

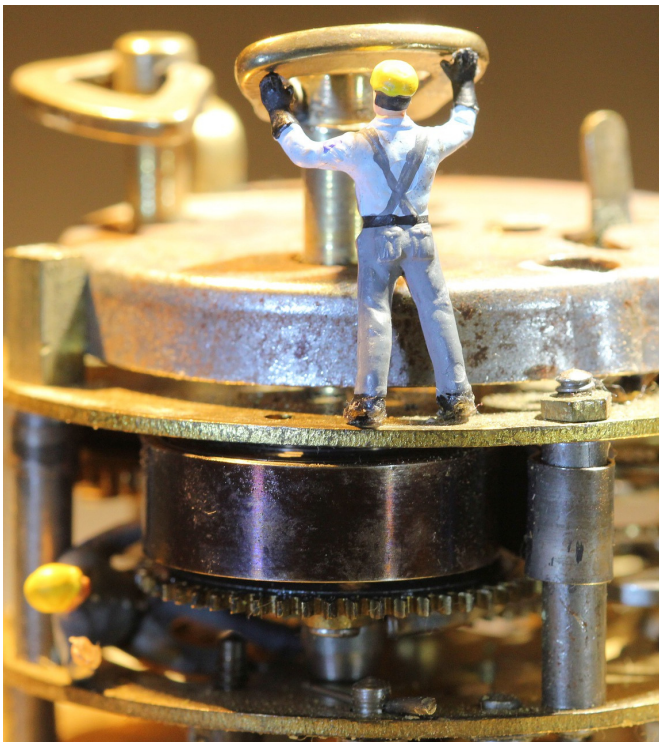


DOES SKILL INDIA NEED A SUMPUSIMUS APPROACH?

Dr TR Madan Mohan

Introduction

Government of India's ambitious Skill India program created National Skill development council (NSDC) to create a powerful network of training ecosystem to address employment skills and support gainful entrepreneurship. NSDC has created 38 Sector Skill Councils (SSC) in partnership with the industry to address training need analysis, curriculum development, and implementation of training programs. The Skill India program envisaged training & placement intermediaries to equip themselves with industry and trade skills, train their trainers, get certified by the Sector councils and impart skills to prospective candidates. The training centres earnings were through three revenue streams: viz., training, placement and entrepreneurship.

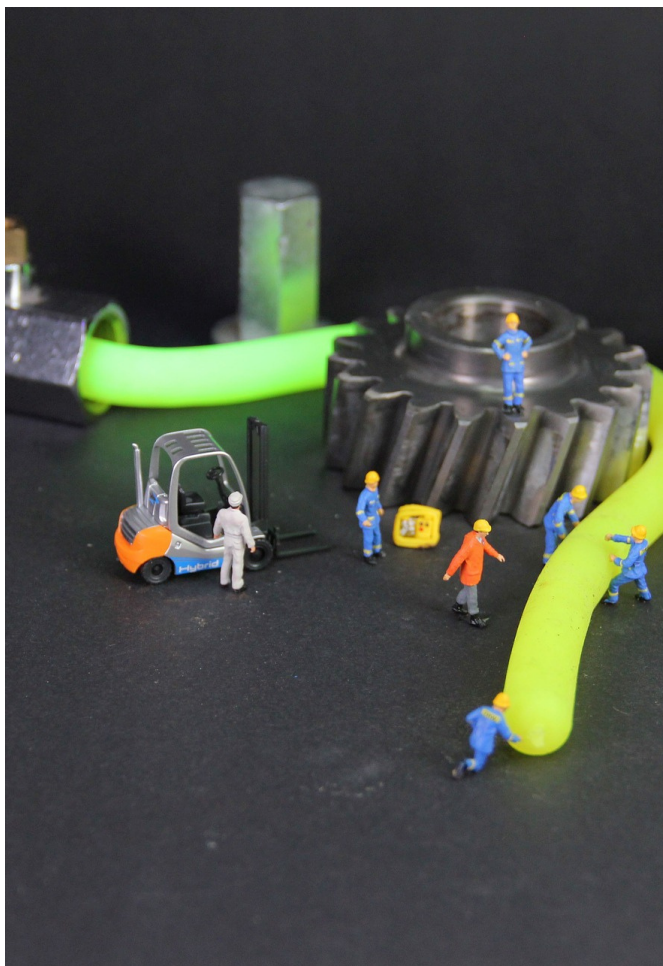


Pradhan Mantri Kaushal Vikas Yojana (PMKVY), the flagship program of skill India mission was launched on July 15, 2015 to address semi-skills and skilled capacities. The aim of this scheme was to create courses and institutes of vocational training integrated with formal education system and supported by the private sector through its 2% payroll bill for skill development initiatives. To encourage industry partners, adopt and upgrade skill development programs, the government introduced two PPP models. In the first model, the government would provide the ITI a 30-year, interest free loan of ₹2.5 Crore. In the second model, ITI gets a grant of ₹3.5 crore from the World Bank.

For a smoother running of the program, each ITI has a governing body called the Institute Management Committee (IMC) comprising government and industry nominees. Private players nominate the chairperson of the IMC and enjoy financial and academic autonomy to run the ITI. The state government appoints the principal and funds operating expenses.

Based on learning gained from PMKVY 1.0 and 2.0, the Skill India program recently launched the 3rd phase of PMKVY to cover 600 districts across all states of India. As a part of PMKVY 3.0, employability skills at ITI's have been increased by 45% with more emphasis on Craft based courses. PMKVY 3.0 aim is to train 8 lakh students with an outlay of ₹ 948.90 crore. The PMKVY 3.0 program actively encourages private partners to collaborate with 200 ++ Industrial training institutes (ITI) for course up-gradation, industry relevant training, and post-training employment.

Despite the best efforts of the government, partners and other agencies involved in the outcomes of Skill India program have fallen short of objectives. Ms. Nirmala Sitharaman, the finance minister in 2020 budget had announced an allocation of ₹ 30,000 core for Skill India Program in 2020. The problem of skilling India can't be solved by increasing expenditure and bringing in more training partners alone. We present here the reasons for the shortfall and approaches to overcome each pain area.



Supply side bias and constraints

A parliamentary panel reports the ministry has not spent its entire budget for the last three years and could achieve 49% of its training targets. Lack of staff, challenges in bringing up implementation partners and operational delays with release of funds to states were cited as the reasons. NSDC data shows the number of partners has increased from 382 partners in FY17-18 to 462 in FY18-19 and 538 in FY19-20. However, the number of training centres dropped from 11,035 in FY17-18 to 11,000 in FY18-19 and 10,373 in FY19-20. Placements also show a similar trend. From 7,75,685 in FY17-18 to 6,61,575 in FY18-19 and 1,86,467 in FY19-20. Closure, merger or even suspension could be the reasons in reduction of centres. However, suspension under the scheme is not a permanent one, but for a maximum of 7 months.

Recent data from NSDC show about 300 + centres have completed their suspension and eligible to take part in the program. Many large private sector players have been suspended and eligible to take part show scale is not a guarantee of quality. A short suspension period shows the supply side pressures the schemes are saddled with.

Moving further, our analysis of training partner shows supply constraints and low revenue generation challenges. For example, an NSDC approved education centre in South Bangalore, pays a rent of ₹90,000 per month, has a security deposit of ₹ 4,00,000 for a carpet area of about 3000 square feet which can house 4 class rooms with 30-seater capacity each. With an average fee from each student of ₹ 35,000 the company generates an annual revenue of ₹ 90,00,000. The company with a staff strength of 14 has trained 500 students enrolled across 33 courses.

With thin margins, +90 days receivables from 30 odd partners and payments from government, trading partners can barely survive. Many training partners resort to having the faculty teach courses where they have no expertise or exposure at all. Result, poor quality training, poor ROI on skill development and rough transition to work environment.

Analysis of skilling centres in Tier 2 districts in Karnataka and Andhra Pradesh reveal financial viability concerns. To remain profitable, courses require large student populations as contribution margin per student is small. For breakeven, each centre required to train at least 95,000 to 120,000 students in ten years and thus required scaling to multiple centres placing additional burden on financial viability. Our analysis of PMKVY centres in smaller towns like Salem and Trichur show that with their annual revenues of below ₹ 20 lakh with 60 number of students/years they could hardly break even.

The supply constraints are glaring if one looks at emerging sectors. Consider EV industry that industry resources estimate would require 8,50,000 direct employees and at least 4 times indirect employees in support and repair. Currently, the market has 100+ start-ups and a few large automotive venturing into the sector. While automotive sector council, Central Staff Training and Research Institute (CSTRI) are preparing the program curriculum, the number of trained resources is woefully short of demand.



Consider another hot employment area with a serious shortage of training partners and institutions. According to NASSCOM, the AI & ML market is expected to reach \$7.2 Billion by 2022. The enormous challenge IT industry is facing is a shortage of trained resources. The number of AI professionals was 40,000 in 2018, 72,000 in 2019, and about 1,40,000 in 2020. About 30% are employed with large companies (>10,000 employee size), 29% with mid-sized (employee base 200-10,000) and remaining 41% with start-ups and small companies. According to Great Learning, an ed-tech company, in 2019 alone 2,500 positions remained vacant and talent available is far in short supply relative to the demand.

Training related to AI and ML is still a nascent, mostly dominated by short-term (2-6 months) programs. Institutes like IITB and others have started PG certification/diploma courses. However, industry experts opine that there is a long way to go to match the demand if online courses are a mishmash of some video's and poor faculty interactions.

To realize Prime Minister Narendra Modi's vision to meet \$5-trillion economy contribution of skill India program is paramount. Skill development is not about ease of doing business, but enriching the capabilities of a nation's human resources through both formal and vocational programs. A recent study from Azim Premji University showed that total employment in India dropped by 90 lakhs between 2011-12 and 2017-18. CMIE reported a drop-in unemployment rate in the last two months. However, the total unemployed who were willing to work but did not have any employment in January 2021 stands at 40 million. The Home Minister of India, Mr Amit Shah in 2017 rightly quipped that "it is not possible to provide jobs to all, so we promote self-employment".

In the background post-COVID-19 disruptions and increasing automation across industries' creation of jobs in organized sector will be an immense challenge. Skill development therefore must not only improve employability but also the creation of a pool of entrepreneurs. Too much bias on supply side (Training partners, academic institutions and other agencies) is going to restrict the quality of skill development. Better execution and involvement of not just supply side, but importantly "demand side" can only improve skill development programs. By shifting the focus of the skilling program from too much supply side (read TP and other intermediaries) to demand side (MSME, and companies) increases economic additionality and sustainability of the scheme, otherwise India would miss growth opportunities.



Employer led model, misses the core

NSDC has announced an employer led model to impart training that is placement linked. Under this model, either an employer or a consortium (between an employer and new/existing training partner) can pursue the training program wherein 50% of the number of trained and certified will be absorbed by the employer. To qualify for this program, an employer must have an average turnover of ₹ 5 crore during last 3 consecutive financial years and a minimum employee strength of 250 employees. In case company has existed less than 3 years, then average turnover shall be considered as a basis.

The scheme misses 21 lakhs+ MSME operating in India. According to MSME Ministry's FY19 annual report, India has 6.33 crore MSMEs out of which 6.30 crore are micro-enterprises, while 3.31 lakh are medium and 5,000 are medium enterprises. MSME employ about 120 Million people and contribute about 6.11% of the manufacturing GDP and 24.63% of the GDP from service activities. Their export contribution is \$147 Billion and according to a CII survey they created highest number of jobs in the last four years. Most SME hire freshers and invest in "on-the job" training and capability development. MSME are hunting grounds for curated talent for large companies and MNCs. While the state machinery is aiming for a larger growth, MSME's across many states are facing a huge shortage of skilled labour force. Take the case of Telangana, where about 1.25 lakh are MSME of which 40,000 are into manufacturing. A NSDC study reveals Telangana has just 1.3 percent of skilled human resources against a demand for 29 percent and 2.7 percent of semi-skilled against a demand of 11 percent. Its minimal skilled labour is 26 percent, while the requirement is just 10 percent. With Punjab, over 1,28,000 industrial units are SME and their biggest challenge remains availability of skilled and semi-skilled employees. With huge migration to Canada and UK, the agricultural state requires many more harvester operators and briquette repair semi-skilled resources.



MSME's which form the bulk of hiring and the ground where raw human resources is trained and developed could not afford to employ trainees. Covid-19 has further exacerbated their ability to absorb and train the bulk of youth. The employer led model scheme does not cover the skill development investment of existing employees, which affects the vertical growth of employees, especially in SME as the majority of the resources move from semi-skilled roles to more skill-based roles. Skilling programs in most countries is about enhancing the training and investments by the industry players by active support and nudging by the governments towards automation and newer skills

Canada runs Student Workplace Placement Program (SWPP) and Green Jobs Science and Technology Internship Program (STIP) to host students. The employers in key sectors like biotechnology, IT, aviation, environmental sectors are funded to attract and train students. The Enhanced Training Support (ETS) program of Singapore envisages employers to provide staff with required new training and 95% of the fee is a subsidy by the government.

Industry players know what talent they require and nurture it. Employers want more than short-term training and surely away from anarchic apprenticeship models, but flexible programs that can create problem solvers and not someone with just skills. Skill development programs must look beyond short-term skill enhancement through supply side, but also make significant policy changes to support long-term internship or fellowship programs so that employers directly hire interested students and train them on the job. The Co-op program of Canada is a good example that can be improved to suit Indian conditions. Extending “training subsidies” for MSME and start-ups on the lines of CLCSC or ISO subsidy reimbursement could be considered. With the availability of affordable IT tools to manage and monitor allocations, it could eliminate leakages.

Skill India program must look at building immersive, relevant and amortizable skills. An integrated view of current and potential demand, capacities and capabilities of training providers, informal investment made by companies, and tax and other incentives to ensure outputs, outcomes and impact of skill development programs happen as planned. Unlike the apprenticeship program under the Ministry of Labour that many companies in industries like IT and others skirt away and even those in manufacturing do not exploit fully, there is a need to create a less burdensome program for both employers and employees.



The answer lies in immersive on-the-job training or fellowship programs. Many of the companies we work with across IT (software products), Aerospace and Defence, Agricultural equipment and Light Engineering have created 12-24 months fellowship programs to attract and train graduates. The students, mostly from low-ranking colleges from Tier 2 and 3 cities, are selected based on their attitude to learn and problem-solving skills. The fellowships program is a blended program involving classroom and on-the-job training. This helps address the challenge many students coming from Tier 2 and 3 Colleges face with no faculty to teach or poor teaching skills. Post basic training, they immerse the interns in the actual work. Fellowship students learn to code, design, and develop 3D models or build prototypes. They pay the students to learn and gain skills. Fellowship students not only work on production problems but also involved in R&D projects. These fellowships are long term and the company completely owns the design and delivery of the content.

The fellowship provides students an opportunity to hone their skills and emerge as valuable resources. These fellowships meet both skilling and employment objectives, especially at undergraduate and entry levels where the bulk of prospective employees will be. The fellowship program has two advantages from Skill India perspective. First, they hone the skills at the workplace, not at some training centre, and most of the employees trained end up gaining rightful employment with the company. Another key aspect is the rate of skill development and scale of skill development. By modifying employer eligibility criteria for employer led schemes, India can quickly create deep skills in many emerging areas in defence, aerospace, biotech and other areas.

The new education policy (NEP 2020) is in the right direction of moving away from rote learning to more practical based learning. It proposes to align the structure and process of education to impact practical skills, specialization and entry/exit to enhance lifelong learning environment. AICTE, under the Ministry of Education, already runs a portal connecting internships for engineering students. Canada has the National Sciences & Research Council of Canada (NSERC) Experience award to encourage companies to access natural sciences and engineering students for a work term. In this cost-sharing program, students work on company specific R&D challenges. They can pursue a similar program through AICTE to encourage last year students to pursue industry specific projects. AICTE can also experiment with awards for best R&D projects externally reviewed by SSC and other agencies.



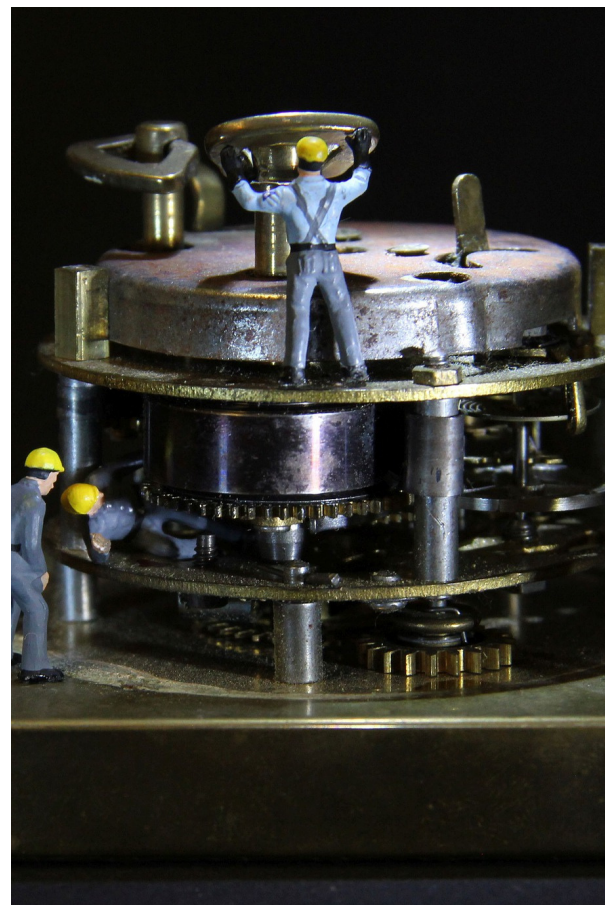
Too many schemes

Twenty ministries at the Centre spend close to ₹ 15,000 Crore each year on various skilling programs and states do a matching contribution. However, implementation of many schemes by different ministries is poor. The Ministry of Social Justice and Empowerment had allocated around ₹ 1 Crore to the National Backward Classes Finance & Development corporation (NBCFDC) for skill development of transgender people. However, the funds remained unutilized. The government has also increased its allocation to National Apprenticeship Promotion Scheme (NAPS), a scheme with an outlay of ₹ 10,000 Crore. From an initial target of training 5 lakhs in 2016-17, it now has an aim of meeting 50 lakh apprentices by 2020. To date, about 3 lakh apprentices work with 24,884 establishments and less than ₹ 500 Crore has been disbursed.

NATS, a one-year program was introduced to enable interested students to work in Central, State and private sector. The program covers both basic training and on-the-job training/practical training at the workplace in the industry. NATS covers about 120+ technical courses. Under this scheme, the government reimburses 50% of the stipend. NATS requires all employers with 30 or more employees to compulsorily hire apprentices. They allow companies 2.5 to 15% of the total workforce to be apprentices. Till date, 10,74,673 students have been trained with an active participation of 13,813 industries and 2669 institutions.

National Employability Enhancement Scheme (NEEM) is yet another flagship program of skilling Indian Youth. NEEM scheme jointly managed by AICTE and MHRD provides for on-the-job training to candidates. Companies must sign an MOU with a NEEM agent (any Society/Trust/Company registered under Section 25 of Companies Act 1956/Section 8 of Company Act, 2013). NEEM supports training of minimum 3 months to a maximum of 36 months, and the training must be NSQF compliant. A person seeking training under NEEM shall not be over 40 years of age as on the date of registration and Employee must cover trainees under Employer compensation policy and comply with PF deduction of EPFO Act. No new admissions have happened after a notification from 2019 onwards.

The Apprentice Act, mandates industrial units with over 500 workers establish their own training centre. This discourages them to outsource training to qualified partners. Recent announcement of amending The Apprentice Act and integrate its provision with the ease of business is a welcome step. While amendment will encourage 3rd party establishments participation in Apprenticeship can reduce paperwork and ease bean counting, but for deeper skills immersion of students in the crucibles of work. For more immersive and innovative capability development consider expanding the scheme to include start-ups and MSME. In many emergent areas, such as rocket propulsion, EV design, AI/ML aerospace applications, defence technologies, very few 3rd party training partners can be expected to have the breadth and depth of expertise required. Many start-ups and MSME use interns and contract employees for emergent areas, and the scheme must extend its application to those employees too.



Recently, Central government has announced a common fund pool of ₹ 30,000 Crore for skill development, a decision that can have a significant impact on the number of quality resources in the future. Managing fund of funds with focus across various ministers will require smarter application of IT solution including AI & ML, Blockchain and other technologies to manage priority allocations and strong M&E follow through.



Inadequate quality of skill development

A parliamentary reply mentions just about 30% of people who got trained under Skill India program got a job. This could be because that the training was generic and not deep enough for local firms to absorb them or explore international placements. Sector specific skill councils and their response to apprenticeship program has been inconsistent. It is not just the spend and reach, those who were trained could not find job. About 8 million freshers enter the job market each year. According to CMIE and Periodic Labour Force Reports (PLFS) around 35% of formally trained freshers could not be placed because of skill gaps. Companies across industries could not recruit the required talent.

The state-level data of demand-driven, placement linked skill development schemes such as Deen Dayal Upadhyaya Grameen Kaushal Yojana (DDU-GKY) raise questions on the quality and sustainability of the employment provided under the scheme. For example, a report from Karnataka Evaluation Authority (KEA) released in February 2021 shows only 42% of the beneficiaries were continuously employed and the average monthly salary post-training was lower than even the minimum wage for unskilled labour. The average placement is 36.6% and a 53% of the beneficiaries continue to be unemployed. While intermediaries like training partners and agencies are important to build the skill, they can't substitute the role of demand side play on the skill development. Skills development is a dynamic activity and immersive skills can be realized at the places of work. Unlike training in labs of partnering institutions, learning by doing develop strong industry relevant and amortizable skills. Academic institutes are finding challenge in hiring an expert and experience faculty members and investing in infrastructure, including labs, servers, and software. The quality of training by learning by doing which largely happens in start-up and smaller companies is much higher than academic programs and they continue to serve as breeding grounds for talent pool with no formal support to hire and train interns or contract employees. Same is the fate of space technologies (where 300+ private companies like Pixel, Agnikul, etc), Agricultural equipment and other sectors.

According to a CMIE report, close to 390 Million individuals have gained skills through informal on-the job learning, of which 384 Million are working. A sizeable number of semi-skilled resources come from Odisha, Bihar, Jharkhand, Chhattisgarh, Karnataka, AP, Telangana and Punjab. The bulk of overseas remittance of \$70-80 Billion remittances India receives each year comes from this segment. Most of these workers gain their skills by “learning on the job”, usually in Micro and small enterprises. Formal labour market does not value workers informally trained for specific occupations. Most positions, from electricians to a carpenter or even a Bedside Assistant learns on the job. In fact, in most industries, semi-skilled employees start as a work hand or operator and progress to technical roles over time with adequate experience. For example, Briquette operators/supervisors or Biomass supervisors are “semi-skilled” employees who gain expertise through experience. There is an enormous demand for their skills in India and abroad. Self-certification by companies, even SMEs, would enable faster formal inclusion of these types of jobs. .



While domestic jobs do not require English or other foreign language proficiency, the challenge for companies has been on offering long-term housing and other facilities. With increasing real estate pricing, lack of sustainable group housing alongside industrial localities, many companies find it difficult to attract and keep “semi-skilled” workers. Lure of foreign markets, especially Canada, GCC and Italy, is creating a challenge for many SME and large companies. Companies like L&T, Mahindra, Bajaj, Bosch and others that have invested huge training facilities offering free boarding and lodging facilities.

On the international semi-skilled resources front, foreign language proficiency tests (Level 4 or higher), Short-term certifications, personality development programs and trade registrations to speed up their immersion is what is required to embellish their experience for formal national and international labour markets. Encourage self-certification by the employers and transparent feedback from the employees to eliminate information asymmetry and intermediation costs. Publicly funded programs to hone their soft skills and deepen their domain skills are crucial. Considering most of these skills are gained at tiny and SME sector, short-term work programs, where state supports struggling SME with partial pay of such workforce, would be money better spent. Comparative data from Europe, especially Germany and USA on the job loss front and economic recovery show the value of such program in employee capability development and cushioning against economic crisis. Government can use direct benefit transfer to the employers using Aadhaar and other identification mechanisms to control leakages.

The apprenticeship program is implemented by the Ministry of Human Resources and Development (MHRD) and the Ministry of Labour and Employment (MOLE). It monitors the program by three agencies, viz., Board of Apprenticeship Training (BOAT), Regional Directorate of Apprenticeship Training (RDAT) and Directorate General of Training (DGET). For many SME and large companies, the administrative costs of engaging with many government agencies, submitting same information to different agencies is an enormous burden, especially when their HR teams are lean. Participation is weak, some skirt away, and those in rural areas are unaware and do not exploit the program fully. The efficacy of the program is subject to the personalized investment by the company and quality of apprentices. The quality of training and apprentices varies drastically across training institutes. Students coming from NTTF, GTTC's, CMTI, KGTTI, and other few institutions come with reasonable prior exposure to concepts and applications. The apprenticeship program of these institutions requires the students to complete the practical training and prohibit dropping out during the program.

A majority of the 11,430 private ITI's lack labs, equipment, and faculty. They have accreditation for highly amortizable trades like lift repair, heavy equipment drivers, Fire & safety technicians, repairs of motors, turbine or rotavators. Many of them can contribute to skill development of migrant labour workforce and contribute to regional development. However, many of them lack resources, especially finance. Many are plagued by high drop rate of students. For many companies, enormous drop out of apprentices and stipulation from government to recover dues from the apprentices dropping out is an additional administrative chore they wish to avoid.

Section 35CCD type of tax incentive to encourage large companies to invest in resources to upskill these ITI's can be considered. Alternately, NSDC can select 100 private ITI's through a national level award program and extend TP type of funding and support.



Decentralization: More government, less governance

Decentralized skill program formulation and implementation is key for successful outcome driven skill development programs. Some administrators believe District level committees (DSC) created under The State Skill Development Missions (SSDMs) can deliberate upon and plan viable skill development and employment plan for each district. On paper, DSC composed of district level officials and co-opted members of civil society, local chamber of commerce nominees can successfully manage demand-supply mismatch and provide robust monitoring. However, many DSC do not have working secretariat, lack of leadership and financial resources. Extending governance process from federal, state, district and gram panchayat for skill development as proposed by some administrators is not the answer. Investing in parallel administrative structure for “skill” development goes against the very principle the Prime Minister Modi’s government philosophy of less government and more governance. Government interventions work best when they focus on allocative efficiencies and leave technical efficiency (in this case of honing and development of skills) to the market players. Bounded rationality, adverse selection, opportunism, poor technical efficiencies will plague unfocused decentralization. In many states, District Industry Centres (DIC)’s under the Ministry of Industry and Commerce is deeply engaged with a local chamber of commerce and industries in their region. With little clarity on the positioning and role of DSCs and their suspected efficacy, pursuing this approach will only add to additional cost to the exchequer with no salient improvements on driving a robust skill development program at district level.



The much-advertised Mahatma Gandhi National Fellowships (MGNF) program where in young dynamic individuals are assigned to work at pre-selected district to document and understand the potential for employment and livelihoods is a short-term program from data management and not a sustainable skill development program. It is surprising the Skill India program that has taken bold decisions to adopt IT tools including portals and social media tools for aggregation and market making to reduce transaction costs resorting to people based heavy structure model.

SSC's have a critical role to play on setting standards, best-practices, skill gap identification and recommending programs that best for their sector. For example, for Indian space program to compete against the world, India would need more start-ups like Agnikul and others. SSC's can recommend emerging start-ups that may not meet the employer led model criteria for the funding agencies to support fellowship/internship opportunities. Such an approach has dual benefits, right skill development, but also competitive factors of production for Indian companies. This is unlike the free-reward based supply driven skilling program India is currently pursuing. Badges and awards can also be for employer hiring the most women trainees, employed with highest hiring rate, etc. DIC and other infrastructure of the state governments such as IADB, and SSIDC could also collect and report the efficacy of the program.



Finally, with availability of low-cost information technology portals, the transaction cost of collecting, collating and reviewing the output, outcome and impact of the schemes is made simple. Beneficiaries (students and semi-skilled professionals) can upload feedback about the quality of the program and the placements independently, and this “open feedback” can help in monitoring and evaluation of training partners. The Ministry of Skill Development and Entrepreneurship (MSDE) has already launched Aatmanirbhar Skilled employee Employer Mapping (ASEEM) portal linking skilled resources to employment opportunities. Using similar IT portals that allow start-ups, SME's, large industries, training partners, SSC, DSC/DIC and end users to aggregate demand, market making and M&E can turn skill development programs emerge immersive, relevant to the industry and with high long-term impact.

Sharad Prasad committee has critiqued the efficacy focusing on supply side skilling and the role of NSDC and SSC. Moving away from supply side to demand side focus and involving start-ups, MSME, large enterprises and SSC in right sizing and right skilling of resources can be a first step. With exposure to demand driven skilling and learning while earning economic spill overs that accrue at firm, industry and employment level increase because of improved allocation, access and availability of capital. The reform push of the government must build mechanisms for non-state stakeholders to drive skill up-gradation and employment for people who do not have them today. That is the way forward to reach skill development and employment generation goals.

Bibliography

- Gibb, T and Walker, J. Educating for a high skills society? The landscape of federal employment, training and lifelong learning policy in Canada, Journal of Education Policy, Vol, 26, No3, 2011
- Governder, C.M. and Valand, T.I. Work Integrated Learning for Students: Challenges and Solutions for Enhancing Employability, Cambridge Scholars Publishing, 2021
- Healy, J, Mavromaras, K and Sloane, P.J, adjusting to skill shortages in Australian SMEs, Applied Economics, Vol 47, No 24, 2015
- Kamaladevi, A, Gandhi, A and Mehrotra, S, China's Skill Development Program: Lessons for India, Economic and Political Weekly, Vol 50, No 28, 2015
- Mehrotra, S and Parida, J.K. Rising Education Levels and Falling Non-agricultural Job Growth, CSE Working Paper, No 23, Azim Premji University, 2019.
- Mourshed, M, Farrell, and Barton D, Education to Employment: Designing a System that Works, National Partnership for Educational Access, McKinsey Center for Government, 2012.
- Saraf, R. Skill Training or Nipping Potential in the Bud?, Economic and Political Weekly, Vol 51, No 18, 2016.
- <https://www.businesstoday.in/current/economy-politics/e-vehicles-industry-electric-mobility-mission-create-10-million-jobs-in-future/story/346804.html>
- <https://indianexpress.com/article/business/economy/india-employment-rate-study-azim-premji-university-6097024/>
- <https://www.livemint.com/news/india/ai-in-demand-but-2-500-jobs-remained-vacant-in-2019-says-report-11577358818915.html>
- <https://www.businessinsider.in/careers/news/ai-and-machine-learning-jobs-are-in-demand-but-hiring-is-difficult/articleshow/72879872.cms>
- https://www.business-standard.com/article/current-affairs/estimate-space-sector-s-share-in-gdp-before-allowing-pvt-sector-experts-120063000556_1.html
- <https://www.businesstoday.in/sectors/jobs/india-unemployment-rate-drops-65-in-january-employment-rate-surges-379-cmie/story/431334.html>
- <https://www.thehindu.com/news/national/karnataka/placement-poor-under-kaushalya-yojana-in-karnataka/article33884306.ece>

Browne & Mohan white papers are for information and knowledge update purpose only. Neither Browne & Mohan nor its affiliates, officers, directors, employees, owners, representatives nor any of its data or content providers shall be liable for any errors or for any actions taken in reliance thereon.

© Browne & Mohan, 2021. All rights reserved

Printed in India