contact Number: 7302663914
Distance from nearest road (in Km): 0.1 km

Established in 1963
स्थापना वर्ष - १९६३

NODAL ITI

- No. of Trades: **10**
- No. of Classrooms: **9**
- No. of Workshops/ Laboratory: **10**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **14 (14** Regular**)**
- ITI Grading Under Phase 1: **2.11** (June 2018), Phase 2: **2.05** (Jan 2022)
- Financially Supported by - **Model ITI, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **COPA: 1 - 24**
2. **Draughtsman Mechanical: 2 - 40**
3. **Electrician: 2 - 40**
4. **Electronics Mechanic: 2 - 48**
5. **Fitter: 4 - 80**
6. **Foundryman: 1 - 24**
7. **Machinist: 2 - 40**
8. **Turner: 2 - 40**
9. **Stenographer & Secretarial Assistant (Hindi): 1 - 24**
10. **Welder: 1 - 20**

On Job Training

C&S electric
MUNJAL SHOWA
C-sec
Genus energizing lives
MEENAKSHI POLYMERS PVT. LTD.

This GITI has sufficient infrastructure to facilitate course offerings. It is the only ITI in the state under **the Model ITI** scheme. A strong placement record, it utilizes its industrial location for OJTs and MOUs.

1. Number of Students (Avg.): **256**
2. Percentage of Girls: **8%**
3. Students from 20 kms. radius: **60%**
4. Students from Outside district: **15%**

Government ITI Almora

राजकीय औद्योगीक प्रशिक्षण संस्थान अल्मोड़ा, अल्मोड़ा

Govt ITI Almora
Town/City, Block &Tehsil: Almora
District: Almora
Pin Code - 263601
Official Email Address: iti.almora.ppp@gmail.com
Contact Number: 7302663934
Distance from nearest road (in Km): 0.1 km

NODAL ITI

- No. of Trades: **16**
- No. of Classrooms: **31**
- No. of Workshops/ Laboratory: **1**
- No. of Multi-purpose Hall: **0**
- No. of faculty: **34 (26** Regular, **8** Contractual**)**
- Residential campus with faculty accommodation
- Provision for student hostel (*not functional*)
- ITI Grading Under Phase 1: **2.39** (June 2018)
- Financially Supported by - **World Bank, under PPP (since), Govt. of Uttarakhand**
- Student Scholarships: **Available**

On Job Training

Dixon — The brand behind brands
ASAL — A TATA Enterprise
TATA MOTORS
Jio Fiber
Hero

GITI is situated in remote area with minimal industry exposure. Students lack hostel facilities, posing challenges for accommodation. Limited industrial engagement hinders practical learning opportunities at the institute. Fitter is the popular trade.

Trades, Units & Seats

1. **Draughtsman Mechanical: 2 - 20**
2. **Draughtsman Civil: - 2 - 24**
3. **Electrician: 4 - 20**
4. **Electronics Mechanic: 2 - 24**
5. **Fitter: 2 - 20**
6. **Machinist: 2 - 20**
7. **Mechanic (Motor Vehicle): 2 - 24**
8. **Mechanic Diesel: 1 - 24**
9. **Plumber: 1 - 24**
10. **Sewing Technology: 2 - 20**
11. **Stenographer & Sec. Asst. (Hindi): 3 - 24**
12. **Stenographer & Sec. Asst. (English): 1 - 24**
13. **Surveyor: 2 - 24**
14. **Turner: 3 - 20**
15. **Welder: 1 - 20**
16. **Wireman: 2 - 20**


1. Number of Students (Avg.): **291**
2. Percentage of Girls: **9.62%**
3. Students from 20 kms. radius: **70%**
4. Students from Outside district: **10%**

Government ITI Jainti

राजकीय औद्योगीक प्रशिक्षण संस्थान जैंती, अल्मोड़ा

Govt ITI Jainti
Town/City: Jainti, Block: Lamgara,Tehsil: Jainti
District: Almora
Pin Code - 263626
Official Email Address: iti.jayanti.ppp@gmail.com
Contact Number: 8057608047
Distance from nearest road (in Km): 0.1 km

Established in 1997
स्थापना वर्ष - १९७८

GITI

- No. of Trades: **5**
- No. of Classrooms: **7**
- No. of Workshops/ Laboratory: **1**
- No. of Multi-purpose Hall: **0**
- No. of faculty: **5 (4** Regular, **1** Contractual**)**
- No accommodation for faculty & student
- ITI Grading Under Phase 1: **1.37** (June 2018), Phase 2: **0.97** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **COPA: 2 - 24**
2. **Electronics Mechanic: 1 - 24**
3. **Fitter: 2 - 20**
4. **Stenographer & Secretarial Assistant (Hindi): 1 - 24**
5. **Sewing Technology: 1 - 20**

The ITI is in PPP mode but no support from the industry partner to enhance the employ ability of the passing students. No faculty for COPA and Electrician trades.

On Job Training

Not Available

GITI has inadequate classrooms, limited library resources & faculty lack industry exposure. No hostel facility. These facilities are crucial for enriched learning environment.

1. Number of Students (Avg.): **70**
2. Percentage of Girls: **11%**
3. Students from 20 kms. radius: **90%**
4. Students from Outside district: **< 10%**

Government ITI Dhaulchina

राजकीय औद्योगीक प्रशिक्षण संस्थान धौलछिना, अल्मोड़ा

Govt ITI Dhaulchina
Town/City: Dhaulchina, Block: Bhasiyachana
Tehsil & District: Almora
Pin Code - 263624
Official Email Address: iti.dhaulchina.uk@gmail.com
Contact Number: 9410302582
Distance from nearest road (in Km): 0.6 km

GITI

- No. of Trades: **1**
- No. of Classrooms: **5**
- No. of Workshops/ Laboratory: **0**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **2 (2** Contractual**)**
- No residential facility for faculty and student
- ITI Grading Under Phase 1: **NA** (June 2018), Phase 2: **0.63** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Sewing Technology:** 1 - 20

SC/ST students seats usually gets vacant
Fitter and Welder courses may be started as workshops are available.
Computer and Tourism related trades may be opened which will attract more students.
No apprenticeship scheme.

On Job Training

Not Available

GITI offers only Sewing Technology exclusively for girls but faces challenges with insufficient lab equipment and a shortage of faculty. Absence of modern machines hampers skill development.

1. Number of Students (Avg.): **10**
2. Percentage of Girls: **100%**
3. Students from 20 kms. radius: **100%**
4. Students from Outside district: **0%**

Government ITI Brightend Corner Almora

राजकीय औद्योगीक प्रशिक्षण संस्थान ब्राइट एन्ड कार्नर, अल्मोड़ा

PT JJ GITI Brightend Corner
Town/City: Almora, Block: Hawalbag
Tehsil & District : Almora
District: Uttarkashi
Pin Code - 249141
Official Email Address: iti.barkot.ppp@gmail.com
Contact Number: 01375224117
Distance from nearest road (in Km): 1km

Established in 1946
स्थापना वर्ष - १९४६

GITI

- No. of Trades: **2**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: **1**
- No. of Multi-purpose Hall: 0
- No. of faculty: **4 (4** Regular**)**
- No residential facility for faculty & students
- ITI Grading Under Phase 1: **1.24** (June 2018), Phase 2: **0.83** (Jan 22)
- Financially Supported by: **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 2 - 20
2. **Sewing Technology:** 1 - 20

Students are not interested in OJT because travel and lodging are expensive.
Also, there is absence of local industries in the district which hinders placements.
Students are required to travel to ITI Almora (nodal centre) for job fair and apprenticeship.

On Job Training

GITI faces issues with machine availability, affecting various trades. Insufficient access to essential equipment hampers the practical learning experience for students.

1. Number of Students (Avg.): **22**
2. Percentage of Girls: **4.5%**
3. Students from 20 kms. radius: **96%**
4. Students from Outside district: **4%**

Government ITI Pithoragarh

राजकीय औद्योगीक प्रशिक्षण संस्थान पिथौरागढ़, पिथौरागढ़

Govt ITI Pithoragarh
Town/City, Block,Tehsil: Pithoragarh
District: Pithoragarh
Pin Code - 262501
Official Email Address: iti.pithoragarh.vtip@gmail.com
Contact Number: 9410104820
Distance from nearest road (in Km): 0.6 km

NODAL ITI

- No. of Trades: **8**
- No. of Classrooms: **10**
- No. of Workshops/ Laboratory: **8**
- No. of Multi-purpose Hall: **0**
- No. of faculty: **17 (11** Regular, **6** Contractual**)**
- ITI Grading Under Phase 1: **1.61** (June 2018), Phase 2: **0.88** (Jan 22)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician: 2- 20**
2. **Fitter: 2 - 20**
3. **Information and Communication Technology System Maintenance (ICTSM): 2 - 24**
4. **Machinist: 2 - 20**
5. **Mechanic (Motor Vehicle): 2 - 24**
6. **Sewing Technology: 1 - 20**
7. **Welder: 2 - 20**
8. **Wireman: 2 - 20**

Industry Linkage Cell

The GITI has ... opinion from Bharat Sir

1. Number of Students (Avg.): 293
2. Percentage of Girls: 7%
3. Students from 20 kms. radius: %
4. Students from Outside district: %

Government ITI Askote

राजकीय औद्योगीक प्रशिक्षण संस्थान अस्कोट, पिथौरागढ़

Govt ITI Barkot
Town/City: Askote, Block: Kanalichina,Tehsil: Didihat
District: Pithoragarh
Pin Code - 262543
Official Email Address: iti.askote.vtip@gmail.com
Contact Number: 9927526272
Distance from nearest road (in Km): 0.1 km

Established in 1976
स्थापना वर्ष - १९७६

GITI

- No. of Trades: **8**
- No. of Classrooms: **8**
- No. of Workshops/ Laboratory: **6**
- No. of Multi-purpose Hall: **0**
- No. of faculty: **16 (14** Regular, **2** Contractual)
- Residential campus but for reasons beyond comprehension the student hostel is *not functional*
- ITI Grading Under Phase 1: **1.57** (June 2018), Phase 2: **0.80** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 2 - 20
2. **Fitter:** 2- 20
3. **Information and Communication Technology System Maintenance (ICTSM):** 2 - 24
4. **Machinist:** 2 - 20
5. **Mechanic (Motor Vehicle):** 2 - 24
6. **Sewing Technology:** 1 - 20
7. **Welder:** 2 - 20
8. **Wireman:** 2 - 20

On Job Training

NAINITAL MOTORS
Didihat, Pithoragarh

Border Roads Organisation
GREF

The GITI has enough space for expansion and should be developed further. There is a visible unwillingness to improve situation from the part of the management.

1. Number of Students (Avg.): **180**
2. Percentage of Girls: **3%**
3. Students from 20 kms. radius: **45%**
4. Students from Outside district: **< 10%**

Government ITI Dharchula

राजकीय औद्योगीक प्रशिक्षण संस्थान धारचूला, पिथौरागढ़

Govt ITI Dharchula
Town/City & Block: Dharchula,Tehsil: Didihat
District: Pithoragarh
Pin Code - 262543
Official Email Address: iti.dharchula.uk@gmail.com
Contact Number: 9411186377
Distance from nearest road (in Km): 0.2 km

Established in 1992
स्थापना वर्ष - १९९२

GITI

- No. of Trades: **2**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: Classrooms are used
- No. of faculty: **3 (2** Regular, **1** Contractual**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **1.05** (June 2018), Phase 2: **0.18** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**
- Poor in infrastructure, hygiene and location.

Trades, Units & Seats

1. **Draughtsman Civil:** 1 - 24
2. **Electrician:** 1 - 20

The GITI infrastructures should be improved. After construction of toilets for boys, girls and staff members, better illuminated classrooms and workshops, proper administratve office, the number of trades can be increased. The town, in a disaster prone region has limited facilities for prospective students.

On Job Training

Not Available

The GITI has limited space for expansion and requires immediate support. The Institute is in such a location that the first appearance breaks all hopes.

1. Number of Students (Avg.): 20
2. Percentage of Girls: 0%
3. Students from 20 kms. radius: %
4. Students from Outside district: %

Government ITI Gangolihat

राजकीय औद्योगीक प्रशिक्षण संस्थान गंगोलीहाट, पिथौरागढ़

Govt ITI Gangolihat
Town/City, Block &Tehsil: Gangolihat
District: Pithoragarh
Pin Code - 262522
Official Email Address: ----
Contact Number: 9917513920
Distance from nearest road (in Km): 0.5 km

Established in 1986
स्थापना वर्ष - १९८६

GITI

- No. of Trades:
- No. of Classrooms:
- No. of Workshops/ Laboratory: Classrooms are used
- No. of faculty: **1 (1** Contractual**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: (June 2018)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**
- **Scores least in terms of infrastructure, hygiene and location.**

Trades, Units & Seats

1. **Draughtsman Civil:** 1 - 24

The GITI is Closed and the faculty and trade shifted to Pithoragarh Nodal GITI

On Job Training

Not Available

Government ITI Haldwani (Boys)

राजकीय औद्योगीक प्रशिक्षण संस्थान हल्द्वानी, नैनीताल

Govt ITI Haldwani (Boys)
Town/City, Block, Tehsil & District: Haldwani
Pin Code - 263139
Official Email Address: iti.haldwaniboys.uk@gmail.com
Contact Number: 05946292408
Distance from nearest road (in Km): 0.5 km

GITI

- No. of Trades: **13**
- No. of Classrooms: **20**
- No. of Workshops/ Laboratory: Classrooms are used: **18**
- No. of faculty: **30 (30** Regular**)**
- Residential facility for staff only.
- ITI Grading Under Phase 1: **2.0** (June 2018)
- Financially Supported by - **World Bank, under PPP** (since 2008-09), Govt. of Uttarakhand
- Student Scholarships: **Available**
- Number of Students (Avg.): **555**
- Percentage of Girls: **11%**
- Students from 20 kms. radius: **75%**
- Students from Outside district: **<10%**

Trades, Units & Seats

1. **Electronics Mechanic: 2 - 24**
2. **Fitter: 3 - 20**
3. **Machinist: 4 - 20**
4. **Mechanic Auto Body Repair: 2 - 20**
5. **Mechanic Auto Body Painting: 2 - 20**
6. **Mechanic Diesel: 1 - 24**
7. **Mechanic (Motor Vehicle): 2 - 24**
8. **Mechanic RAC: 2 - 24**
9. **PLUMBER: 1 - 24**
10. **Stenographer & Secretarial Assistant (Hindi): 1 - 24**
11. **Turner: 4 - 20**
12. **Welder: 1 - 20**
13. **Wireman: 3 - 20**

On Job Training

MSME
BELRISE INDUSTRIES
TOYOTA
TATA MOTORS

Government ITI Kaladhungi

राजकीय औद्योगीक प्रशिक्षण संस्थान कालाढूंगी, नैनीताल

Govt ITI Kaladhungi
Town/City: Kaladhungi, Block: Kotabaag, Tehsil : Kaladhungi
District: Haldwani
Pin Code - 263140
Official Email Address: iti.kaladhungi.uk@gmail.com
Contact Number: 05946292408
Distance from nearest road (in Km): 0.5 km

Established in 1963
स्थापना वर्ष - १९६३

GITI

- No. of Trades: **3**
- No. of Classrooms: **10**
- No. of Workshops/ Laboratory: Classrooms are used : **1**
- No. of faculty: **4** (**3** Regular, **1** Contractual)
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **NA** (June 2018), Phase 2: **0.35** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Draughtsman Civil:** 2 - 24
2. **Sewing Technology:** 2 - 20
3. **Electrician:** - 1 - 20

Flags issues such as faculty shortage, outdated trade machines, and limited industry visits for trainees

On Job Training

उत्तराखण्ड पावर कारपोरेशन लि०

R.P. AUTOSTYLES

The GITI's opportunities for skill development are restricted, hindering the overall learning experience for students at the institute. No company has hired in Draughtsman Civil and Sewing Technology trades.

1. Number of Students (Avg.): **47**
2. Percentage of Girls: **25%**
3. Students from 20 kms. radius: **80%**
4. Students from Outside district: **< 5%**

Government ITI Bhowali

राजकीय औद्योगीक प्रशिक्षण संस्थान भोवाली, नैनीताल

Govt ITI Bhowali
Town/City: Bhowali, Block: Bhimtal, Tehsil : Nainital
District: Nainital
Pin Code - 263132
Official Email Address: iti.bhawaliw.uk@gmail.com
Contact Number: 8393990885
Distance from nearest road (in Km): 0.05 km

Established in 1985
स्थापना वर्ष - १९८५

GITI

- No. of Trades: **2**
- No. of Classrooms: **2**
- No. of Workshops/ Laboratory: Classrooms are used : **0**
- No. of faculty: **3 (3** Regular**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **1.71** (June 2018)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic:** 1 - 24
2. **Sewing Technology:** 1 - 20

DGVT compliance lab is not present.
Also, land is leased from municipality.

No On Job Training

Not Available

The GITI lacks basic infrastructure with no laboratories & conference room. Practical learning and collaborative activities, impacting the overall quality of education at the institute.

1. Number of Students (Avg.): 8
2. Percentage of Girls: 25%
3. Students from 20 kms. radius: **95%**
4. Students from Outside district: **<5%**

Government ITI Dhokane

राजकीय औद्योगीक प्रशिक्षण संस्थान दोकाने, नैनीताल

Govt ITI Dhokane
Town/City: Kamoli Dhokane, Block: Ramgarh,
Tehsil : Koshiya Kotali, District: Nainital
Pin Code - 263135
Official Email Address: iti.dhokane.ppp@gmail.com
Contact Number: 7248205793
Distance from nearest road (in Km): 0.05 km

Established in 1985
स्थापना वर्ष - १९८५

GITI

- No. of Trades: **2**
- No. of Classrooms: **6**
- No. of Workshops/ Laboratory: Classrooms are used: **3**
- No. of faculty: **5 (3** Regular, **2** Contractual**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **1.60** (June 2018)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electrician:** 2 - 20
2. **Fitter:** 2 - 20

Well constructed staff quarters are vacant (may be converted to student accommodation).

On Job Training

Not Available

The GITI lacks library amenities and suffers from inadequate road connectivity, hindering accessibility and development.

1. Number of Students (Avg.): 109
2. Percentage of Girls:0
3. Students from 20 kms. radius: **95%**
4. Students from Outside district: **<5%**

Government ITI Kashipur

राजकीय औद्योगीक प्रशिक्षण संस्थान काशीपुर, उधम सिंह नगर

Govt ITI Kashipur
Town/City, Block & Tehsil: Kashipur ,
District: Udham Singh Nagar
Pin Code - 244713
Official Email Address: iti.kashipurb.uk@gmail.com
Contact Number: 9412310506
Distance from nearest road (in Km): 0.01 km

Established in 1972
स्थापना वर्ष - १९७२

GITI

- No. of Trades: **13**
- No. of Classrooms: **16**
- No. of Workshops/ Laboratory: Classrooms are used
- No. of faculty: **24 (21** Regular, **3** Contractual)
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **2.24** (June 2018), Phase 2: **0.54** (Jan 22)
- Financially Supported by - **Govt. of Uttarakhand**
- Student Scholarships: **Available**
- Number of Students (Avg.): **465**
- Percentage of Girls: **10%**
- Students from 20 kms. radius: **80%**
- Students from Outside district: **< 6%**

Trades, Units & Seats

1. **Copa: 1 - 24**
2. **Electrician: 2 - 20**
3. **Electronics Mechanic: 3 - 24**
4. **Fitter: 2 - 20**
5. **Inf. and Comm. Tech. System Maintenance (ICTSM): 1 - 24**
6. **Machinist: 2 - 20**
7. **Mechanic (Motor Vehicle): 2 - 24**
8. **Mechanic (Tractor): 1 - 20**
9. **Sewing Technology: 1 - 20**
10. **Steno. & Sec. Asst. (English): 1 - 24**
11. **Turner: 2 - 20**
12. **Welder: 1 - 20**
13. **Wireman: 2 - 20**

On Job Training

MARUTI SUZUKI

HYUNDAI

Government ITI Bazpur

राजकीय औद्योगीक प्रशिक्षण संस्थान बाजपुर, उधम सिंह नगर

Govt ITI Bazpur
Town/City, Block & Tehsil: Bazpur
District: Udham Singh Nagar
Pin Code - 262401
Official Email Address: iti.bajp.ppp@gmail.com
Contact Number: 05949297026
Distance from nearest road (in Km): 0.3 km

Established in 2003
स्थापना वर्ष - २००३

GITI

- No. of Trades: **7**
- No. of Classrooms: **12**
- No. of Workshops/ Laboratory: **8**
- No. of faculty: **13 (10** Regular, **3** Contractual**)**
- Non residential campus
- ITI Grading Under Phase 1: **NA** (June 2018), Phase 2: **0.80** (Jan 22)
- Financially Supported by -**World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Draughtsman Mechanical:** 2 - 20
2. **Electrician:** 2 - 20
3. **Fashion Design & Technology:** 2- 20
4. **Fitter:** 2 - 20
5. **Mechanic Consumer Electronics:** 2- 24
6. **Painter General:** 2 - 20
7. **Welder:** 2 - 20

On Job Training

The Bazpur Cooperative Sugar Factory Ltd

TATA MOTORS

This GITI has sufficient infrastructure but requires additional faculty and manpower to operate courses effectively. It benefits from strong MOU support and maintains a commendable placement record.

1. Number of Students (Avg.): **183**
2. Percentage of Girls: **13%**
3. Students from 20 kms. radius: **80%**
4. Students from Outside district: **<5%**

Government ITI Pantnagar Vishisht

राजकीय औद्योगीक प्रशिक्षण संस्थान पंतनगर, उधम सिंह नगर

Govt ITI Pantnagar
Town/City, Block & Tehsil: Rudrapur
District: Udham Singh Nagar
Pin Code - 263153
Official Email Address: iti.pantnagar.uk@gmail.com
Contact Number: 9411372662
Distance from nearest road (in Km): 1 km

Established in 2015
स्थापना वर्ष - २०१५

GITI

- No. of Trades: **2**
- No. of Classrooms: **4**
- No. of Workshops/ Laboratory: **2**
- No. of faculty: **2 (2** Regular**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **NA** (June 2018), Phase 2: **0.38** (Jan 22)
- Financially Supported by: **World Bank**, **Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic:** 1 - 24
2. **Welder:** 1 - 20

The privilege of SIDCUL and major industries in Pantnagar isn't adequately reflected in the OJTs. Instructors have noted that mandatory insurance for students is limiting their OJT opportunities. Classrooms used as workshops.

On Job Training

Not Available

This GITI has good location benefit as it has surrounded by many industries, its limited trade options can hinder students' ability to receive training relevant to available jobs.

1. Number of Students (Avg.): **30**
2. Percentage of Girls: **0%**
3. Students from 20 kms. radius: **80%**
4. Students from Outside district: **<5%**

Government ITI Sitarganj

राजकीय औद्योगीक प्रशिक्षण संस्थान सितारगंज, उधम सिंह नगर

Govt ITI Sitarganj
Town/City, Block & Tehsil: Sitarganj
District: Udham Singh Nagar
Pin Code - 262405
Official Email Address: iti.sitarganj.ppp@gmail.com
Contact Number: 7088498336
Distance from nearest road (in Km): 1.1 km

Established in 2015
स्थापना वर्ष - २०१५

GITI

- No. of Trades: **3**
- No. of Classrooms: **8**
- No. of Workshops/ Laboratory: **3**
- No. of faculty: **3 (3** Regular**)**
- Non residential facility for students and staff
- ITI Grading Under Phase 1: **1.55** (June 2018), Phase 2: **1.21** (Jan 22)
- Financially Supported by - **World bank, Govt. of Uttarakhand**
- Student Scholarships: **Available**

Trades, Units & Seats

1. **Electronics Mechanic:** 1 - 24
2. **Fitter:** 1 - 20
3. **Mechanic (Motor Vehicle):** 1 - 24

Faculty positions are vacant and few classrooms used as workshops. Students are unaware of scholarships available and a suggestion for introducing **COPA** in the institute

On Job Training

talbros

MARUTI SUZUKI

The GITI has nesassary infrastructure, but lacks sufficient faculty and manpower to adequately support the range of trades it offers.

1. Number of Students (Avg.): **63**
2. Percentage of Girls: **0%**
3. Students from 20 kms. radius: **70%**
4. Students from Outside district: **<5%**

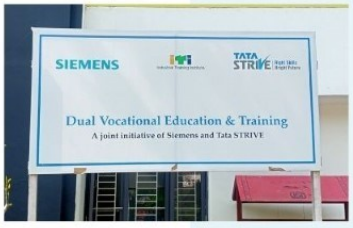
Government ITI Dehradun (Girls)

राजकीय औद्योगीक प्रशिक्षण संस्थान देहरादून (महिला)

Govt ITI Dehradun (Girls)
26, EC Road, Survey Chowk, Race Course
City & District: Dehradun
Pincode - 2480011
Official Email Address:
Contact Number:
Distance from nearest road (in Km): 0.1 km

NODAL ITI

- No. of Trades: **9**
- No. of Classrooms: **11**
- No. of Workshops/ Laboratory: **9**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **14 (9** Regular, **5** Contractual**)**
- Residential campus with faculty accommodation
- Provision for student hostel (*not functional*)
- ITI Grading Under Phase 1: **2.39** (June 2018)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**



The GITI has the supporting infrastructure, reputation among students but requires faculty & additional manpower to support the trades it is offering.

Trades, Units & Seats

1. **Electronics Mechanic**: 1 - 24
2. **Surface ornamentation Techniques (Embrodery)**: 1 - 20
3. **Stenographer & Secretarial Assistant (Hindi)**: 1 - 24
4. **Stenographer & Secretarial Assistant (English)**: 1 - 24
5. **Sewing Technology**: 4 - 20
6. **Draughtsman Civil**: 2 - 24
7. **Information and Communication Technology System Maintenance (ICTSM)**: 2 - 24
8. **Fashion Design & Technology**: 2 - 20
9. **Basic Cosmetology**: 2 - 24

1. Number of Students (Avg.): **170**
2. Percentage of Girls:
3. Students from 20 kms. radius: **80%**
4. Students from Outside district: **< 5%**

Government ITI Dehradun (Boys)

राजकीय औद्योगीक प्रशिक्षण संस्थान देहरादून (युवग)

Govt ITI Dehradun (Boys)
Town/City: Niranjanpur, Block: Dehradun
District: Dehradun
Pin Code - 249141
Official Email Address: iti.dehradunboys.uk@gmail.com
Contact Number: 0135-2720910
Distance from nearest road (in Km): 0.1 km

Established in 1965
स्थापना वर्ष - १९६५

NODAL ITI

- No. of Trades: **16**
- No. of Classrooms: **32**
- No. of Workshops/ Laboratory: **25**
- No. of Multi-purpose Hall: **1**
- No. of faculty: **49 (49** Regular**)**
- Residential campus with faculty accommodation (31 staff currently staying in the campus)
- Provision for student hostel (*100 beds*)
- ITI Grading Under Phase 1: **2.67** (June 2018) Phase 2: **1.65** (Jan 2022)
- Financially Supported by - **World Bank, under PPP (since 2008-09), Govt. of Uttarakhand**
- Student Scholarships: **Available**

The GITI has the supporting infrastructure, reputation among students but requires faculty & additional manpower to support the trades it is offering.

Trades, Units & Seats

1. **Draughtsman Civil**: 2 - 24
2. **Draughtsman Mechanical**: 4 - 20
3. **Electrician**: 12 - 20
4. **Electronics Mechanic**: 1 - 24
5. **Fitter**: 12 - 20
6. **Instrument Mechanic**: 4 - 24
7. **Machinist**: 3 - 20
8. **Mechanic (Motor Vehicle)**: 3 - 24
9. **Mechanic RAC**: 2 - 24
10. **Painter General**: 1 - 20
11. **Plumber**: 1 - 24
12. **Turner**: 2 - 20
13. **Welder**: 2 - 20
14. **Wireman**: 2 - 20
15. **Stenographer & Secretarial Assistant (English)**: 1 - 24
16. **Stenographer & Secretarial Assistant (Hindi)**: 1 - 24

Up-gradation Plans

- **Electronics Mechanic** as **Mechanic Consumer Electronics Appliances**
- **Painter General** as **Mechanic Auto Body Painting**

Government ITI Dehradun (Boys)

राजकीय औद्योगीक प्रशिक्षण संस्थान देहरादून (युवग)

Govt ITI Dehradun (Boys)
Town/City: Niranjanpur, Block: Dehradun
District: Dehradun
Pin Code - 249141
Official Email Address: iti.dehradunboys.uk@gmail.com
Contact Number: 0135-2720910
Distance from nearest road (in Km): 0.1 km

On Job Training

UTTARAKHAND JAL SANSTHAN

Dixon
The brand behind brands
Dixon Technologies (India) Limited

Honeywell

Jaquar

1. Number of Students (Avg.): **800**
2. Percentage of Girls: **43** out of 800
3. Students from 20 kms. radius: **75%**
4. Students from Outside district: **< 25%**

The GITI has the supporting infrastructure, reputation among students but requires faculty & additional manpower to support the trades it is offering.

MOU

SAMSUNG ELECTRONICS

THE PROJECT TEAM MEMBERS

Principal Investigator

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Associate Professor, IIT Roorkee

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