

## PROMISING AVENUES : Landscape of School to work Transition in India



January 2024

### Acknowledgements

### Contributors

Dr Shweta Gaur, Sarayu Mathur, Labhisha Meena, Harshita Kumari and Siddharth Rout

### Review

Anantha Narayan and Rathish Balakrishnan

### Disclaimer

This report has been produced by a team from Sattva Consulting as a product for the Sattva Knowledge Institute (SKI). The authors take full responsibility for the contents and conclusions. Any participation of industry experts and affiliates who were consulted and acknowledged here, does not necessarily imply endorsement of the report's contents or conclusions. To quote this primer, please mention: Sattva Knowledge Institute, *Promising Avenues: Landscape of School to Work Transition in India,* January 2024. Use of the report's figures, tables or diagrams, must fully credit the respective copyright owner where indicated. Reproduction must be in original form with no adaptions or derivatives. For use of any images in the report please contact the respective copyright holders directly for permission.

This work is licensed under the Creative Commons Attribution-Non Commercial-ShareAlike 4.0 International License:

Attribution - You may give appropriate credit, provide a link to the license, indicate if any changes were made.

Non-Commercial - You may not use the material for commercial purposes.

Share A Like - If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.



To view a copy of this license, visit <u>http://creativecommons.org/licenses/by-nc-sa/4.0/</u>

### About Sattva Knowledge Institute

Sattva Knowledge Institute (SKI), established in 2022, is our official knowledge platform at Sattva. The SKI platform aims to guide investment decisions for impact, shedding light on urgent problems and high potential solutions, so that stakeholders can build greater awareness and a bias towards concerted action. Our focus is on offering solutions over symptoms, carefully curating strong evidence-based research, and engaging decision-makers actively with our insights. Overall, **SKI aims to shift intent and action toward greater impact by influencing leaders with knowledge.** All of our content proactively leverages the capabilities, experience and proprietary data from across Sattva.

Editing: Anagha Wankhede and Pragati Priya | Design: Usha Sondhi Kundu; cognitive.designs@gmail.com



1	Executive Summary	04
2	Introduction: Understanding School-to-Work Transition	06
3	Status of Vocational Education in Schools	13
4	Vocational Education Training in India	18
5	India's VET Framework: Institutional & Policy Landscape	25
6	VET Challenges in India	31
7	School to Work Transition: Successful Interventions	38
8	References	46

# **EXECUTIVE SUMMARY**



School to Work (StW) Transition comprises the building of prerequisite skills for the world of work during schooling, and stable employment post schooling. Four capabilities are essential for a successful StW transition - foundational skills, transferable skills, occupational competencies and employment outcomes. A successful StW transition strategy can play a critical role in achieving India's ambition of attaining a \$5 trillion economy by 2030 and overcoming the NEET (Not In Employment, Education and Training) crisis. 36% of India's youth population is NEET and the situation is worse for women (>50%), especially in states like UP, West Bengal, MP and Punjab.

Youth unemployment is a major challenge in India, where the **informal workforce** and its contribution to the GDP is also growing. **High dropout rates** and low foundational skills at secondary levels lead to reduced readiness for vocational education programmes. At the same time, 85% of the schools failing to implement vocational education in school also makes access a big challenge. Regional and social disparities aggravate the problem.

The landscape of vocational education and training (VET) in India is marked by efforts to align programmes with the National Skills Qualification Framework (NSQF), encompassing a diverse range of courses across 19 sectors. **The National Education Policy** has directed the initiation of VET from Grade 6 onwards to make students employable for a **broad range of occupations after Grade 12.** The NEP 2020 envisions integrating vocational education into mainstream education at school level, with several entry and exit schemes for the students to attain certifications, degree and occupations. Despite various efforts and recommendations, vocational education delivery is marred by issues like **irrelevance of curriculum, redundant pedagogy and unavailability of industry experts.** These lead students to join the workforce without acquiring necessary skill sets. Reliance on private institutions, particularly in the case of ITIs, continues, with their high fees adding to accessibility challenges.

The Ministry of Skill Development and Entrepreneurship highlights the **requirement of 109.73 million skilled manpower in 24 key sectors**. However, the skewed uptake of skilling towards IT and Electronics sectors underlines the importance of tailoring VET to meet the diverse needs of the economy. Additionally, the stark gender disparities in access to formal or informal vocational training reveal a critical area for intervention. Skill training also reflects cultural biases, with more men opting for new-age sectors, as compared to women, who are in more visible in traditional sectors like textiles and care. India's vocational education system faces challenges at four levels. At a **structural level** it grapples with a lack of qualified teachers and poor funding, negative perceptions of vocational education, and issues with matching the curriculum to industry needs. At **a managerial level**, there is a scarcity of certifications, apprenticeships, and strong employer connections after training. Accountability, budget optimisation, and gender-inclusive vocational pathways are missing. At the **classroom level**, addressing the digital divide and improving the curriculum is essential. **Personal hurdles** include limited career guidance and role models. Overcoming these challenges requires strategic policy reforms, increased funding, and extensive career awareness initiatives.

Several models can be replicated in the Indian education system to attain the desired results from VET at the school level. These **include China's model of government-industry collaboration to provide free and relevant VET** for students and adults; **Tata Trusts' model for bringing marginalised youth into the mainstream** through VET; **CIFF's model to provide life skills along with technical skills** for girls **and Sarthak's model to impart vocational skills to the differently abled**. Multilaterals like World Bank and UNICEF have adopted infrastructure development and career guidance as an approach to contribute to VET in India. Projects like ABLE and MAST are technology-based scalable models by AIF to build vocational skills. These case studies provide inputs to scale the interventions, and at the same time ensure smooth, inclusive school to work transition for students.



# INTRODUCTION



### A smooth School-to-Work Transition for the workforce is achieved by acquiring essential skills during schooling, and obtaining stable employment after schooling or higher education.



#### **Process of PREPARING YOUNG PEOPLE for transition**

It involves the **capacity building of adolescents** and young adults (aged 10-19) to cope with the changing demands of skills, technology, and labour markets while aligning with their interests.<sup>2</sup>

#### **Process of MAKING ACTUAL transition**

This stage refers to the **transition from the completion of schooling to the establishment of stable, long-term employment,** which can either be formalised through a written or verbal contract lasting for a **minimum of 12 months.** Additionally, this stage also includes individuals who may not have long-term wage employment but hold a job with a self-perceived sense of continuity.<sup>3</sup>

In a country like India, the transitional process is weak - primarily due to the lack of strong industry and school linkages.<sup>4</sup>



#### Sattva Knowledge Institute | primer www.sattva.co.in/knowledge-institute

### School To Work Transition is a fourfold journey from Foundational Skills to Employment Outcomes.





### Why School To Work Transition Matters: Breaking The Cycle of Youth Disadvantage

### **COST OF INACTION**

#### School-to-work Transition Crisis

Lack of school-to-work transition support and dropout leads to low career awareness and aspiration, and youth unemployment.

#### **Mental Health Crisis**

These challenges increase the risk of mental health issues, further impacting career prospects and perpetuating the cycle.

#### **Socio-economic Crisis**

Unemployment and dropouts contribute to reduced social well-being and greater economic vulnerability.

**3 out of 4 young people** worldwide **work informally,** a proportion rising to **19 out of 20 in developing countries.** This poses significant policy issues.<sup>5</sup>

Globally, about **1** in **5** young people (267 million) are NEET (Not In Education, Employment or Training), with 68 million unemployed, causing economic and stability concerns.<sup>6</sup>

Studies have linked NEET population with the emergence of **symptoms of depression**, **anxiety**, **substance use**, **and suicidality**.<sup>7</sup>

**Young vocational training graduates face higher automation risk,** necessitating labour policy and vocational education and training (VET) system modernisation.<sup>8</sup>

Automation increases unemployment and instability. The World Economic Forum forecasts **displacement of 85 million jobs by 2025 due to automation.**<sup>9</sup>

Gender disparities in NEET are significant, with **3 in 4 NEET individuals being females**, a trend particularly pronounced in Arab and South Asian countries due to social norms.<sup>10</sup>

### Despite a big labour pool, both employability and quality of employment continue to be major concerns in India.



Notes: Higher level education includes diplomas, graduates and post graduates

### Three forms of School-to-work Transition occur in India, but all three lead to low-skilled jobs.





### A successful StW transition strategy can play a critical role in achieving India's ambition of being a USD 10 Trillion economy by 2033, and overcoming the NEET crisis.

The proportion of India's working age population will reach its highest level at 68.9% by 2030. But with 33% of India's population aged between 15-29 being classified as **NEET**, the opportunity of reaping the demographic dividend is at risk.<sup>18</sup>



Source: PLFS

## **STATUS OF VOCATIONAL EDUCATION IN SCHOOLS**



'Skills beget skills through multiplier process': Lack of FLN skills constrain individuals' ability to attain advanced skills, thereby affecting labour market outcomes.





## Lack of access to skilling opportunities through vocational education programmes and poor learning outcomes in primary grades contribute to unskilled youth entering the workforce.

NEP has directed the initiation of VET from grade 6th onwards, to make students employable for a broad range of occupations after Grade 12th.





Sattva Knowledge Institute | primer www.sattva.co.in/knowledge-institute 15

### Vocational education delivery is marred by issues like irrelevance of curriculum, redundant pedagogy and unavailability of industry experts to synchronise it with industry needs.





# Due to insufficient links between formal education and vocational training in school, students graduate without job-ready skills, in addition to the high number of dropouts joining the workforce unprepared.



Vocational programmes can promote learners' horizontal and vertical progression, prevent dropouts, and develop employability skills. However, nearly **85% of Indian schools have yet to implement vocational courses** as part of their curriculum. <sup>31,32</sup>



## VOCATIONAL EDUCATION TRAINING IN INDIA



Organisations linked with ministries like the MSDE, industry, and the Samagra Shiksha Abhiyan offer school-based vocational programmes, encompassing 55 National Skill Qualification Framework (NSQF)-aligned courses.



The National Skills Qualification Framework (NSQF) adopted by India comprises ten levels, recognises job roles in 19 sectors, representing increasing levels of complexity in terms of the knowledge, competence and autonomy starting from school to university.<sup>40</sup>



## In spite of government efforts, VET (especially in ITIs) is predominantly offered by private institutions, making it inaccessible and unaffordable for a significant portion of the population.

### Challenges in Provisioning of VET in India

Pre-requisites: VET courses differ structurally and spatially. Further, the courses demand either Grade 8, 10 or 12 certificates.

High Time Commitment: Mean level of education for most ITI courses is **12 years** or more. On the other hand, for **handloom or motor driving** – the mean years of education are below 10 years.

High Cost of VET: Private expenditure for VET is **Rs. 14,881,** and 75% of ITIs are private. This is very high compared to free government training programmes and the cost of general education (Rs. 7360). <sup>41</sup>

#### Uptake of VET in India

Uptake of VET takes place at a **much later stage** in a student's life than the expected enrolment age.

Mean age for ITI participants is 26.5 years, and 24.7 years for Polytechnic students.

### Outcome of Industrial Training Institute training



(B. VOC: Bachelors in Vocational Education; CITS: Craft Instructors Training Scheme)

NSSO 64<sup>th</sup> Round data shows that it is relatively **well-off income groups** who have access to VET.



### The MSDE highlighted the requirement of 109.73 million skilled manpower in 24 key sectors. However, the uptake of skilling is largely in the IT-ITES and Electronics sectors.<sup>43</sup>



Students accord higher value to getting trained for white-collar jobs, followed by blue-collar jobs in manufacturing.



### Students from rural areas aim for desk-based jobs, which are more prevalent in urban areas, rather than considering skill options that could lead to opportunities in their vicinity.

Prevailing social norms and low esteem associated with manual heavy trade (such as masonry), and lack of regional employment opportunities after completion of trainings leads to low uptake of courses apart from IT-ITES.



As per the India Skills Report, the employability of ITI alumni has shown a dramatic downturn, falling from approximately 47% in 2014 to under 30% in 2018.<sup>45</sup>



### Gender Lens: More than 90% of women received no formal or informal vocational training. Among those who received training, 44% did not enter the workforce.

Skill training also reflects cultural biases, with more men opting for new-age sectors for skilling as compared to women, who are more visible in traditional sectors like textile and care.<sup>46</sup>



Sector	Male	Female
Beauty & Wellness	0.30%	7.00%
Artisan/Craftsman	0.60%	2.50%
Healthcare and life sciences	3.90%	8.90%
Hospitality and tourism	0.80%	1.20%
Textiles and handlooms, apparels	1%	24%
IT-ITES	31%	27%
Electronics	16%	1.10%
Mechanical Engineering	6.0%	0%
Others	31%	27%

Women are lagging behind across VET spaces. Their presence is largely in traditional sectors of textiles, beauty and wellness, and healthcare.

**79.20%** of men who received vocational/technical training (VET) were employed, with only **10.20%** categorised as unemployed.

For women who underwent VET, only 48% were employed, and **7.8%** were classified as unemployed.

A significant **44.3%** of women who received formal VET were not present in the labour market, indicating a considerable gap in understanding their aspirations and provisioning of training.

### Despite the huge expenditure, ITIs face the twin deficit of low uptake of courses and low placement of students.

The skilling ecosystem for 14 to 18 year-olds rests with Industrial Training institutes (ITIs). Only 21% of these ITIs are government-run, with a high maintenance cost of Rs 12,200 crores per annum. <sup>48</sup>





## INDIA'S VET FRAMEWORK: INSTITUTIONAL & POLICY LANDSCAPE



## The Indian Government's' strategic emphasis on skill development is key to addressing the dual challenge of shortage of skilled labour in the industry, and the issue of youth unemployment.

### Youth Unemployment



Lack of awareness and aspiration-mapping in career choices: The youth is unaware of the range of career options. The available options may not be aspirationally-aligned.



**Lack of accessible skilling:** If aware, young individuals lack the opportunities to acquire skills for their desired, high-aspiration occupations.



**Lack of quality skilling:** If skilling is available, it lacks the required quality to ensure employability.



**Lack of placement support:** If quality skilling is available, links to industry for jobs or entrepreneurship is missing.



Target: **Responding to youth aspirations** 

#### **Dearth of Skilled Workforce**



**Lack of access to pool of talent:** Industries need to spend large sums to build a human resource pipeline.



Lack of technically skilled talent: Human resources available are not sufficiently technically skilled.



**Lack of soft-skilled talent:** If technical skills are available, necessary soft skills are missing.



**Time consuming hiring process:** If skilled human resources are available, there are no partners to link them to the industry.



**Low-employee retention:** If employees are linked to industry, the latter still grapples with high attrition rate.



Target: Alignment with industry priorities



Policy Approach

## Although the significance of vocational skills has been acknowledged in policies, its effective implementation at the school level has not resulted in anticipated outcomes.

	Introduction of VET in Schools	Establish Importance of VET for Employability	Institutionalise VET in Mainstream Education from Middle to Secondary School
	Phase I 1960-2000	Phase II 2000-2015	Phase III 2016-2023
Milestones	<ul> <li>Introduction of VET in formal education system at +2 level as an optional stream.</li> <li>The 1986 Apprentice Act was amended to include a 10+2 vocational stream.</li> <li>Goal of 25% enrollments in VET at +2 levels by 1995.</li> <li>VET awareness creation from Grade 9 to increase enrollment</li> </ul>	<ul> <li>Focus on enhancing employability of school dropouts and socially disadvantaged groups.</li> <li>Discussion on institutionalisation of VET in school curriculum from pre-primary to Grade 12.</li> <li>Provide framework of national principles for recognising skill proficiency and competencies at different levels.</li> </ul>	<ul> <li>Establish the right of every child towards learning, including skill development through National Plan of Action, 2016</li> <li>National Apprenticeship Promotion Scheme launched (2016)</li> <li>Integrate vocational education into mainstream education in a phased manner</li> <li>Expose students to VET at early ages in middle and secondary school. Targets 50% enrolment in VET by 2025.</li> </ul>
Policy Levers	<ul> <li>• 1964-65: Introduction of the vocational stream recommended by the central Kothari Commission</li> <li>• 1968 &amp; 1986: National Policy of Education</li> </ul>	<ul> <li>2000: National Curriculum Framework</li> <li>2005: National Curriculum Framework</li> <li>2009: National Policy on Skill Development</li> <li>2013: National Skill Qualification Framework</li> <li>2015: National Policy on Skill Development and Entrepreneurship</li> </ul>	<ul> <li>2020: National Education Policy</li> <li>2023: Union Budget announced stipend support to 47 lakh youth across three years (Direct Benefit Transfer under pan-India NAPS).</li> </ul>

### To overcome the regional disparity in the provisioning and uptake of VET in rural and urban areas, the Gol has initiated several national level schemes.

Percentage allocation FY21	Major Schemes	Aspect of VET and initiatives		Intervention areas
67%	प्रियाली, बरे घली उज्जवुराव Shikksha Samagra Shiksha	<ul> <li>Aims at providing exposure to vocational skills at upper primary level in school</li> <li>Introduces hub and spoke model for VET to enable utilisation of available infrastructure in hub schools by students of nearby (spoke) schools</li> <li>Inclusion apprenticeship through the introduction of 'bagless days' in middle schools</li> </ul>		
30%	Pradhan Mantri Kaushal Vikas Yojana (PMKVY 3.0)	<ul> <li>Aims to provide industry-relevant skill training</li> <li>Establishes Skill Hub which provides VET opportunities through industry linkages</li> <li>Partners with skilling institutions for better access to training</li> </ul>		
2%	Deen Dayal Upadhyaya Grameen Kaushalya Yojana Scheme	<ul> <li>Public-Private Partnership (PPP) model for Placement-linked Skill Training Initiative for rural population</li> <li>Industry partnership, which give access to new technologies and job training</li> <li>DDU-GKY targets 55 million disadvantaged 18 to 34-year-olds from impoverished backgrounds, comprising 69% of the country's rural youth.</li> </ul>		
2%	National Apprenticeship Promotion Scheme (NAPS)	<ul> <li>Aims to link apprenticeship training to government-approved skilling courses such as PMKVY and DDU-GKY</li> <li>Implements the programme online through technology</li> <li>Provides a centralised platform for both the State and Central governments</li> </ul>		
		Awareness Generation 🔂 Apprent	iceshir	o Infrastructure Building

### Sattva Knowledge Institute | primer

### By 2036, the labour force in the industrialised world is expected to decline by 4%, while in India it will increase by 32%.<sup>51</sup>

To reap the demographic dividend, the Government of India is working towards strengthening the four pillars of StW transition.



The National Skill Development Corporation (NSDC) and the All India Council for Technical Education (AICTE) are implementing quality assurance mechanisms to ensure that vocational education programmes meet the required **standards of quality and relevance**.

## Through collective efforts of various ministries and stakeholders, the Government of India has established a robust system to steer positive outcomes in skill education and training.



### Industrial Training Institutes (ITIs) ecosystem of India 53

There are 19 ministries, apart from MSDE, that engage with VET. Several ministries like Agriculture, Commerce, Tourism, Medium and Small Enterprises have established their own sector skill councils to address sectoral skill requirements.



# VET CHALLENGES IN INDIA



### Navigating the hurdles: Challenges in school-to-work transition





### Structural Challenges

Structural challenges such as inadequate funding, misdirected budgeting, and a negative societal perception of VET in India make it exceedingly difficult to execute theorised action items, as per the NEP 2020.





### Managerial Challenges

Managerial challenges include lack of accountability, suboptimal monitoring, availability of resources and insufficient community engagement, leading to significant hurdles in establishing gender-inclusive vocational pathways.



### **Monitoring & Accountability**

### **Employer Surveys and Skill Needs:**

- Infrequent surveys by DGE&T, NSDC, QCI
- Inconsistent skill assessments, hindering gap bridging.

### Lack of Continuity of Training and Competence:

• Absence of upskilling options for teachers via in-service training.

### **Teacher Engagement and Collaboration:**

• Resistance from teachers towards adapting to new regulations.

### Access to Experts & Teachers

...

### Challenges in Integrating Vocational Education:

 Ambiguity on integration with subjects creates challenges for teachers. <sup>57</sup>

### Lack of Expert Availability

- Disconnect between Training Centers and schools. <sup>58</sup>
- Hindrance in accessing specialised expertise.

### Poor Capacity Building and Recognition:

- Public perception impacts teacher motivation.
- Rural regions lack training for teachers and teaching equipment.



### Parent & Community Engagement

### **Poor Perceptions of Vocational Education:**

- VET seen as last resort rather than mainstream pathway.
- Vacant ITI seats (46%) due to inferior perceptions.

### Lack of Gendered Approach and Skilling:

- Gender bias in training choices. <sup>59</sup>
- Women underrepresented in emerging sectors like logistics.

### **Early Marriages and Education:**

- Early marriages impacting girls' education and career prospects.
- Parents reluctance to send girls to skilling centres due to safety concerns.



### Classroom Challenges

Poor integration of VET with mainstream school curriculum, lack of tech infrastructure to bridge the Digital Divide at school levels and resources to encourage Experiential Learning.

Deficit of FLN	Teacher Capacity	Medium of Instruction	Employability Skills	
25% of surveyed children between the ages of 14-18, were unable to read basic text, according to ASER 2019 Survey.	Deficiency of 21.6% in teacher positions for grades IX and X. Shortage of 26.5% in posts for grades XI and XII, according to AISHE 2019 Report.	English predominance in technical institutions poses a hurdle for students from vernacular language backgrounds, according to research by UNESCO in 2022.	Limited awareness and opportunities to build 21st century skills and agency amongst the students. <sup>60</sup>	

Classroom challenges in implementing quality VET resources continue to deter the growth of VET in India.



#### 93% of students aged 14-21 are aware of only seven or fewer career options.<sup>61</sup> Personal Challenges Ð S 3 **Availability of Role Models** Lack of Awareness **Career Aspirations** Limited Career Options Awareness: **Role Models and Career Confidence: Career Aspirations and VET:** • 250+ career options are available in India, Lack of role models affects confidence and Scarcity of employment opportunities and but lack of awareness makes students aspirations. limited placements in rural areas. focus on a few. 62 Influence of academic motivation and parental involvement. **Inadequate Career Guidance:** ITI trained manpower Outdated perceptions continue to be received placement for >15% major contributing factors. the year 2020-21. 63 Absence of clear direction and insufficient

- **Hesitancy to Pursue VET:** 
  - Entry-level jobs provided after trainings can also be attained without the VET certification.
  - Job dropouts due to living costs and lack of • social support.

36

- access to proper career guidance.
- Impact on post-training uncertainties.

### Unaware of Skill Demand in the Industry:

- Insufficient information, guidance, and socioeconomic challenges.
- Mismatch between acquired skills and industry needs.

2019	2030

According to UNICEF, 47% of Indian youth are not on track to gain the education and skills necessary for employment in 2030.

## Apart from supply of skilled workforce, there are other demand-side factors also that influence young people's transition to work.

### Barriers to Accessing Stable Work Opportunities

- Lack of labour markets, job search information and experience
- Mismatch between youth aspirations and labour market realities

#### **Barriers to Building Market-relevant Skills**

 Outdated curriculum, paucity of teachers and lack of transferable skills like critical thinking, problem-solving among students leave them with skills that are irrelevant for the market.

### Barriers to Developing an Enabling Ecosystem

- Access to finance and extent to which the skills are certified and recognised
- Government policies and their implementation leading to job creation



#### **Barriers to Sustain in Entry-level Jobs**

- Low-paying entry-level jobs makes it difficult to sustain living in cities
- Jobs mostly demand migration from rural areas, leading to breaking of job-seekers social support systems.
- Low-skilled workers may be priced out of the job market because the value they add is not seen to be equivalent to the new higher level of wages.<sup>64</sup>



## SCHOOL TO WORK TRANSITION: SUCCESSFUL INTERVENTIONS



### IN SPOTLIGHT China's Story of Successful Interventions for School to Work Transition <sup>65</sup>



### **IN SPOTLIGHT** Marginalised Youth and Skilling: The Tata Trusts Model <sup>66</sup>





Sattva Knowledge Institute | primer www.sattva.co.in/knowledge-institute

### IN SPOTLIGHT Young Girls and Skilling: The CIFF Approach <sup>67</sup>





### **IN SPOTLIGHT** People with Disability and Skilling: The Sarthak Approach <sup>68</sup>





### IN SPOTLIGHT Awareness Building and Career Guidance: The UNICEF Approach 69





### **IN SPOTLIGHT** Revitalisation of Institutions: The World Bank Way <sup>70</sup>





### **IN SPOTLIGHT** Leveraging Technology for Skill Development: American India Foundation <sup>71</sup>





# REFERENCES



- 1. Institute for Human Development & United Nations Development Programme, <u>School To Work Transition in India</u>, New Delhi.
- 2. Jung T.H., Kisung J.M., Dawe L.S., Hong S.Y., Lee K.C. 2004, <u>'Effective measures for school-to-work transition in the vocational education system Lessons from Australia</u> and Korea', National Centre for Vocational Education Research Ltd., Australia.
- 3. International Labor Organisation 2019, *From School to Work*, Geneva.
- 4. Ibid, 1.
- 5. International Labor Organisation 2018, *Women and men in the informal economy: A statistical picture*, Geneva.
- 6. International Labor Organisation 2018, Young people not in employment, education or training, Geneva.
- 7. Gariépy G., Danna S.M., Hawke L., Henderson J., Iyer S.N. 2022, *The mental health of young people who are not in education, employment, or training: a systematic review and meta-analysis*, National Library of Medicine, U.S.A.
- 8. Chang J.H., Huynh P. 2016, ASEAN in transformation: The future of jobs at risk of automation, International Labor Organisation, Geneva.
- 9. Zahidi S., Ratcheva V., Hingel G., Brown S.. 2020, *<u>The Future of Jobs Report</u>*, World Economic Forum.
- 10. UNICEF 2022, <u>Gender equality programming in South Asia</u>, UNICEF Regional Office, Nepal.
- 11. Wheebox, India Skills Report 2020.
- 12. Employment Statistics in Focus-April 2023, *Female Labour Utilization in India*, Ministry of Labour and Employment.
- 13. Ministry of Education 2020-21, <u>UDISE + Report.</u>
- 14. Bairagya, I 2021, 'Effects of COVID-19 Pandemic on the Rural Non-farm Self-employed in India', Economic & Political Weekly.
- 15. World Economic Forum 2022, *Education 4.0 India: Insight Report*, Yuwah, India.
- 16. ILOSTAT 2023, <u>Unemployment, youth total (% of total labor force ages 15-24</u>, World Bank Open Data.
- 17. CMIE Data 2023, Rate of unemployment in India 2022, by education level, Statista.
- 18. Chaudhary A., Pradhan B. 2017, *India Officials Trek Through Villages to Map Rising Joblessness*, Bloomberg, US Edition.
- 19. NSS Report 2023, Multiple Indicator Survey, MoSPI, India.
- 20. Rampal, N 2023, <u>'33% of India's youth aren't in employment, education, or training. Most of them are women</u>', The Print, India.



- 21. ASER 2018, Annual Status of Education Report (Rural) 2018, Delhi.
- 22. UNICEF 2019, More than half of South Asian youth are not on track to have the education and skills necessary for employment in 2030.
- 23. Ministry of Education, Reimagining Vocational Education & Skill Building.
- 24. UNESCO 2020, Vocational education first: state of the education report for India 2020; Technical and Vocational Education Training (TVET), Delhi.
- 25. Teamlease Survey 2018, 'Industry opportunity based vocational course design', Economic Times.
- 26. Wadia LC 2020, Putting vocational education centre stage in the implementation of NEP 2020, ORF.
- 27. India Today 2020, <u>'Over 2 lakh apprentices to get their full stipend during Covid-19 lockdown</u>', India Today Web Desk, New Delhi.
- 28. Mahapatra SK 2020, *Empowering and skilling youth from marginalised communities through vocationalisation of education and open schooling in India*, National Institute of Open Schooling, India.
- 29. Jena S.S. 2012, Prior Learning: A Key to Lifelong Learning, NIOS New Delhi.
- 30. National Skill Development Corporation, Skill Development Key Indicators Dashboard, India.
- 31. Research in Comparative and International Education, <u>'Learning for life and/or work: The status quo of pre-vocational education in India, China, Germany and the USA</u>', *Sage Journal*, USA.
- 32. Ibid, 15.
- 33. Ibid, 26.
- 34. Ibid, 31.
- 35. Samagra Shiksha 2023, Vocationalisation of School Education in India: Origin, Coverage, Status, Objectives, Schemes, and Challenges, 2023, Education for All, India.
- 36. Pilz M, Gengaiah U 2021, Teacher Training Education for VET Teachers in India, ResearchGate.
- 37. NISHTHA 2.0, Training of the Vocational Teachers/ Trainers, NCERT, New Delhi.
- 38. Ibid, 31.
- 39. Business Standard 2023, Most students aware of just seven career options: Study, India.
- 40. Ibid, 32.



- 41. Ahmed, T 2016, Socio-Economic Impact of VET: Are Students Interested in Joining Vocational Education and Training in India In the Context of Skilling Mission in India, ResearchGate.
- 42. NITI Aayog 2023, Transforming Industrial Training Institutes, New Delhi.
- 43. National Policy for Skill Development and Entrepreneurship 2015, Ministry of Skill Development and Entrepreneurship, New Delhi.
- 44. India Data Insights 2023, Worker Population Industry and Enterprises, Sattva.
- 45. Ibid, 11.
- 46. Ernst & Young, <u>Gender study to identify constraints on female participation in skills training and labor market in India</u>, Ministry of Skill Development and Entrepreneurship, New Delhi.
- 47. India Data Insights 2022, Women Out-of-work: Exploring the Untapped Economic Potential of India's Women, Sattva.

48. Ibid, 42.

- 49. Gudapati, S 2022, *Reimagining technical education and training in India: Top 5 areas of improvement*, National Skills Network.
- 50. Pilz M., Regel J. 2021, 'Vocational Education and Training in India: Prospects and Challenges from an Outside Perspective', Sage Journals.
- 51. PIB Report, <u>Challenges of Skill Development in India</u>, Government of India.
- 52. Singh, V., Mahore, S 2018, <u>'Present Situation and Issues of Vocational Education in India: A Case Study of Nagpur</u>', Journal of Advanced and Scholarly Researches in Allied Education.
- 53. Ibid, 42.
- 54. Raman, S 2020, Vocational Education in the NEP 2020: Opportunities and Challenges, Team SPRF, India.
- 55. Chakraborty, R 2023, 'How apprenticeship is the key to unlocking employment opportunities', The Hindu.

56. Ibid, 54.

- 57. Ministry of Education, National Education Policy Report 2020.
- 58. Rakowski, N 2022, Bridging the Disconnect Between Academic Institutions and Employers in the 4th Industrial Revolution, ResearchGate.
- 59. Pathak, RK, *Reimagining Vocational Education and Skill-building*, NCERT.
- 60. Stehle SM, Peters-Burton EE 2019, 'Developing student 21st Century skills in selected exemplary inclusive STEM high schools', International Journal of STEM Education.



- 61. Sen, C 2022, *Career Coaching: A Choice Or A Compulsion*, Mindler.
- 62. Ibid, 61.
- 41. Ibid, 42.
- 61. Ethical Trading Initiative, Raising wages: an urgent imperative.
- 62. UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training 2018, <u>China's TVET Model</u>, UNESCO Open Access Repository, Germany, viewed on Dec 18, 2023.
- 63. Tata Community Initiatives Trust 2014, TATA Strive, New Delhi, viewed on Dec 18, 2023.
- 64. Children Investment Fund Foundation, <u>CIFF</u>, India, viewed on Dec 18, 2023.
- 65. Sarthak Education Trust. 2008. Sarthak Digital Literacy. New Delhi.
- 66. UNICEF Report 2019, Professional and Career Development.
- 67. Ministry of Skill Development and Entrepreneurship, Skill Strengthening for Industrial Value Enhancement, Directorate General of Training, New Delhi
- 68. American India Foundation, *Market Aligned Skill Training*, New Delhi.



