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AKHIL BHARTIYA SHIKSHA SAMAGAM

THEMATIC SESSION

on

**Holistic Education through Integration of
Skilling, Industry-connect and Employability**

30th JULY 2023

GOVERNMENT OF INDIA

INTRODUCTION

The National Education Policy 2020 (NEP 2020) recognises that with the quickly changing employment landscape and global ecosystem, education must move away from its focus on content, and move towards learning about how to be creative and multidisciplinary, solve problems and how to innovate, adapt, and absorb new material in novel and changing fields. It encourages holistic education through the provision of research internships and practical learning to improve the employability of students. The policy, thus, lays emphasis on critical thinking and a holistic education system, which is relevant, learner-centered and driven by innovation and inquiry. This is imperative to develop a well-rounded and employable individual. The pedagogy and curriculum, from pre-school to higher education, must change and align itself with this goal. The policy seeks to achieve this by integrating skilling and industry-academia linkage in schools as well as Higher Education Institutions (HEIs). The NEP brings about gives the ed-tech industry a new space to explore and grow in, creating more and more employment opportunities in the country.

NEP 2020 marks a revolutionary change in the existing ecosystem and has signalled a need of new education system that is essential to equip workforce with 21st century skills and increase employability potential of higher education programs.

In order to actualise the vision, the policy has proposed definitive roadmap, along with an enabling environment, for the future:

- **Embed talent-driven student learning:** Increase focus on identifying and nurturing students' potential across academic and non-academic learning areas, and tailor instruction to help them develop their abilities
- **Make holistic learning a community-led priority:** Mobilize parents and community collectives to proactively partake in and create avenues within communities for the holistic development of children
- **Establish institutions as hubs of innovation:** Create pathways for strengthened industry and academia linkages and promote on-campus incubation of start-ups through by creating research and development cells and designing experiential, on-the-job learning models

- **Actualize talent dividend of students:** Help students to actualize their abilities across areas of learning and emerge as thriving leaders, contributing significantly to efforts, such as science, sports, and culture
- **Champion holistic learning outcomes through communities:** Collaborate with the Ministries of Panchayati Raj, and Rural and Urban Development to make cognitive, socio-emotional, and value-based education the responsibility of local governments and community collectives
- **Reimagine the learning agenda and enable students to thrive:** Integrate socio-emotional learning and key industry 4.0 skills into the curriculum, equip teachers and caregivers to support children and youth to meaningfully absorb these learnings, and empower all learners to be environmentally responsible, and develop into strong global and national citizens
- **Weave adaptive career pathways:** Develop the National Credit Framework with multiple, non-linear pathways recognizing prior learning, and integrate both general & vocational education while ensuring mobility of candidates between the two systems

Government has introduced guidelines for enhancing HEI-industry connect through “Professors of Practice” model to integrate industry experts in developing curriculum and learning modules. The government has also released guidelines for internships/apprenticeships embedded degree programs.

AKHIL BHARATIYA SHIKSHA SAMAGAM, 2023

On the occasion of the 3rd Anniversary of the announcement of NEP 2020, a two-day Akhil Bhartiya Shiksha Samagam (ABSS), 2023 was held from 29th to 30th July, 2023 at ITPO Complex, New Delhi. The event was organized by the Ministry of Education and Ministry of Skill Development & Entrepreneurship. The two-day event consisted of 16 sessions on as many different themes.

The objective of this Samagam was to brainstorm and identify various approaches and methodologies to implement NEP 2020; effectively articulate the roadmap and implementation strategies, foster knowledge exchange, discuss challenges; provide a common platform for all stakeholders to come together and network for effective, smooth, and timely implementation of the NEP 2020; and to deliberate, and share best practices for the implementation of NEP, 2020.

Thematic Session 14 was organized on the issue of “Holistic Education through Integration of Skilling, Industry-connect and Employability”. The composition of panelists for the session was as below:

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|--|----------|
| (a) Dr. Anunaya Chaubey, Provost, Anant National University, Gujarat | Chairman |
| (b) Shri Satish Pradhan, Ex-Head, Tata Group HR, Tata Sons Ltd. | Panelist |
| (c) Shri Manish Sabharwal, Vice-Chairman, TeamLease Services | Panelist |
| (d) Dr. Abhay Jere, Vice-Chairman, AICTE | Panelist |
| (e) Shri Narayanan Ramaswamy, Head, Education & Skill Development & Practice Partner, KPMG | Panelist |
| (f) Smt. Anjali Hans, President, Telecom Sector Skill Council (TSSC) and Vice-President, Regulatory & Corporate Affairs, Vodafone Idea | Panelist |

A brief intro of the panelists is attached as **Annexure-I** with this report.

EXPECTED OUTCOMES OF THE SESSION

The session was expected to provide an opportunity and a platform to gain the academic and industry perspective on the issue of integration of skilling, industry-connect, and employability through following aspects:

- (a) Pathway for HEIs to capitalize on industry-connect for developing course offerings with practical component for students.
- (b) Improvements in overall industry exposure and work-ready skill levels through internships, apprenticeships, workshops, guest lectures, etc.
- (c) Leveraging technology and public digital infrastructure to improve the available opportunities for skilling and employability.
- (d) An understanding of scope of convergence of various schemes

DISCUSSIONS

The Session was coordinated by Shri Priyank Chaturvedi, Deputy Secretary (IISERs/IITs), D/o Higher Education, M/o Education. He gave a brief of the topic of the Thematic Session and welcomed the panelists and the participants. After a brief introduction of the panelists, he requested Shri Atul

Kumar Tiwari, Secretary, Ministry of Skill Development and Entrepreneurship to present mementos to all the panelists. Later, the session was handed over to the Chair for discussion.

Chairperson: Dr. Anunaya Chaubey

While welcoming the panelists and the participants, Dr. Chaubey stated that there were four extremely interesting and seminal themes for the session- skilling, industry-connect, employability and holistic education. He observed that at the core of the session, lay the issue of holistic education, and how can it be brought about by skilling and industry connect across educational institutions, i.e. school and higher educational levels, so that it may lead to employability.

Dr. Chaubey stated that there is an insistence on specialization not just in schools and colleges, but in the society as well. He shared a quote from the 1973 novel *Time Enough for Love* by the famous American Science-fiction writer, Robert A. Heinlein:

"A human being should be able to change a diaper, plan an invasion, butcher a hog, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects".

He indicated that in his experience as a student and as an administrator as well, we have been focusing on specializing in one discipline. This may come at the cost of an innate skill or talent that a person may be born with, like, music, sports, writing, painting, etc. Emphasis is given on grades, which could help the person get employment. It is like a rat race that everyone is expected to run. There is a lack of understanding of the requirements of the employment sector. This results in rigid thinking, straight- jacketed and linear-thinking cadres, which may or may not be preferred by the industry. He observed that the essence of holistic education is to understand the idea that the world is a complex place, made up of parts, that are inter-connected. Once the students acquire this understanding, they become more versatile, flexible, and productive. In the process, they gain new insights and analyzing skills. This also leads to better problem-solving abilities in students, and they. He observed that the students would never be able to develop this understanding if the insistence on specialization, grades and jobs persists.

Dr. Chaubey suggested that the students need to be trained to understand that different specializations provide different perspectives of the world and have varying functionalities, which are interconnected. These individual views, together, constitute a complete knowledge of the system. This is the essence of holistic education. He concluded by mentioning that NEP has realized this and is aimed at addressing this issue.

Panelist 1: Mr. Manish Sabharwal

Expressing that the academic institutions and the industry represented the supply and demand sides respectively, Mr. Sabharwal contended that it was important to understand the demand side perspective. It was essential to strike a balance between what the universities want and what the industry requires. He observed that the problem at the exit gate of education system was of wages, not jobs. He observed that the unemployment since the independence has been hovering between a reasonably low rate of 4% to 7%. While striking a distinction between self-employment and self-exploitation, Mr. Sabharwal indicated that sustaining this has been possible not on account of self-employment, but because of the self-exploitation of most people.

Mr. Sabharwal mentioned it was imperative that the productivity of cities, States, firms, individual sectors, and individuals go up. He used the example of Uttar Pradesh and Karnataka to drive home this point, submitting that although both the States had the same GDP, Karnataka had almost one-fourth the workforce that Uttar Pradesh does. While discussing sector-specific productivity, he shared that while IT has 0.8% of our labour force, it generates 8% of our GDP. On the other hand, farming, with 40% of our labour force, contributes only 16% to the GDP. He suggested it was critical to acknowledge that because of lack of infrastructure, including regulatory, there is a demand side problem.

Talking about the issues ailing the supply side, Mr. Sabharwal referred to three problems: matching, mismatching, and the pipeline. While matching related to connecting supply with demand, mismatching alluded to the issue of repairing supply for demand. Pipeline, on the other hand, dealt with preparing supply for demand. The three issues have a different perspective each but need to be considered together to appreciate the problem in its entirety and arrive at probable solutions.

Mr. Sabharwal contended that financing any probable solution to improving employability through skilling and industry-connect, is the most critical issue that needs addressing. He observed that though there have been various innovations in curriculum and pedagogy, financing has not been talked about

much. It was a classic case, where the student wanted their parents to pay for their education and training, the parents wanted the government, and the government wanted the industry, to pay for it. He shared that when the industry pays for the skilling and training of a student, it puts it in a disadvantageous position on account of three possible situations: (a) employer pays for training but the student doesn't get a job (b) employer pays for the training, student gets the jobs but is not productive (c) employer pays for the training, student gets the job and is productive, but leaves the job. These are individually referred to as learning risks, productivity risks and attrition risks, respectively. This places the industries in a peculiar situation of always focusing on hiring than identifying probable solutions to the financing issue.

As regards the possible solutions to the issue, Mr. Sabharwal contended that any possible solution to these issue in India, must necessarily be unique to the country, then being derived from other countries. Further, the solutions need to be scalable, generasible and replicable. He contended that the only solution visible as of now is the degree-apprentice programme, incorporating the five design principles listed below:

- (a) Learning by doing
- (b) Learning while earning- currently the focus is on full-time learners. However, if pursued correctly, India could be the first country where employed learners would outnumber full time learners
- (c) Learning with qualification modularity, where a 3-months certificate course becomes the eligibility for a 1-year diploma course, which becomes one for a 2-year advanced diploma, and so on and so forth. This is coupled with academic credit transfers. India is currently working towards this.
- (d) Learning with flexibility delivery, where online learning should be considered equal to on job, on site and on campus learning.
- (e) Learning with employer signaling value

While closing off, Mr. Sabharwal quoted from a 1961 book, "Excellence: Can we be equal and excellent too" by John W. Gardner, to advocate that if we want to be equal, we must think of employability, education, employment as a continuum. But if we have to be excellent, we need to do it in smaller numbers. NEP aims to do this, and finally, provides us with a roadmap.

Panelist 2: Mr. Satish Pradhan

Mr. Pradhan observed that his basic understanding of NEP was that it is about learning to learn. He put forth four different ways of looking at it. One, building intentionality. Financial motives are critical for not just individuals, but for institutions and corporate entities as well. What is also required is creating an intentionality of pursuing education- a certification or a qualification to explore and gain from. Two, focusing on thinking. While we demand creative thinking, our pedagogy is still concentrated on content rather than process and context. So, making sense of the content is less important than being able to demonstrate a familiarity, an understanding, and the ability to reproduce the content. Three, understanding and implementing multi-disciplinarity. We are besotted by the taxonomy of educational disciplines- biology, physics, mechanical engineering, and so on. Each of the disciplines works in silos and has a different perspective. This is not the true meaning of the term multi-disciplinarity. Lastly, we have the concept of unified and integrated learning. Perhaps the most ambitious policy statement, it relates to an enabling of connections, interdependencies, and linkages in the way we think about reality. Linkages between areas we want to explore are essentially the threads connecting education, skilling, and employability. They are also the bridge between aspirations or intentionality on one hand, and capability, access, and opportunities on the other, for good and gainful work. The end goal, however, is the understanding of what is good and gainful work for an individual.

He suggested that the education needs to be wider, deeper, and fit for purpose. The intent of creating sustainable creativity is a worthy wish. However, the industry has a target and a job description, and the students end up in the market to service that job description at a tactile level. It is essential to understand these dynamics of the market. That lies at the core of the partnership between industry and academia. Interestingly, Mr. Pradhan used the analogy between a live-in relationship and a committed relationship and suggested the industry and educational institutions to find ways to be in a committed relationship, metaphorically speaking.

While agreeing with Mr. Sabharwal on the critical issue of who pays for skilling the students, Mr. Pradhan observed that it was a major challenge that needed addressing. He suggested that one of the ways this challenge can be met is for research and academic work not only to provide for immediate needs of industry, but also, to build longitudinal studies and commitments to a pathway of sustainable employability. He lamented that our demographic dividend is producing employable age people of the same kind at a rate which is exponentially growing. There is a dire need to for employability and

employment to find a demand and supply balance. This can happen only when all the stakeholders- policy makers, educators, and industry- work in tandem.

Building upon his concept of intentionality, Mr. Pradhan contended that domain expertise and intentionality for domination in a domain must be the common characteristic that brings industry and academia together, with policy and regulation, enabling that to happen. Current model of the committees of various industry bodies and associations has not been successful.

Mr. Pradhan indicated that the industry and academia, both, need to strike a balance. The industry needs to move away from an interest in immediate profits and profit alone, to investments in processes for treating talent and capability as a supply chain. Their emphasis should not just be on building one individual, but on a sustainable process that creates fit for purpose workforce for their companies continuously.

The academia, on the other hand, needs to move from the focus on individuality- my research, my publication, my brand, my department, my institution, and my field of work. This is going to be a condition of success.

Making a distinction between start-up and standing strong (larger employers), Mr. Pradhan opined that we need to leverage both, although the star-ups have a greater appeal.

Mr. Pradhan projected that automation at low-tech and at hi-tech and augmentation were two distinct ends of the vertical spectrum. Both are relevant to the industry-connect and employability. Automation improves the productivity functionality, which is beneficial for the economy, but it takes away jobs. This, effectively, leads to jobless growth. The base of the partnership between industry and education needs to be augmentation, wherein technology is brought in to augment human effort.

On a concluding note, Mr. Pradhan advocated that the industry and education, both, need to look at the emerging context, with a combined agile and adaptive response. They should anticipate unknowns of the future and provision pathways for them. This is a challenge as we are not trained to function in such a manner.

Panelist 3: Mr. Abhay Jere

Presenting the regulators perspective, Mr. Jere observed that how to think about holistic development is also a key skill. This is an aspect that has constantly been found deficient in our system. He listed out some of the steps being taken to address this gap:

- (a) CBSE has already released textbooks from Class 6 to 12 on Design Thinking
- (b) India is the first country to come up with Design Thinking aspect as part of skilling
- (c) Emphasis is now also being given on ethics, moral values, and universal human values. A new 3-week compulsory induction programme has been introduced in CFTIs and HEIs, before the start of actual programme, which covers all these aspects. This ensures that a technocrat being developed, is also socially, spiritually, and ethically relevant. This process has already started and is producing good outcomes.
- (d) Many initiatives been taken, under which 26 lakh internships have been offered. AICTE has an internship portal, which has a huge database of industry-connects

Mr. Jere also informed that a programme PARAKH has been started, completely based on learning-based outcomes. In association with more than 600 faculty members, question banks are being designed for engineering students, which are based on learning-based outcomes. These are being tested with technical students.

Speaking about the issues impacting holistic education through industry-connect, Mr. Jere observed a distrust exists between industry and academia for each other, which needs to be addressed as well.

The second issue relates to the efficacy of the MoUs being signed between educational institutions and the industry. Each HEI strives to sign as many MoUs as possible; however, a tangible outcome is usually lacking. There does not appear to be any value addition from these MoUs. Industry is aware that training the students is a time-consuming process, and yet, they cannot utilize the students fully since the students are with them only for a few months. Therefore, no seriousness is attached to these internships or a student's performance there.

On the part of the HEIs, the concern is that they fail to provide any counselling support to the students to identify right sectors or companies to visit for internships. They also fail to develop the sense in students of according seriousness to their internships. So, most of the students, who can learn, end up not learning. This issue also needs addressing.

Another aspect where the educational institutions are found wanting is not viewing holistic education from a life-long learning perspective. These institutions do not consider the students as their long-term partners, but as customers. In contrast, the foreign universities view their students as long-term partners and stakeholders. This ensures the students have a positive connection with their educational institutes and are willing to go back for developing skills in future.

Panelist 4: Ms. Anjali Hans

Ms. Hans advocated that the solutions to the issue being faced by the academia can be provided by the industry. She informed that TSSC was created by the government with a two-fold goal in mind: first, to make the youth skilled and employable and two, to support the industry with skilled manpower. In order to provide a perspective on this, Ms. Hans presented a slew of measures that have been taken by TSSC the past few years. The same have been summarized under:

- (a) TSSC has trained 10 lakh manpower and achieved 65% placements
- (b) 58 qualifications packs have been developed in consultation with the industry aligning with their needs and requirements
- (c) TSSC has established 1000+ training centers and 12 skilled labs in the areas of 5G, IoT, handset repair, line assembler, cyber security and optic fiber
- (d) A telecom job portal has also been created recently, with 232 employers being onboarded till now. It also has around 2 lakh job seekers, with Airtel, Jio and Siemens being the top hirers
- (e) TSSC also runs CSR projects for companies. Ms. Hans provided details of a few such projects. Ericsson CSR project is being done in collaboration with Delhi Skill Entrepreneurship University for offering courses on 5G, IoT, cyber security. Similarly, the Nokia CSR project is run in collaboration with Kaushalya Skill University, Gujarat. Another CSR project is with Rotary District 3011, where classroom plus blended trainings are being carried out. TSSC has also collaborated with NIT Patna for the Huawei CSR project, with courses in 5G, IoT, handset repairs, etc. In the SBI Cards CSR projects, TSSC has collaborated with Government Girls College, Gurugram, providing call centre and in-store trainings. Finally, Vodafone Idea, in collaboration with Indira Gandhi Delhi Technical University, is offering courses in IoT
- (f) An online platform, Telco Learn Platform, has been set up for courses in online and physical mode. Besides offering certificates in those courses, TSSC also assists in placements
- (g) TSSC are also in discussions with Directorate General of Training to offer 11 short-term courses in telecom in all ITIs across the country.
- (h) It was informed that TSSC has two models for providing training: place and train model and train and place model. Place and train model has been found to be more effective

Ms. Hans informed that TSSC tries to provide a holistic assistance, by covering entire spectrum of skilling requirements- from developing learning courses, running those courses, and lastly, assisting

in placements. She observed that given the fact that 5G is going to change how businesses are run and with digital becoming the foundation of services across industry verticals, TSSC has a vital role to play in making sure India's youth is both skilled for future fit environment and employable, and that it meets the industry requirements. She contended that TSSC was a vital link between academia and industry, training the youth to cater to the skill sets required by the companies. She advocated that skilling and learning in any field, as a part of curriculum, was critical. Since the demands of industry were constantly changing, therefore, skilling and upskilling was paramount.

Panelist 5: Mr. Narayanan Ramaswamy

Mr. Ramaswamy began by observing that there is already a lot of discussion about the current state of interaction between academia and industry, particularly in the context of holistic education. However, the relationship between the two sectors needs to be reimaged, moving beyond the quagmire of what has happened or not happened. To realise this, he proposes five models of engagement between academic institutions and the industry; some of them are already being implemented in the country. These five models are discussed below:

- (a) **Industry reaching out to academia:** This is the most common form of engagement. The industry assists the academic institutions in defining curriculum, offering internships, providing services of faculty, for example, in the form of Professor of Practice. The industry comes to academia and becomes part of the ecosystem. It is predicted that in the future, substantial student intake would happen from the industry; many students would come back to learn, while they are still earning. NEP talks about this in the form of multiple-entry and multiple-exit. Because of this, the profile of students entering institutions would vary greatly. Additionally, the teachers can work in different industries, while they are still teaching in the institutions. They provide the industry with the academia perspective and take their corporate experience to the academic institutions.

He also mentioned that there is a gradual change from pedagogy to heutagogy, and the industry can play a critical role in this transition. In today's academic institutions, the focus is still on one-way learning, with peer-to-peer learning not being talked about much. The focus of the institutions must be on creating an ecosystem, which facilitates learning outside the classroom as well. Further, he also advocated a larger role for industries in assessments, offering internships, placements.

- (b) **Academic institutions reaching out to industry:** At the base of this model lies the work-integrated learning programme, where the main idea is to take the universities to the workplace if the learners cannot come to the campus. Academia can proactively create a microcosm of education and learning environment within the industry. This is also being done in India currently, in the form of Microcredits, discussions on National Digital University (NDU), etc.
- (c) **Industries build academic institutions:** Building on the example of Indian Institutes of Information Technologies (IIITs) created in the Public-Private-Partnership (PPP) mode, it was explained that industries from a particular sector team up to form a specific category of institutions. Some other examples from similar geographies are Beijing Agricultural School in Beijing, Saangyo Textile Specialized Schools created in Korea and Number 7 School concept in Mongolia. In the case of China, the agricultural sector led the way in creation of the school, which has acted as a catalyst in bringing the rural parts of the country on the educational bandwagon. In Korea, the textile companies brought educational institutions to the textile clusters to be their training partners. However, philanthropic capital is not enough to sustain this model; regulators need to identify other means of bringing capital in the educational world, something, which is very tough today. If that issue is addressed, the industry participation in creating institutions would go up.
- (d) **Academic institutions incubate and build industries:** Silicon Valley is a prime example of this model, where the entire hi-tech industry happened because educational institutions in California started creating individual industries, that dominate the world today. In India also, for example, IIT Madras has research park, where the institutions create new sectors of jobs. The academic institutions here, have a responsibility to create incubators and accelerators in a way they can define new sectors.
- (e) **Academia and industry come together and co-create value:** This is the most interesting model, which, although is already happening, but it is not in a well-defined, structured manner. It is also not sure if it is replicable. The model helps creates assets and values for the civil society, particularly in the context of India. If the underlying issues can be addressed, India could help create human resources for the world.

Mr. Ramaswamy closed off by observing that any solution, if done in a partial manner, would fail to provide desired outcomes. Agreeing with Mr. Sabharwal, he also indicated that any workable solution to the issues need to be replicable to be useful.

The panel discussion was followed by an open and engaging discussion between the panelists and the participants on the theme and its pertinent aspects. The session ended with the chair, Dr. Anunaya Chaubey highlighting the key takeaways from the session.

CONCLUSION

The session saw the panelists discuss thread bare the various challenges that lay ahead for successful creation of an employable, well-rounded, and creative workforce, that would be ready to meet the demands and requirements of the industry. The major issues and the probable solutions have already been elaborately discussed above in the report while covering the individual speeches of each of the panelists. Some of these challenges and solutions are listed below for recap and quick reference:

Challenges:

- Insistence on specialization and grades at the expense of innate skills/talents
- Warped understanding of the concept of holistic education
- Perceived equivalence of holistic education to multidisciplinary
- Failure to understand the demand side (corporate) perspective
- Inadequate examination of supply side (HEIs) issues in terms of matching, mismatching and pipeline to understand the problem in entirety
- Financing the skilling and training of students/employees- who pays
- Pedagogy still focused on content
- Existing distrust between academia and industry
- Failure to view holistic education from a life-long learning perspective

Solutions:

- Movement from a content-based pedagogy to one based on creative thinking and innovation
- Degree-apprentice programme based on five design principles: learning by doing; learning while earning; learning with qualification modularity; learning with flexible delivery and learning with employer signaling value
- Elaborate discussion between all three stakeholders on addressing the financing issue
- Research and academia to not just address immediate industry requirements, but to also identify processes to achieve sustainable employability

- Reimagining the concept of interest in both industry and research: move away from profit motive in case of industries and from individuality in that of academia
- Redefining the base of partnership between academia and industry: focus should be on augmentation and not automation to prevent the prospect of jobless growth
- Instilling and building a sense in HEIs of considering students as life-long partners, rather than short-term customers
- Creating an ecosystem facilitating learning outside the classroom in addition to inside the classroom
- Need for regulators to identify more sources of raising capital/investment for HEIs

ROADMAP FOR INSTITUTES TO ACCELERATE INTEGRATION OF SKILLING, INDUSTRY-CONNECT AND EMPLOYABILITY

- (a) **Promote work integrated training programs:** To provide students with hands-on experience and making them employability ready with industry specific skills. The institutions should increase the practical component in the curriculum along with promoting on-the-job trainings.
- (b) **Leverage corporate trainings outside of corporations:** By pairing elements from best-of-class corporate programs with a government-led national policy framework, institutions and industry can jointly help establish a high-quality national skills development program.
- (c) **Promote women's participation in skills training programmes:** There is need to accelerate the skilling of women to enable the transition of women from farming to non-farming professions. This will require a concerted and targeted efforts to skill women for higher ability jobs both by the academic institutions and industries.
- (d) **Identification of best practices in vocational education and training:** Identification of best practices with focus on specific criteria that can be replicated in different institutions in the relevant areas and shared at various levels to promote effectiveness in pedagogical aspects.
- (e) **Inclusive learning** - Develop strategies to make tech-enabled learning more inclusive, leverage open learning resources and more importantly, develop digital public infrastructure to make e-learning more inclusive.
- (f) **Future Skills** - Adoption of comprehensive strategies for integrating future skills in the workforce and promote life-long learning. Development of real time and dynamic skill gap assessments with the help of rapidly evolving technological prowess like Big Data analytics, etc., to uncover skill trends at a very granular level.

******END OF REPORT******

ANNEXURE-I

BRIEF OF CHAIR AND PANELISTS FOR THEMATIC SESSION 14

Dr. Anunaya Chaubey, Chair of the Thematic Session

Provost, Anant National University, Gujarat. He is a well-known artist and academic in the fields of literature and art history. He has a Ph.D. in English Literature with a specialisation in modern poetry and criticism. Over the past ten years, he has taught courses on art appreciation, economics, entrepreneurship, environment, media, and journalism around the world. At Anant, he is focused on building a design university with a strong liberal arts foundation.

Shri Satish Pradhan, Panelist

Currently an independent consultant, advising Boards and Companies on Strategy, Leadership and HR, Shri Pradhan retired as Advisor, Tata Sons Limited in 2015. He has a Masters in History from Delhi University and has worked in several Public & Private Sector companies over the last 40 years in varying capacities. Shri Pradhan is an avid naturalist and continues to be associated with a large number of institutions in Environmental, Community and Education areas in an advisory capacity.

Shri Manish Sabharwal, Panelist

An MBA from The Wharton School, University of Pennsylvania, Shri Sabharwal is the Vice Chairman of Teamlease Services, India's largest staffing and human capital firm. Teamlease has over 300,000 employees in 5000+ cities and has sponsored India's first vocational university. Teamlease operates India's fastest-growing national PPP apprenticeship program and is listed on the National Stock Exchange.

Dr. Abhay Jere, Panelist

Vice Chairman, AICTE and the Chief Innovation Officer, Ministry of Education. Dr. Jere has been instrumental in the conceptualisation of various key initiatives of the Ministry, like, Smart India Hackathon and Atal Innovation Ranking framework (ARIIA). Through the Ministry, Dr. Jere has also established Institution's Innovation Councils (IIC) across 1000 institutions to facilitate creation of local innovation ecosystems.

Shri Narayanan Ramaswamy, Panelist

Head, Education, Skill Development and Social Sector advisory vertical, KPMG India. With an education journey that took him from Madurai Kamaraj University to IIM, Bangalore and finally, Harvard University, Mr. Ramaswamy has over 29-years' experience in management consulting and industry. His engagements span across India, ASEAN, Middle East and African regions, and key multilateral and bilateral agencies like the World Bank, ADB, USAID, etc. He has been associated with several government committees on education and skill development, as also of forums as CII and FICCI.

Ms. Anjali Hans, Panelist

A commerce/business economics student, Ms. Hans is the President, Telecom Sector Skill Council and Vice-President, Regulatory & Corporate Affairs, Vodafone Idea. She has been associated with the telecom industry for nearly 25 years. Her experience in the telecom sector ranges from policy to regulatory and legal issues to engagement with Government and other key external stakeholders. She moved to Vodafone in 2010 and became a part of the Vodafone Idea team in 2018.

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