

Establishing 5 Centers of Excellence for skilling

I. Introduction	2
II. Analysis	3
A. Background	3
B. Budget allocation and focus areas	4
C. German Dual Vocational Training System	5
III. Recommendations	6
A. Merging previous policies	6
B. Collaboration with the private sector	6
C. Implementation Mechanism	6
IV. Conclusion	8

Executive Summary

- A. Skilling is considered a national priority as a skilled workforce can use their specialization to generate more opportunities for employment and entrepreneurship translating to GDP growth in the Economy
- B. In the budget of 2024-25, an amount of INR 1.48 lakh crore was allocated for education, employment, and skilling.
- C. There are certain gaps in the designed skilling policy in terms of focus areas, feasibility, and implementation.
- D. India already runs around 15 major skilling programs and the accountability of those initiatives is limited, hence another skilling program challenges the fiscal discipline of the government
- E. The societal perception of skilling programs is not one of dignity, hence the students won't have motivation to participate in these initiatives. The classic comparison of an ITI not being the same as an IIT
- F. The German dual vocational training system can be used as a reference point for the centers of skilling to be established in India, as the system has proven to be successful in generating employment, enhancing workforce dignity, and establishing a public-private partnership

I. Introduction

Skills have often been considered superpowers, a way to be distinct in a crowd, aligned with industry requirements, and employable. The state of affairs since independence has changed, but the narrative remains the same, India lacks skilled labour, which makes unemployment a challenge that cannot be tackled. To solve the employment crisis, various initiatives toward skilling the Indian youth have been taken

1. Skill India Mission (2015)
2. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
3. National Apprenticeship Promotion Scheme (NAPS)
4. National Skill Development Corporation (NSDC)
5. Jan Shikshan Sansthan (JSS)
6. Skill Development in Higher Education
7. **National Centres of Excellence for Skilling**
8. Recognition of Prior Learning (RPL)
9. State-Specific Skilling Programs
10. India's Global Skilling Initiatives

Despite various initiatives aimed at improving employment and skills in the nation, the government has not been successful in moving the needle. Interns, even after receiving training, often fail to meet industry standards or be considered employable. The infrastructure and training curriculum are outdated and irrelevant, leading to low placement rates. Many skilling initiatives result in duplication of efforts without actual systemic changes, and there is minimal accountability for how these efforts translate to employment. Furthermore, the private sector remains disengaged due to the lack of incentivized partnerships with the government, hindering collaboration in such initiatives.

Additionally, societal perceptions contribute to the challenge, as there is a belief that a student's dignity is higher when enrolled in a high value-adding degree program than a skill enhancement training center—highlighted by the common comparison that an ITI is not the same as an IIT. To address these issues, establishing national centers of excellence for skilling could be explored to make Indian youth more skilled, employable, and industry-ready. Drawing parallels from the German dual vocational training system, it is essential to design an effective fund allocation system to ensure the success of these centers and bridge the gap between training and employability.

II. Analysis

A. Background

India has a lot of people, a population of 1.45 billion (as of February 2025). To function in an economy and make ends meet, these 1.45 billion people need to earn a livelihood, earn money to participate in the economy, or, simply put, get employed.

Individuals need skills—specialization in a discipline or activity—to contribute to the economy and be employed.

The dark side of India's growth story is that most citizens do not possess the skills that make them employable, they are not employed, and they fail to earn a livelihood for themselves. Unemployment is a crisis, and it leads to inefficient use of the nation's most valuable asset: its people. According to the Economic Survey 2025, India's unemployment rate was 3.2% in the 2023-24 fiscal year, indicating a substantial improvement from 6% in 2017-18.

The declining unemployment rate does not mean that there are not enough jobs, alarming statistics suggest that in the

- a. **Financial Sector:** approximately 1.8 million positions remained vacant last year due to a significant skill gap
- b. **Energy sector:** there is a gap of 1.2 million skilled workers in the energy sector hindering India's clean energy goals

Skills are the only thing that can bridge the gap between the current state of affairs and our aspiration of a *Viksit Bharat*. The state realizes this and hence believes that skilling the youth of the country is a national priority and several initiatives have been taken to achieve this, the latest being the setting up of centres of excellence for skilling.

“Building on the initiative announced in the July 2024 Budget, five National Centres of Excellence for skilling will be set up with global expertise and partnerships to equip our youth with the skills required for “Make for India, Make for the World” manufacturing. The partnerships will cover curriculum design, training of trainers, a skills certification framework, and periodic reviews.”¹

In the budget of 2024-25, an amount of INR 1.48 lakh crore was allocated for education, employment, and skilling. For enhancing skill development and entrepreneurship, the government announced a package of 5 schemes intended to benefit 4.1 crore youth over 5 years.

These centres are intended to enhance the skills of our youth and help them explore domains that can create employment in emerging high-demand domains such as AI, Renewable Energy, Semiconductor Manufacturing, and Healthcare.

B. Budget allocation and focus areas

The Ministry of Skill Development and Entrepreneurship has been allocated ₹6,017 crore. The major share of this allocation is dedicated to enhancing the ITI infrastructure in the nation with a sum of ₹3,000 crore to be invested in FY 26. ITI investment is essential for preparing infrastructure for vocational training and the centers of excellence would add to the ecosystem that intends towards educating the youth in a manner that they earn high-value practical skills.

The budget, however, lacks clarity on the focus areas of these institutions. These centers will focus on curriculum design, training of trainers, and establishing a robust skills certification framework. However, there is ambiguity on the priority being given to these institutions and the disciplines it would cater to. The government has many priorities to fulfill, starting from increased spending on research and development, participating in emerging developments in technology, generating employment, and collaborating with private institutions for collaborative growth.

The government acknowledges AI to be the new emerging cutting-edge technology and has allocated a dedicated budget of ₹500 crore for a Centre of Excellence in Artificial Intelligence (AI).

Focus areas of these centers of excellence are:

1. High-Quality Training-
2. Industry-Academia Collaboration
3. Research and Development
4. Technological Upgradation

¹ [Budget 2025-26 Speech of finance minister Smt. Nirmala Sitharaman Ji](#)

C. German Dual Vocational Training System

The Indian skilling initiative in theory is very closely related to the dual vocational training system practiced in Germany. The German system is designed in a way that practical training is given a higher priority as compared to theory. The German system is a proven model of reducing unemployment, making the youth industry aligned, and creating viable partnerships with the private sector. The success of the system can be verified by the following statistics:

- a. Lowest unemployment rate of around 5-7% as compared to the average of 15-20% in Europe
- b. Industry Alignment- Around 70 % of the apprentices are hired by the companies training them, making the process of employment easier and acting as a testament to the viability of the model
- c. Financial returns- the sole reason why organizations prefer to collaborate with the government in training and skilling is because of clarity of incentives, it is reported that 77% of companies see financial returns on training investments within a few years

The biggest reason behind the success of the German model is how they changed the narrative around vocational training. In India, pursuing skill courses is a stigma, making skill training a compromise of their dignity, causing a direct impact on the skilled employment dynamic.

Germany through collaborative partnerships and incentivized efforts has made the model a success and an inspiration for the India growth story.

Research by Prof. Dr. Dieter Euler, suggests that no model can be duplicated in its entirety, while importing a model, the nation needs to carefully evaluate different aspects of the model and pick out relevant points that can impact the growth story of the nation.

In the Indian context, while adopting the German model, India needs to prioritise-

- a. **The existing curriculum**, the Indian education system is rigid in its approach, and adopting a new system requires making changes from the root level. The NEP is an attempt intended in this direction, but it continues to pose a challenge in terms of feasibility due to a lack of trained faculty, infrastructure, and friction to adopt to a newer system

- b. **Focus Area:** Germany had a realization of their true potential, engineering, hence the skilling initiative leveraged the idea of making Germany a nation of fine skilled engineers while also prioritizing other skills and disciplines

India, however, still lacks direction in its priorities, is it local? Is it technology? Is it engineering? Is it products or services? India is making a bold attempt at riding the AI wave, however, that cannot be the sole priority of a diverse and populous nation, and drawing inspiration from the German model cannot provide answers to these questions.

India is emerging, and the German model is a finely designed template for India to draw inspiration from and provides a clear vision for analyzing feasibility and preparing for the limitations that the German model encountered.

III. Recommendations

A. Merging previous policies

Duplication of efforts- There exists over 20 major skilling policies each focusing on a particular aspect of the challenge. The situation is alarming because the Government is formulating newer policies without tracing the consequences of the previous initiatives. These policies are leading to duplication of efforts as the state of affairs for employment has not significantly improved despite massive fund allocation given to the ministry.

In this initiative to skill India, the government must focus on efficiency, accountability, and make an effort to merge similar policies to achieve better fiscal discipline and avoid duplication of efforts

B. Collaboration with the private sector

The Indian story can only be a success if the private sector collaborates as enthusiastically as the government. The private sector and the government are parts of the same whole and need to function simultaneously to create employment in the nation.

Drawing inspiration from the German model, creating an incentivized partnership with the private sector in terms of training assistance and placements can take the burden off the government, reach greater masses and reduce the cost of recruitment for the private sector.

It also allows the private sector to train individuals as per their aspired industry standards hence saving time and friction of training a recruit.

C. Implementation Mechanism

The skilling initiatives can impact only if India has clarity on the skills to focus on, and the region where these skilling centers will be established. To create employment for educated citizens and enter the market of high value service exports, the Indian government should use these skilling

centers to equip the youth with the prerequisite knowledge to work with emerging technologies and take on entrepreneurial ventures.

The Budget announced a Centre of Excellence in Artificial Intelligence for education with a total outlay of ₹ 500 crore. The other skills that could be given priority in the initiative should be decided based on existing infrastructure, the government could leverage the metro cities to establish partnerships with the private sector to create an ecosystem of training and recruitment of the youth

The 5 centers of excellence should be located strategically to leverage the infrastructure and specializations of the Indian metro cities

1. CoE 1: Bengaluru (Digital Technologies & IT)
 - a. The existing Silicon Valley infrastructure and entrepreneurial ecosystem of Bengaluru makes it easier to establish AI education centers in the region and take advantage of the private sector to collaborate in training and recruitment of the skilled professionals
2. CoE 2: Pune (Advanced Manufacturing & Robotics)
 - a. Pune has an established manufacturing infrastructure and is the home to many large Indian industries, hence manufacturing-related skills can be inculcated in the Pune region
3. CoE 3: Ahmedabad (Renewable Energy & Sustainability)
 - a. Gujarat has emerged as a leader in India's renewable energy sector, leveraging its arid landscape and favorable policies to develop substantial solar and wind power capacities. These policy framework and existing ecosystem can give birth to new industries based on the premise of sustainability, and the city can serve as a hub for educating the youth about new technology and innovation concerning sustainability practices
4. CoE 4: Chennai (Automotive & Electric Mobility)
 - a. Chennai contributes approximately 30% to India's automobile industry and 35% to its auto components industry, underscoring its industrial significance. The city can empower the Indian youth to participate in the manufacturing of automobiles and contribute to innovation to strengthen India in becoming a global player in the automobile industry
5. CoE 5: Delhi-NCR (Healthcare & Biotechnology)
 - a. The NCR region's proximity to policy hubs and healthcare infrastructure makes it an important centre for empowering youth with necessary primary healthcare and diagnostics skills.

IV. Conclusion

The Indian government has long acknowledged the unemployment crisis and taken several initiatives to empower the youth by inculcating skills and entrepreneurial spirit. The outcomes of these initiatives, however, have failed to move the needle, and the lack of accountability of these policies makes it harder to trace the impact of these initiatives. The 2025-26 budget has taken the initiative a step further by prioritising specialisation in skills, taking advantage of existing infrastructure, and creating an opportunity for a PPP model. The government would need to establish a robust implementation mechanism and provide incentives to the private sector to create a viable skilling program.

The German dual vocational training system can be used as a reference for building a roadmap to build these centres of excellence as the German model has been long proven successful in empowering the German citizens and creating opportunities for training and employment.

India is a nation with potential, the youth being our superpower can only contribute to the growth story if they are equipped with skills and exposed to opportunities. Establishment of these centres of excellence may bring India closer to its Viksit Bharat dream.

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7. [German Dual Vocational Training](#)