Employability Training Gaps in Industries: A Post-Covid Scenario of India

DR. N.V.J Rao

Registrar, GIET University, Gunupur, Odisha India

DR. Manabhanjan Sahu

Debasis Mohapatro

Assistant Professor, GIET University, Gunupur

ABSTRACT

Even before the outbreak of COVID-19, there was a realization that a new world of work would be completely different from the past. Thus, there has been a renewed interest in the area of employability skills. COVID-19 pandemic accelerated the need for action to redress the problems of rising skill shortage and job displacements, demanding a higher pace of reskilling and upskilling. However, this necessitates plugging the existing gaps in the existing employability training framework in India.

The present study is aimed to explore the missing links on the existing employability programs, particularly at the last mile implementation. It also aims to portray major themes that are evolving in the employability training space in India in the post-pandemic period.

The first part of this paper contextualizes the research by providing background information on the concept of skill gap, career shock and career resilience and briefs the responses from government, higher education regulators and corporate bodies to bridge the existing skill-gap. The second part considers the theoretical aspects of post-pandemic employability training along with currently prevailing five major concerns in the employability training. The last part gives an overview of five major themes related to post-COVID employability training in Indian context.

The paper points out that inadequate assessment of employability programmes, lack of clarity on the methods employed, unvalidated pedagogy, misplaced softskills' teaching and limited linkage with the existing systems are the missing links in the current modes of training. The paper elaborates five evolving themes in the skilling education in the post-pandemic period. They are, new forms of partnerships, career concerns, need for hybrid skillsets, changing credentialing systems and pedagogical shifts. The study strengthens the idea of the upskilling and reskilling and has shown that the future of learning will be largely self-driven and technology-mediated. The study highlights the need for incorporating hybrid, digital and remote working skills in the curriculum through necessary curricular changes. The paper makes a case for shifting the nature of employability training from adjusting to uncertainty to preparing for uncertainty.

Key words: Career shock, Career resilience, Employability skills, Soft skills

INTRODUCTION

The advancements in technology and changing employment patterns reaffirms that a new world of work has emerged. COVID-19 has given a new dimension to the already changing workspaces. This fuels the need for employability training aligning with new realities. According to an analysis by the National Skill Development Corporation (NSDC), about 60 million people between the ages of 15 and 30 are expected to join India's labour force by 2023. The preparation towards this and the opportunities became complicated as the pandemic has shifted the sectoral priorities. The existing employability training needs an urgent transition the new realities. This starts by understanding the gaps in the existing training framework and being prepared for the changes and evolving opportunities.

OBJECTIVES AND APPROACH

The first objective of this paper is to understand the missing links on the existing employability programmes, particularly at the last mile implementation. The second objective is to identify major themes that are evolving in the employability training space in India in the post-pandemic period.

METHODS

Author's evolving understanding and reflection are used to identify the missing links in employability training, the first objective. Critical reflection is normally used in professional learning settings to assist practitioners to improve practice (Fook, 2011). The reflection is a result of authors' engagement with student training and participation in employability training initiatives for the last

five years. As a continuation of this reflection, an attempt is made to trace out the potential themes of change in the employability training during COVID-19 and beyond. To aid this, content analysis of news stories appeared in two leading national newspapers from April to September 2020 was used.

Constant comparison method was used for identifying the evolving themes. The technique is developed by Glaser and Strauss (1967) in its detailed form under the grounded theory approach. It was further refined by Strauss and Corbin (1990) using coding techniques. Being an exploratory study and the purpose was not to identify the relational pattern but to infer the evolving themes on employability during the pandemic period. Therefore, a simple content analysis using QDA minor was attempted for the current study. The news items relevant to employability and skills were selected and classified with a code. The codes were aggregated to arrive at themes. Each evolving code is compared with the previous ones and the comparison was stopped when further themes were not forthcoming.

LIMITATIONS

Reflection being a continuous process, the study has the limitation that the missing links pointed out cannot be static or universally applicable. Another limitation is that the study has not attempted any text-mining or relational thematic analysis of information or its validation from industry sources. The author feels attempting the above will push the current work beyond its intended scope and increase complexity.

STRUCTURE

The first part of this paper gives an introduction to the concept of skill gap and career shock followed by the responses from government and corporate bodies to bridge the already obvious skill-gap. The second part gives a theoretical framework for post-pandemic employability training along with five major concerns related to the employability training at the implementation level, which the author feels are the missing links in the current state of initiatives. Addressing these links and developing a framework can advance the current state of employability training and match it with the requirements of the post-COVID world of work. Third part traces out five major themes related to post-COVID employability training in the Indian context.

STUDIES ON SKILL GAP BEFORE COVID-19

Ever since, the highly quoted NASSCOM and McKinsey Report (2005), many researchers worked on the broad theme of employability gaps. Researchers like

Blom and Saeki (2011) and JeemolUnni (2016) repeatedly point out the prevalence and reiterates the importance of bridging skill gaps. Researchers like Mona Khare (2014), Mujal& Tiwari (2019) and Nair *et al* (2019) identify the skill gaps and suggest pathways to address those gaps. Sector-wise Reports by KPMG commissioned by Ministry of Skills and Development and Entrepreneurship (2019) captures major changes in each sector and signal different areas to address the employability gap. Carbal and Dhar (2019) reviewed 45 articles on skill development research in India conducted between 2004 and 2017 and points to the low quality of skills assimilated and low level of in-house training apart from other obvious aspects behind the concerns on employability. The India Skills Report 2019 gives rich insights into the current trends in the skill development ecosystem of India highlighting on the depth of demand-supply imbalances persistent in our country.

COVID-19 has given a new dimension to the already existing skill gap. A study by Eurofound, says that 40% of working-age Europeans have adapted to the pandemic by setting up temporary offices in their houses and apartments. A similar pattern is visible in other countries also, including India. The need to bridge the skill gap in the new context is suggested by many researchers who analysed the changing skill requirements in the pandemic period. LinkedIn's 2020 Workplace Learning Report endorses the need for closing the skill gaps in the next 3 to 5 years. Failing to do so, will result in a sharp decline in customer experience and satisfaction and will hamper the ability of the companies to innovate and grow.

To emerge successfully from the current crisis, organizations will need to nurture their employees' digital, cognitive, social and emotional, and adaptability and resilience skill sets (McKinsey, 2020). This means, firstly, a degree of technical skills is required to be comfortable with the organisation's ecosystem. Secondly, cognitive skills should be sharpened to attain enhanced levels of problem-solving skills, creativity, and innovation. This will help in the redesign of the present projects and manage big projects remotely. Thirdly, it is important to strengthen the social *and emotional* skills to ensure effective collaboration, management, and self-expression. Advanced communication and

interpersonal skills, including empathy, will strengthen the teamwork and nurture client relationships.

Lastly, *adaptability and resilience* to thrive during COVID-19 aftershocks and beyond build self-awareness, self-confidence, and self-reliance.

Most studies before COVID-19 have focused on nature of the gaps, attempt to measure the probable changes in the industry, links that with the supply and demand of relevant skills and outlines corresponding changes required in training and education sector. To be more specific, most studies on employability in Indian contexts falls under three overlapping categories. Firstly, those who point out the gaps along with generic suggestions; secondly, those who attempt to capture the perception of employers and employees and emphasise on the type of skill-sets required to fill the gaps, and; thirdly, those who look into the responses of different stakeholders in addressing these gaps and the effectiveness of those gap-filling interventions. As the skill development attempts are getting momentum from different quarters in India, particularly in the last five years, more effort is required on the last kind of works. To redress India's skilling challenge the committed participation of all stakeholders is necessary. Following is an overview of such initiatives.

INITIATIVES IN THE PRE-PANDEMIC PERIOD

Four major sources of employability training initiatives in India are Government, regulatory bodies, corporate bodies and independent institutions. The National Skill Development Mission, Scheme for Higher Education Youth in Apprenticeship and Skills, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Pradhan Mantri Kaushal Kendra, UDAAN and initiatives of India International Skill Centres are the major programmes initiated by Government which are directly implemented with a diversity of beneficiaries. Objectives and focus areas of these government programmes are summarised under appendix-I. Such programmes from Government are more of platforms for a portfolio of skilling activities. Evaluations of such broader initiatives are generally done as policy analysis or impact analysis. Last-mile assessments are largely vested with the implementation agency.

Skill development programs initiated by regulatory bodies of higher education are mainly through the establishment of community colleges, Kaushal Kendra and starting vocational courses like Bachelor of Vocation (B.Voc.) programmes. It also includes programmes like PMKVY-TI to provide employable and certifiable skills based on National Occupational Standards (NOS) with necessary soft skills to the school dropouts who want to pursue/attain higher-order skills. Employability Enhancement Training Programme (EETP) and National Employability Enhancement Mission (NEEM) are also umbrella attempts to meet the skills gap. Objectives and focus areas of these regulatory programmes are summarised under appendix-II. Apart from the above, there are innovation related employability enhancement programmes offered by regulatory bodies. India Innovation Initiative (i3), to identify top innovators from across the country and to enable commercialisation of home-grown innovations, Incubation initiatives, UKIERI scheme to enhance educational links between India and the United Kingdom are some of them.

Corporate initiated skill development programs are common since the 1980s. Companies like TATA were the forerunners of this in India. Since the 1990s and later many corporate platforms and corporate associations became actively engaged in employability training. Objectives and focus areas of some of the prominent corporate initiated programmes are given as appendix-III. Campus Connect, one of the most famous programmes under this category provides modules and training for teachers and students in the IT sector. WASE, an initiative of WIPRO in collaboration with BITS Pilani is a collaborative also an example of a work-integrated learning platform. TCS has as programmes for undergraduate students integrated with the current curriculum. Similarly, there are initiatives from SAP Lab, Intel, IBM and industry bodies like CII, FICII and financial organisations like SEBI. Many of the corporate initiatives, including above, are providing certifications also.

It can be seen that the programmes initiated by regulatory bodies, largely use the existing machinery of higher education to meet the objectives of the employability schemes. It is early to comment on the impact of these programmes, as most of them are three-year programmes. It is reported that there is high variability across the country regarding the running of BVoc courses, even though the syllabus and evaluations are validated by NSQF. This means the type of institution and micro-factors have a significant role in the success of such initiatives. Therefore, a detailed impact assessment of each of the above scheme is required to understand the shape and changes required for the future programmes, particularly on how they revamp the needs to the changed and uncertain situation during and after the COVID-19 pandemic. Nevertheless, probably due to the ground support from

institutions, these noble initiatives are easier to assess and do course corrections compared to broader policy level skilling initiatives.

Corporate initiated skill development programmes are highly structured and are used as campus-to-corporate bridges in many institutions. However, it is reported that mere placement motivation is the driving factor for academia to aligning these programmes with educational institutions. Faculty members are seen as the weakest chain in this link. Though there are few case studies which evaluate the impact of these programmes in a general way, there are no comprehensive studies conducted by an impartial agency. These trends are going to be accelerated in future if we see the evolving themes in employability training.

CAREER SHOCK AND POST-COVID EMPLOYABILITY TRAINING

COVID-19 has hit many industries and individual careers with a shock. There is a growing body of literature on career shocks and probably the first systematic study was reported by Lee and Mitchell in the year 1994. The term, shock, tends to be used to refer any expected or unexpected change to an ongoing social system that shakes an employee out of a steady-state or challenges the status quo to his or her thinking about the job (Lee and Mitchell in the year 1994). A career shock is defined as generally understood to mean a disruptive and extraordinary event that is, at least to some degree, caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career. Recent studies have established that the occurrence of a career shock can vary in terms of predictability, and can be either positively or negatively valenced (Akkermans, Seibert, and Mol 2018).

Previous studies mostly defined career resilience as *effective vocational functioning under disabling circumstances (*Rochat, Masdonati, and Dauwalder 2017). One's career resilience is the end product of both individual and contextual factors. Most of the studies focused on CR recognize that influence one's career resilience (Kossek and Perrigino 2016; Lengelle, Van der Heijden, and Meijers 2017; Mishra and McDonald 2017). Individual characteristics such as traits, skills, attitudes and behaviours have been found to influence one's resilience. Contextual factors such as supportive workplaces, job characteristics and supportive family also are important factors that determine Career resilience. (Mishra and McDonald 2017). The theory of career resilience has put the focus on the individual rather than the context or environment. Thus, the burden of resilience falls upon the employees. Irrespective of the reason for the career shock, the employee is supposed to adjust with it, make changes in him/her and emerge as successful. Thus, lack of resilience is often perceived as a flaw of employees and organizations would prefer to hire for resilience and offer resilience training rather than changing those conditions within an organization that may be causing the adversity. This is a critical point as workplaces strategize a post-pandemic future of work.

The key elements in this definition are often referred to as frequency, intensity, controllability and predictability, valence, and duration (Akkermans, Richardson, and Kraimer 2020; Akkermans, Seibert, and Mol 2018). Most of the factors discussed in the definition can be related to COVID-19.

Hite & McDonald (2020) draws on the career shock, resilience, and sustainable careers literature, consider how both individual and contextual factors will impact people and their occupations moving forward after the pandemic. To cushion the shock many training programmes are being suggested by independent authors and government. Countries like Namibia report the use and usefulness of simulations to prepare students for Work Integrated Learning (WIL) learning and placements (Lipinge et al, 2020). WIL as a compulsory component is included in the curriculum in all undergraduate academic programs in Namibia. The WIL period ranges from 360 to 480 hours minimum covering the skills required at the workplace. To prepare students for WIL, the university offers a pre-WIL work preparedness workshop and simulated employability improvement training. Both these have theoretical and practical elements. There are initial studies that establish the need for accelerated approaches and more research in skill enhancement in the post-pandemic period. For example, Buheji and Buheji (2020) illustrate how the utilisation of problem-based learning (PBL) helps in such times. There are already many success stories in medical sciences and engineering fields where the combination of both learner-centred and problem-based learning approach has proved to be effective. These experiences can be applied to other disciplines to meet the challenges created by the new normal. However, what prohibits the current employability training in adopting these methods is the pre-existing missing links.

MISSING LINKS IN THE CURRENT EMPLOYABILITY TRAINING PROGRAMMES

The ability to get a job is no longer just correlated with the certifications and grades that one possesses. Competitive edge and skillset one possesses along with cognitive, social and resilience

skills are perceived as more important in coming days. While there are many macro-attempts on employability training which are laudable and target driven, it is unclear whether these are translated well in the last mile, particularly in the post-pandemic era.

This author has identified five specific grey areas at micro-level which are currently the missing links and shall be the target of rectification in the employability training initiatives in the post-pandemic period. These may not apply to all programmes. However, avoiding these pitfalls and making subsequent improvisations to pre-empt them will enhance the likelihood of meeting our employability targets in an upcoming uncertain world.

Inadequate or faulty assessment of employability programmes: Assessment Components and evidence submitted are very limited in many of the employability training programmes. Most assessments are based on individual members trained and jobs offer received. Many measures like further self-directed learning, age of stay with the organisation and other long-term aspects are not considered.

Evaluation of the training programmes, particularly in generic programmes, appears primitive. Except in structured courses, all training interventions falls under the first or second level of the Kirkpatrick model (1984) of evaluation. The classic model for evaluating the results of training and educational programs has four levels; viz. **Reaction** level measures reaction of the trainers to the programme (like, satisfaction), ***learning*** level measures the extent to which the learners gain knowledge and skills; ***behaviour*** level attempts to understand the capability to perform the learned skills in work and **results** level determines if the training had a positive impact on the individual or organisation including changes in monetary, efficiency, morale related factors. An analysis of feedback forms of different employability training sessions can evidence that the evaluation of training programmes at the micro-level is inadequate to meet our employability targets.

Lack of clarity on the methods employed: Every training programme has specific content and procedure. Content is reflected through the material and resources where the procedure encompasses methods and pedagogy employed. While the corporate programmes and NSDC programmes have some level of clarity on the methods, many skilling programmes are yet to get clarity on the delivery and methods at the last mile. While statistics may show a higher number of individuals reached by each of these programmes, the real impact will be invisible unless a deeper impact study is conducted at multiple levels. This is especially true with domains like soft skills where subtle and incidental learning is more important than scheduled learning.

Unverified or unvalidated pedagogy: Most add-on courses, though involve a board of experts for setting syllabi and related details, in institutionally initiated programmes, the procedure and content are not verified or validated. To understand the importance of these invisible gaps, we may refer to the researches in the 1980s (Brophy, 1986 and Buchmann, 1981) which pointed out the importance of effective teaching procedures, though materials can certainly limit or enhance a teacher's efforts. In other words, what educational researchers talked as a glaring gap four decades back is recurring in training interventions now. More specifically, as suggested in the review of research in the context of teaching by David C. Berliner (1984) to design pre, during and post instructional factors that have an impact on learner outcomes, we need to design in the context of skilling. Despite the initiatives outlined at the beginning of this article, this level of specificity is yet to be attained. As most training is shifted to online and blended mode, the validation of pedagogy and assessments become more cumbersome.

Misplaced soft skills teaching: While there is strong literature to support the importance of soft-skills among the employability skills, there is no clarity on the methods of instruction of soft skills. Sadly, a vast majority of self-proclaimed trainers use conventional sessions with high entertainment value to "impart" soft skills, where the very domain of soft-skills cannot be imbibed through a teaching or training activity in a conventional sense and is used generally as a proxy to motivation training. Unlike in the past, cognitive sciences and data-driven approaches are so much developed whose real inputs can be driven to the training process of soft skills on sustaining basis; not for the fun and feel good value employed by many to lure less informed educators and learners, but for the enduring learning value and skill imbibing. This author could not ascertain any empirical research of international standing done in Indian context on the effectiveness of soft skills training programmes conducted widely in colleges in the country.

Limited linkage with the existing systems: Except for corporate-run programmes and fully run courses like BVoc, the real skill components are working as a finishing school in many programmes. The integration with existing structures like the current curriculum, other prevailing courses and involvement of a broader interdisciplinary academic community are yet to be seen. This results in

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seeing employability programmes as an add-on or top-up programmes, instead of conceiving as an embedded component in the main education system.

EMERGING THEMES

Following are the five emerging themes identified.

The theme I: New partnerships, players and initiatives

The most important theme evolved is the new partnerships and initiatives, seemingly as an answer to concerns on employment, which is presented as another theme. The prominent space received in news for edtech firms such as Upgrad, Talentsprit, Great learning etc indicates their relevance. Major MOOC players like Coursera, Edx, Instructure, Blackboard, Novoed, Iversity, Udacity, Futurelearn, Miriada X and open learn made clear in-roads to the already existing and now expanded skill and education market.

Many public and private partnerships were also announced in the last six months. Microsoft has partnered with the National Skill Development (NSDC) to provide one lakh of underserved women in India with technical skills over the next 10 months. Over 70 hours of course material will be made available free of cost as part of the partnership, addressing subjects such as digital literacy, Improving employability, nano entrepreneurship, and communication skills. Similarly, SBI becomes the first corporate partner of edX from India to offer MOOC. There are no specific academic qualifications to apply for the same. At the same time, edX launched a campaign named *Access for All,* to financially support low-income learners impacted by COVID-19 in four countries, including India**.** In another step, Microsoft sponsor 1,000 Microsoft Certification Exam Vouchers spanning different technologies for students from underserved communities.

In another initiative, NSDC created an e-platform, the Aatmanirbhar Skilled Employee Employer Mapping (ASEEM), which matches demand with supply using artificial intelligence (AI). As of August 2020, it is reported that about 7 million candidates' data have been uploaded and over 210,000 jobs are offered.

More than 1,500-course modules from Microsoft will be made accessible to students and educators free of cost through AICTE's e-learning portal ELIS. The focus areas will be artificial intelligence (AI), Internet of Things (IoT), data science, and cloud computing. Short term programmes like boot-camp approaches are also seen. For example, BridgeLabz has introduced business communications and other soft skills into its 30 days CodinClub Bootcamp for freshers.

Theme II: Career concerns and Skill ambiguity

Initial and continuing concerns on job security, skill relevance and employability in the economy inflicted by the pandemic was the second major theme. It is reported that post-pandemic India faces a massive skills crisis at a time of demographic change. One widely quoted example was that around 15,000 vocational centres were not functioning and the future for those who have been undergoing training there is bleak. The crisis of migrant workers and the tendency to work closer home necessitate more planning in the employability training in future. Many skilling institutes those who train workers in the areas such as repairs or the making of sewing machines, LEDs, plumping, retail sales associates, roles in hospitality were facing more ambiguity. The career ambiguity and skill anxiety are not limited to vocational workers alone. Over 3.5 lakh of the country's five million tech force who are in the age group of 40-45 were also facing the skill and career anxiety, among others.

The concern has three layers, one is that of job availability which is linked with the economy, second is questions of skills-relevance which is related to employability and third is that of security and growth, which is connected with stability and potential.

Theme III: Hybrid skillsets and Cobotics

Thinking about augmented organisations and news about AR-enabled convocations signal ways that technology and humans can work together to act more intelligently than they could separately. Skillsets in this new area, cobotics, are yet to be clear, but evolving fast.

Remote working skills will and need to be a priority in all employability training programmes. The umbrella term, remote working skills, include a bouquet of skillsets such as the use of remote communication equipment, self-motivation, cross-cultural communication skills and time management. Organisations and educational institutions will be creating more customisable remote work plans for their employees.

Technology areas like cloud computing, AI, data science, machine learning, ethnography, robotics and user interface were in high demand before COVID-19 also. While the ambiguity on the volume of the job market in these areas is temporarily unclear due to COVID-19, its relevance and preference from Indian youth have increased. The emerging Ed-tech companies backed by venture capitalists and advertisements vouch for this. More important factor seen in the evolution of a hybrid skillset along with hard skills, that include story-telling, design thinking, resilience, grit, management and self-motivation. This was a repeated theme in many news stories, particularly where HR managers are quoted.

Theme IV: Changing credentialing systems

Industries may tend to change their outlook to conventional credentials and look for new avenues for recruitment from places where more economic talent is available. Human Resource Management professionals may update their policies in this regard. Where the HR decisions of the pre-pandemic period were largely based on performance, the post-pandemic period will be driven by learn-and-performance approach. Technology will continue to be the latest capital to invest in. People with high learning orientation of digital skills will be more preferable than traditional credentials. The transition of many professionals in the IT sector from cities to smaller towns, though gradual will have long-standing implications. There will be more close connection between technology, culture and regional relevance.

Theme V: Pedagogical and curricular changes

A related theme evolved is the pedagogical and curricular changes that are either happening or required in the employability industry. Digitisation allows standardisation of instructions, flexibility in using training material and easy storage of content. These factors are accelerating dissemination of quality content in a pace that not seen in the past. Curating the information and presenting to the learners itself becomes an area requiring a digital and a different sort of pedagogical skillset for which our academics are yet to be fully exposed.

As the online skill market grows, a sub-theme emerging is a need for accreditation in the skill education market. It may be debatable whether accreditation can ensure better training facilities and outcome. However, this is also a theme worth mentioning. As routine jobs are liked to be automated, the pedagogical restructuring will be linked to emerging skillsets. Alignment of National Curriculum Framework, ensuring competency-based education at the institutional level and mapping them against National Higher Education Skills Framework (NHESF) require the simultaneous consideration of the employment market and national priorities.

Connecting the links and new themes

The employability initiatives in India has been focusing on adapting and adjusting to a job market with largely predictable skill-sets. The pandemic-induced disruptions have forced to think on futuristic portfolios in skillsets for the new normal of the workplaces. The future work in an uncertain world and needs an agile workforce equipped to handle career shocks. There is no evidence to say that India has a good track record in predicting employability skills.

Some of the above concerns and missing links are not new. For example, Harvey (2001) says that employability processes are confused with outcomes. He opines that employability-linked learning is likely to continue to be subject to crude measures of outcome, such as the proportion of graduates who achieve a full-time job within a specified period. However, these concerns at the micro-level can be addressed with better planning and evaluation for the last-mile level. This author proposes four broad ways to address the above concerns. a) make the last mile implementation parties as members in policy planning related to employability training; b) develop a common nomenclature for training types and programmes; c) moving away from the conventional generic feedback system and making scientific evaluation and impact assessment at the bottom of the pyramid; d) scaffolding and embedding the areas like soft-skills with focus on experiential pedagogy instead of mere advisory, motivational and language content. These aspects need further researches and need to be prototyped and shared widely among the practitioners and academic community, so that practices with significant evidence, more economic value and higher benefits can be adopted, instead of going by generic opinions, hypes and trends.

Conclusion

From the already prevailing missing links and the evolving themes, it appears that the nature of the training in employability has to shift from adjusting to uncertainty to preparing for uncertainty. Youth at the bottom of the pyramid are more disadvantaged than their college-educated

counterparts. Strengthening the apprenticeship policy and linking it to make India movement can address this matter to a great extent. The pandemic has accelerated the need for upskilling and has shown that the future of learning will be personalised and technology-mediated. Therefore, digital skills and remote working skills may be included directly into the curriculum of institutions. The initiatives in this space have to do the twin work of fixing the existing gaps and smoothening the transition to the new skillsets at the same time. The employability gaps will be widened if adequate attention is not given to both these aspects. In the last mile, we need to look at the pedagogy and training modes by incorporating simulations, cases, purposive internships, industrial projects and short assignments and a range of industry engagements. To address the myriad nature of skill education market and to capitalise the benefits of the evolving themes described earlier, a cohesive facilitation role of government at the state and central level for skilling and reskilling initiatives are paramount.

Appendix

Table 1 Skill development programs initiated by the government of india in pre-pandemic period		
Program	**Objectives and method**	**Major theme and focus areas**
The National Skill Development Mission	Convergence across sectors and States in terms of skill training activities. A portfolio of activities linking multiple stake-holders	Multiple areas. Soft Skills and Entrepreneurship specific to the Job Roles.
Scheme for Higher Education Youth in Apprenticeship and Skills	To improve employability by introducing employment relevance into the learning process. Apprenticeships and on the job training.	Hands on training in different skills sectors. Soft Skills required for the specific jobs.
Pradhan MantriKaushalVikasYojana (PMKVY)	Skill Certification Scheme. Prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL). Targets on school dropouts and undergraduate college drop-outs	Soft skills, digital literacy, financial literacy and entrepreneurship.
Pradhan MantriKaushal Kendra	Establish state of the art training centres and industry driven courses.	Industry-driven courses of high quality with a focus on employability and are aligned to NSQF
UDAAN	To address the skill gaps among UG/PG/Engineering/Diploma holders.	General employability skills Focus on J&K area.
India International Skill Centres	Skill preparation for global markets. Lab infrastructure to deliver International benchmarked training and certification programs	Pre-Departure Orientation Training on employability, culture and environment of the migrating country

Table 2 Skill development programs initiated by regulatory bodies in pre-pandemic period		
Program	**Objectives and method**	**Major theme and focus areas**
Community Colleges	Community–based life-long learning Courses of general interest to the community	Curriculum based upon skills Gap analysis report published by the NSDC
Bachelor of Vocation (B.Voc.) Degree	Direct employment programme with close association with industries in the locality. Flexible entry and exit options for students.	A mix of skills relating to a profession and appropriate content of general education
Kaushal Kendra	Vocation education with courses beyond diploma and BVoc degree	Skilling and entrepreneurial traits
PMKVY-TI	Provide employable and certifiable skills based on National Occupational Standards (NOS) with necessary soft skills to the school dropouts who want to pursue/attain higher order skills.	Mainly engineering skills matching available job roles.
Employability Enhancement Training Programme (EETP)	To enhance the competency skills of the Graduating Student Youth	Competency in different areas. Focus is on finishing skills.
National Employability Enhancement Mission (NEEM)	To create a pool of skilled work force	General Employability enhancement skills.

Table Skill development programs initiated by corporate bodies in pre-pandemic period		
Program	**Nature**	**Major theme and focus areas**
INFOSYS – Campus Connect	IT Modules for colleges along with assessments and certification	Technology and professional skills
WASE (An initative of WIPRO in collaboration with BITS Pilani	Eight-semester off-campus collaborative M.Tech in Software Engineering	industry exposure and real-time practical knowledge on live projects Training for soft skills Involves, course work, dissertation and projects.
TCS	Additional core and skill papers integrated into the regular UG courses	Training for Teachers of collaborating institutions. Industrial visits. Lecture series from TCS.
SAP Lab	For skilling of entry/middle level employable youth, and re-skilling people with up to 10 years of experience.	Artificial intelligence, machine learning, data science, deep learning, programming language skills. Involves Lab work and five-month paid internship.
IBM	Train students in emerging technologies with on-campus approach. 204 hour-long blended training model.	Data science, cloud computing, block chain, life skills and functional English skills.

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