



SCHOOL OF  
VOCATIONAL  
EDUCATION



*Skill India*  
**THE WAY  
FORWARD IN  
HIGHER  
EDUCATION**

**Dr Leena Chandran Wadia, Antara Sengupta and Sanchayan Bhattacharjee**  
Observer Research Foundation

&

**Tejeshree Pardule, Dr Prerna Sharma and Prof Neela Dabir**  
Tata Institute of Social Sciences - School of Vocational Education

*Skill India*  
**THE WAY  
FORWARD IN  
HIGHER EDUCATION**

ISBN: 978-93-89094-00-8

ISBN Digital: 978-81-940791-9-4

# TABLE OF CONTENTS

Introduction	4
<b>PART I</b>	
Overview of the National Consultative Seminar	7
Skill India: The way forward in higher education – The State of the Art	9
<b>PART II</b>	
Report of the National Consultative Seminar on Skill India: The Way Forward in Higher Education	
Inaugural Session	22
Keynote addresses	28
Plenary Session 1 Concepts in Skilling – Understanding NOS, QPs and related terms	38
Plenary Session 2 B.Voc Courses at Universities and Colleges – The Learning So Far	42
Plenary Session 3 Skills Universities – The Emerging Model	47
Plenary Session 4 Understanding International Best Practices for India	50
Plenary Session 5 Analysing Employability in the Skills Ecosystem	53
Plenary Session 6 Short-term courses in the skills ecosystem – An overview	56

## GLOSSARY OF TERMS

AI	Artificial Intelligence	MHRD	Ministry of Human Resource Development	NRLP	National Rural Livelihoods Mission	SSC	Sector Skills Council
AICTE	All India Council of Technical Education	MSCVT	Maharashtra State Council of Vocational Training	NSDA	National Skill Development Agency	SSDMs	State Skill Development Missions
BARTI	Dr. Babasaheb Ambedkar Research and Training Institute	MSDE	Ministry of Skill Development and Entrepreneurship	NSDC	National Skill Development Corporation	SSM	State Skills Mission
B.Voc	Bachelor of Vocation Education	MSME	Micro Small and Medium Enterprises	NSQC	National Skills Qualifications Committee	SVE	School of Vocational Education
CWSN	Children With Special Needs	MSRLM	Maharashtra State Rural Livelihood Mission	NSQF	National Skills Qualification Framework	TISS	Tata Institute of Social Sciences
DDUGKY	Deen Dayal Upadhyay Grameen Kaushal Yojana	MSSDS	Maharashtra State Skill Development Society	NUSSD	National University Student Skill Development Programme	TP	Training Partner
ERP	Enterprise Resource Planning	NCERT	National Council of Educational Research And Training	PMKVY	Pradhan Mantri Kaushal Vikas Yojana	TVET	Technical and Vocational Education and Training
GDP	Gross Domestic Product	NCS	National Career Service	PMYY	Pradhan Mantri Yuva Yojana	UNEVOC	International Centre for Technical and Vocational Education and Training of United Nations
GER	Gross Enrolment Ratio	NCVET	National Council of Vocational Education and Training	PSSCIVE	Pandit Sunderlal Sharma Central Institute for Vocational Education	VE	Vocational Education
Gol	Government of India	NCVT	National Council of Vocational Training	PwD	Persons with Disabilities	VTI	Vocational Training Institute
IBT	Introduction to Basic Technology	NEEM	National Employability Enhancement Mission	QPs-NOS	Qualification Packs-National Occupational Standards		
ICT	Information and Communication Technology	NQR	National Qualification Register	QRC	Qualification Review Committee		
IT	Information Technology	NIOS	National Institute of Open Schooling	RPL	Recognition of Prior Learning		
ITeS	IT enabled Services			SKP	Skills Knowledge Provider		



# Introduction

A National Consultative Seminar on "Skill India – A Way Forward in Higher education" was organised jointly by the Maharashtra State Skill Development Society (MSSDS), Government of Maharashtra; Tata Institute of Social Sciences-School of Vocational Education (TISS-SVE); and Observer Research Foundation (ORF); from 15-17 October, 2018. The three-day seminar held at TISS is the first such event to explore the potential of vocational education and training in the higher education space.

This report has been divided into two parts. The first part is an executive summary that captures the 'State of the Art' with regard to skilling initiatives in the space of higher education (beyond Grade 12). The domain of vocational education and skills training in higher education has seen considerable activity in the past decade. Long-term training at the Bachelors' level with multiple entry and exit options in the form of B.Voc courses were introduced by the University Grants Commission (UGC) in 2013 with funding support. These courses have now proliferated and are being run at over 200 institutions across India. No formal assessment of the impact of these courses has been done so far. This section of the report draws extensively on the inputs we received from keynote

speakers, panelists and participants at the seminar to bring you a sense of the successes achieved so far and the challenges that remain. We have also incorporated knowhow generated through the experience of TISS-SVE in running the largest B.Voc programme in the country, as also independent research conducted by ORF into many aspects of vocational education.

The detailed conference report is captured in the second part of the report. Although the focus of the seminar was on higher education, there was a considerable amount of discussion on skilling initiatives at the secondary and higher secondary levels in schools corresponding to Levels 1-4 of the National Skills Qualification Framework (NSQF), including dropouts and lifelong learners. A dedicated plenary session on short-term courses across various ministries of the government was also held. The ability to provide continuity of vocational education and training across school education and higher education (NSQF Levels 5 and beyond) was identified as one of the key challenges. Eminent practitioners in the field shared their experience during the four keynote addresses and the six plenary sessions, and the salient points made by them have been captured here. ■



PART I

# Overview of the National Consultative Seminar

on

Skill India: The way  
forward  
in higher education  
&

The State of the Art

# Overview of the National Consultative Seminar

The inaugural session of the Seminar comprised presentations from key representatives of the Central government as well as Government of Maharashtra. The main message from all speakers was the need for skill-based courses in higher education that can lead to better employability and incomes, and promote entrepreneurship and job creation. The Government of Maharashtra announced their plan to launch six skills universities, including specialised universities in Forestry and Cyber Skills. A key differentiating factor of these universities would be their agility and flexibility with regard to administrative and operational structures. There would be parity of the degrees offered through these universities, and they would not compromise on academic rigour and practical training. Another highlight was the announcement by the Union Minister of Human Resources Development, Shri Prakash Javadekar, that the ministry was considering introducing B.A (Professional), B.Sc (Professional) and B.Com (Professional) degrees in the Arts, Science and Commerce streams.

The discussions during the next two days were split into two keynote addresses and three panel discussions each. They focussed on different aspects of how the education sector and the economy can be connected through skills, workplace training, qualifications, mobility,

industry requirements, financial support, advocacy and outreach. The discussions also attempted to identify what has worked well in some skilling initiatives, how it could be replicated and what could be learnt from efforts that did not yield the desired results. A case in point is the B.Voc programme offered by three separate educational institutions: while it has been successfully implemented at TISS-SVE and Fergusson College, Pune, through working with industry partners in a demand-driven model, it has faced several challenges at St. Xavier's College, Mumbai, where it has now been discontinued.

The emerging model of blending vocational subjects with conventional courses at Bachelors' level, through skills universities, was discussed thoroughly with examples from TeamLease Skills University, Vishwakarma Skills University and Centurion University of Technology and Management (CUTM). These universities are in the process of establishing unique models of skilling by offering market-driven short-term and long-term courses in compliance with the NSQF.

The keynote speakers and the panelists made important observations regarding skill-focused interventions that are currently trying to complement existing mainstream education. The latter has failed to address issues pertaining to employability, job creation and leveraging of

*The main message from all speakers was the need for skill-based courses in higher education that can lead to better employability and incomes, and promote entrepreneurship and job creation.*

India's demographic dividend. Many deficiencies of the present efforts at skills education were brought to the fore, both for creating awareness and for exploring solutions. This included the role of Sector Skills Councils (SSCs), the need for re-looking Qualification Packs (QPs) and National Occupational Standards (NOS), short-term training programs like the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), concepts such as Recognition of Prior Learning (RPL), incentivised apprenticeships, fee-based model of vocational training, the role of private training partners, future jobs and the impact of latest technologies, and modalities for seeking continued industry participation.

While some of the new ideas are yet to be vetted and implemented, the tremendous success of the B.Voc programmes from TISS-SVE emphasise the centrality of the demand-driven approach, complimented by moderate fees and assured industry participation, as the key features of a model that can be further refined and replicated. The push for vocational courses at the higher education level also addresses larger socio-economic issues. The B.Voc programmes have the potential to create an aspirational path for the youth towards an undergraduate degree, while also building capacity and employability through filling in the skill-gaps.

Skill India mission is no longer restricted to entry-level skills and now encompasses higher order skills through new initiatives in the higher education segment. The seminar provided positive indicators towards new models of industry-academia collaboration and granting professional degrees and diplomas through skill universities as well as regular universities. The continued engagement of members of the academia and industry in building bridges between 'knowledge' and its 'practical application' will be needed to help realise the full potential of the integration of vocational education with mainstream higher education.

# The State of the Art

To throw light on the progress made so far with regard to provision of vocational education in the country and where we stand today, we have drawn on the discussions at the seminar, experience of TISS-SVE as well as independent research conducted by ORF. We document the many challenges facing skilling initiatives in the country at the higher education level, as well as possible solutions. These include the following:

## 1. CONCEPTS IN SKILLING

**National Skills Qualification Framework (NSQF):** The NSQF, announced in December 2013, is a framework based on competencies emanating from knowledge and practice, resulting in acquisition of skills. It is central to the success of all skilling initiatives in the country since it specifies the competencies and responsibilities necessary across various age groups of students, in different sectors of the economy. It also provides for vertical and horizontal mobility between vocational and mainstream education. It is therefore imperative that NSQF is operationalised in a proper way. The specifications of the NSQF also require further adjustments, based on the experience of implementation so far, and an initiative to do this needs to be taken up at the earliest. Currently, the courses that claim to be NSQF-compliant

are also not up to the mark.

The NSQF certification levels range from 1-10 and course content needs to be developed for all of these levels in every sector of the economy. This task is not yet complete due to the shifting nature of government priorities. In 2013-14, the four broad sectors of the economy namely agriculture, manufacturing, non-manufacturing and services were to take up five job roles each and specify the end-to-end qualification levels for these from Level 1 to Level 10. Later, when the new government came in and the PMKVY was launched, the focus of the SSCs shifted to specifying courses only up to Level 4. The remaining levels are yet to be completed. Due to this and other limitations in the NSQF, persons trained under the various skilling initiatives continue to face dead-ends in their career as the framework has failed to facilitate cross movement – vertical or horizontal, thus impeding diversification of skill sets.

In the school education system, several State as well as Central boards are mandated to create standards for vocational education. One of the tasks of NSQF was to address standardisation to tackle the challenge of different types of qualification and certification bodies in this ecosystem. The other challenge now is to get NOSs and QPs developed for higher levels of the NSQF. India still has a long

way to go for implementation of NSQF in the right manner.

**Recognition of Prior Learning (RPL):** Although NSQF was created to assure uniformity in the levels of skilling, it has failed to chart out the way for RPL for entry into various levels of BVoc courses. Although one can exit at any level in the B.Voc degree programme, it is unclear as to how to provide RPL certification to a student, armed with certain skills, wishing to enter beyond level 7. Experts pointed out that unlike the current system where candidates are trained for one week, training for RPL should be at least three months long. There is a need to ensure that large sections of the illiterate population not only upgrade their skills, but also receive training in some degree of cognitive skills post RPL.

**National Occupational Standards and Qualification Packs (NOS and QPs):** National Occupation Standards (NOS) specify the standard of performance, knowledge, and understanding when carrying out a particular activity in the workplace. Several stakeholders pointed out that the QPs (groupings of NOS) and NOSs that exist currently do not embody multiple skills, so the vertical progression (as in the education system) in one QP restricts multiskilling of students and their ability to perform a wider range of jobs. Consequently, this leads to a lack of multi-skilling courses and limits job opportunities for trained students. These NOSs and QPs must be assembled into fewer occupational groups so that students are prepared for a longer term with multiple and related skills.

Also, since the existing QPs and NOSs were originally created for the organised sector, there is also a need to develop specialised ones for the unorganised sector that comprises a majority of our working population, and for the higher education segment.

## 2. ROLE OF DIFFERENT STAKEHOLDERS:

**Sector Skills Councils (SSCs):** The SSCs have been highly inefficient in running workshops,

formulating syllabus and conducting assessments for colleges running BVoc degrees. As per the guidelines released by UGC for BVoc courses, the SSCs were to guide colleges in all the above mentioned functions. In its absence, colleges have had to form their own assessment committees that lacked expertise in the skills to be tested. There is an urgent need to review and strengthen the SSCs for the smooth functioning of the ecosystem.

Additionally, as stated earlier, just as in the case of QPs and NOSs, there are no SSCs that can oversee efforts at multiskilling. This calls for efforts to initiate research in the skills sector, so that cross-sectoral SSCs can be formed to keep pace with evolving markets.

SSCs also need to have better representation on their boards from MSMEs, and not just from large corporate houses, so that the skilling requirements of the unorganised sector are also met.

National Skills Development Council (NSDC): The incorporation of the NSDC as a public-private partnership was an idea ahead of its time given that there are not too many models anywhere in which government funding for skill development is disbursed by an entity, which is a private sector PPP with 51 percent private shareholding. NSDC was set up largely to work in the background, to fund vocational training institutions and create support systems for skills development. Although it has delivered on some counts by creating the SSCs, conducting skills-gap analysis, and signing up many training partners – experts felt that today, unfortunately, we have forgotten the golden rules under which the NSDC was formed.

Through its training partners, NSDC offers only short-term training courses and institution-based practical training. This is grossly insufficient because trainees have no options for vertical mobility beyond this. NSDC has also taken on several training partners that are below par. The SSCs in turn have commissioned NOSs and QPs through international consultants who did not have an understanding of the ground





realities of India, so the outcomes are not useful and need a lot of improvement.

Although the NSDC has commissioned skills gap reports, this was done as a top-down exercise in which they identified industries and sectors with the number of jobs that they anticipated will exist. This way of doing demand assessment is deeply flawed because the reality of India is that it has a highly segmented population and demand. There is a mismatch between available demography in certain locations and opportunities in the form of jobs and vice versa. Therefore, organisations engaged in skills training don't know where the jobs actually are. This forces the youth who have received training to relocate to places far away from their residence for work, leading to social insecurity, unavailability of housing, poor healthcare and other such issues that negatively impact job satisfaction and productivity.

**Training Providers:** In India, skill education is government-financed and supply-driven. There is a shortage of instructors and apprenticeship is not a regular feature of pre-employment training. With regards to enterprise-based training provided by employers, close

to 99 percent of the training partners are not even registered to be eligible to train students. This sector is thus in an urgent need for quality upgradation and regularisation.

Historically, ITIs have been training students in skills at the school level (below Grade 12). However, in the face of lack of industry participation and exchange of duties between ministries, ITIs are known to have an outdated syllabus and poor infrastructure. There is no progression for students after receiving a diploma from ITIs unless he/she can complete Grade 12 through open schooling. Despite these weaknesses, ITIs are important training providers in the skills ecosystem, since they are currently the only ones that offer long-term (one to three years) training to students.

### 3. B.VOC PROGRAMMES:

Given that a Bachelor's degree is aspirational in India, the launch of the B.Voc courses in 2013 represented an important step forward for skill development in higher education. While no formal assessment has been conducted thus far, it appears that the colleges that have been successful in launching courses under this

programme are struggling to sustain themselves due to the financial instability caused by poor and irregular grant disbursement by UGC. Most of the initial grant is spent on infrastructure and labs, and the lack of regular fund flows limits the institution's ability to pay salaries and sustain the course. In addition, many of these courses have not led to students being able to find appropriate jobs. Several colleges that have experienced these kinds of difficulties have opted to shut down these courses.

On the other hand, the success of efforts by TISS-SVE, Fergusson College, Pune, and other such colleges that have opted for a demand-driven model of offering vocational courses affirms the value of selecting the right models for provisioning vocational education and training. The perception of society, students as well as parents, is that education must be linked to employability and this is where the demand-driven model scores since students are typically employed during their education.

Another reason why B.Voc courses are unattractive at the moment is that they are not listed as qualifications that make students eligible for jobs announced by the government sector or even in the private sector. Also, since B.Voc certifications are not treated on par with general BA, BTech, BCom etc., industry does not pay them at similar levels. This then contributes to reducing the uptake of B.Voc courses. Lack of awareness among students and parents of the existence of B.Voc courses also adds to the disinterest. The role of SSCs in formulating curriculum and assessment processes also needs to be strengthened if B.Voc programmes are to be scaled.

### 4. SKILLS UNIVERSITIES:

The Central government as well as several state governments are considering launching skills universities that will offer skill-based courses to students. This is a matter of concern given that there are almost no skilling efforts that are running currently that have reaped positive results and can become precedents to these

upcoming universities. The only exception is that of TISS-SVE, which has pioneered with industry partnerships, a flexible and scalable demand-driven model of vocational education. This was done as an incubation effort for a National Vocational University with initial funding from All India Council for Technical Education (AICTE). TISS-SVE has been able to reach over 20,000 students in just six years since its launch and it has as many as 8,000 B.Voc students currently on its rolls. However, it's rather disconcerting that few, if any, of the state governments are considering using the TISS model as the basis for designing the structure of their skills universities. They appear to prefer basing themselves on the model of the conventional universities, which is unlikely to succeed.

Some private entities such as Symbiosis University, Vishwakarma University, Centurion and Teamlease skills universities have already initiated their own models, most of which, attempt to integrate mainstream education with vocational education. While it is too early to analyse the nuances of their models (some are as young as two years), discussions through the seminar brought up several issues that may become a hindrance to the development of such institutes. In fact, some experts even questioned if such standalone institutes need to come up at all, as the need of the hour is the integration of skills education with mainstream education. However, some were also of the view that until the integration happens, the overlap of the programmes offered at skills universities with conventional education is necessary and is likely to help the two blend together seamlessly as the system evolves.

Through the discussions, it also became apparent that there is almost no involvement of state governments in the selection of skills programmes on offer at universities within the state. This has resulted in considerable mismatch between the requirements of employers and the training availed by students, resulting in students remaining unemployed after the completion of the courses and institutions launching courses

in sectors that have no demand.

Lessons learned from the evolution of the TISS-SVE model show that skills universities will need to be distinct from traditional universities in a whole range of characteristics, from campus sizes to the curriculum, faculty profiles, and so on. The most important aspect for any skills university is strong industry linkage and access to excellent training infrastructure, so as to ensure work-integrated learning. Some of the existing private models are capital intensive and may not be able to keep pace with upgrading labs and infrastructure as the jobs evolve. This is also why a strong industry linkage for practical training is needed because then students can receive their on-the-job training (OJT) at their workplace with the latest technology and equipment.

#### 5. INTEGRATION OF VOCATIONAL EDUCATION INTO MAINSTREAM HIGHER EDUCATION:

There was consensus among all stakeholders

that it would be ideal to integrate vocational education and mainstream education both at the school level as well as in higher education. This would lead to many advantages including: 1) giving students access to a more rounded and holistic education that will prepare them for the long term; 2) giving every student access to at least some vocational courses that can help them learn to work with their hands, develop an appreciation for such activities, and also improve employability; 3) helping to overcome perception issues relating to vocational education being inferior relative to mainstream education.

However, this integration will require considerable political will and a review of the universities' legislations given that these institutions will require additional flexibility to be able to integrate both streams. Flexibility in the types and duration of courses, in the appointment and qualifications of faculty, in the area of jurisdiction, and in striking partnerships with businesses and industry for practical skill

training for their students, are some of the key freedoms that educational institutions will need.

Meanwhile, a critical review and amendment of the NSQF, the only tool that can bring about uniform standards in the skills ecosystem, will go a long way in facilitating this integration.

The quality of outcome from skills training is also affected by the poor learning outcomes in mainstream education. The preparation levels of students/trainees going into the skills courses is poor, as brought out in successive Annual Status of Education Reports (ASER reports), and this affects their ability to benefit from the training available to them.

#### 6. ECONOMICS AND FINANCING OF SKILLS EDUCATION

A significant amount of skills training in the country is being offered free of cost to students, with governments paying training providers on behalf of each student. While this may have been necessary in the early stages of the skill development initiatives, there is a need to revive fee-based skill training to mitigate the risks of government-funded free training programmes, which, mainly pertain to misuse of funds and low quality of skills training provided by private training partners.

The financing of vocational education will need to be redesigned with adequate participation of industry. Internationally, it is the potential employers that pay for the training of youth and this kind of approach needs to be brought into India at scale. The work-integrated model adopted by TISS achieves this goal. Employers pay their trainees for their practical work, which in turn allows these trainees to pay a moderate fee to TISS for their education and certification.

Once trainees have acquired some degree to formal skills through training, employers in the formal as well as informal sector must pay them better. Unless we start paying our skilled people properly and unless businesses and industries pay the differential

premium to skilled people over unskilled people, vocational education and skills training will not become an aspirational story.

#### 7. EMPLOYABILITY OF TRAINED YOUTH

The aim of offering skills education to the youth is to improve their employability. But that is currently suffering in the face of several gaps and mismatches in the skills sector. As discussed earlier, the imbalance in the NSQF framework, lack of involvement of SSCs, dearth of skill gap analysis and low industry participation has led not just to unemployment, but underemployment of trained youth in the country. This is why we have been unable to offer meaningful employment to our trained youth, even though we are rapidly growing as an economy.

The short-term courses under PMKVY and such programmes are usually target-based and do not keep track of students' employment cycle. In the absence of such a database, it has become impossible for the government to perform impact analysis of these programmes, leading to inefficiency in training the youth and providing employment. Several of the rural youth quit jobs within months of joining because of reasons that include displacement from their native region, inability to cope with the work culture, inadequate payment etc.

#### 8. SHORT-TERM COURSES:

Since the formation of the Ministry of Skill Development and Entrepreneurship in 2015, the Government of India has floated several short-term courses under the PMKVY, Deen Dayal Upadhyay Grameen Kaushal Yojana (DDUGKY) and others at the state-level under these two national programmes as well as state-specific schemes, which offer courses that run between three to six months in duration. At the state-level too, various agencies have floated their customised courses to skill youth in the region. However, these courses are not showing the desired results, despite heavy public investment.

The short duration of these courses implies that training providers are unable to



adequately and holistically train youth and arm them with qualities they need to tackle an evolving workplace. For instance, short term courses do not accommodate general and life skills education.

OJT is an absolutely critical part of training going ahead, but opportunities for such on-job training are in short supply. Most workers acquire skills during OJT, but are employed in the unorganised sectors and in unregistered enterprises. Only 36 percent of them receive enterprise-based training offered by large companies. It can't be stressed enough that there is a need to review the short-term employability-linked courses to enhance the scope for apprenticeship through successful multiple stakeholder engagement in various agencies.

Furthermore, these training providers for short-term courses or even colleges running B.Voc courses do not have any provision for lifelong learning. This is crucial for the large working population that might need upskilling or reskilling. Apart from online courses, there are very few places where a worker can go over during the weekend or in the evening to learn a professional course and improve their qualification and skills. There aren't enough institutions offering skill development courses that are available at night, on weekends or at flexible times. Currently, there is a high, but unmet, demand for such short-term courses.

There is also an urgent need to re-look at short-term training programmes like the PMKVY, to ensure that they lead to quality, productivity and efficiency of workers, along with a critical review of the contribution of SSCs in terms of industry participation in skilling programmes. Besides the SSCs, the MSMEs (micro, small and medium enterprises) and start-ups should also have a say in design of such courses, as these sectors are highly demanding and need their workers to be well-trained and multi-skilled. MSMEs constitute about 96 percent of the industry in India, thus it becomes pertinent for the economy to



design courses suited to their specific needs for employment. Short-term courses must also be designed for persons with disability, so as to create an inclusive environment for jobs that can contribute maximally to the rapid growth of the economy.

#### **9. INTERNATIONAL BEST PRACTICES:**

A striking feature about the vocational education experience of Germany, South Korea and Singapore is that their successful models have all been several decades in the making. The German Dual-College model in higher education is around 40 years old and has evolved gradually from the core concept of work-integrated training or OJT in which people are trained in areas of demand in the industry. OJT is attractive to students since they get paid while learning and it is attractive to industry as a means of onboarding well-trained staff. The German model is demand-driven in other ways too, because their industries convey the need for certain skill sets and new job descriptions to the government, which then initiates the process of developing courses for the same. The institutions in the vocational system respond by developing curriculum to align with the needs of the industry. Thus industry, government and institutions work in tandem to deliver a holistic education to students and value to all stakeholders. Another significant characteristic of the Dual model is that higher education and 'Technical and Vocational Education and Training' (TVET) are linked and there is the understanding that students can move back and forth, and can always have the possibility of upward mobility through a Masters' degree.

The South Korean system is approximately 70 years old and has evolved after considerable trial and error including a series of failures when they tried to replicate the Dual system from Germany. They tried the OJT model five times and failed but learnt from the mistakes and evolved their own system. In 1960, Korea was predominantly an agrarian economy with no technology and no large companies,

but an abundance of human resource. They borrowed money and technology from other countries, and focused on human resource development and exporting to the world market, and this has now become a virtuous cycle for Korea. They reviewed progress every decade and changed export commodities on a regular basis, beginning with exporting hair for wigs, followed by textiles in 1970 and automobiles in 1980. They also exported trained human resources, sending nurses and mine workers to Germany for instance and using over 65 percent of the money this brought in for national development. TVET in Korea has been widely credited for effectively supporting the rapid growth of the country in the last 40 years.

It is mandatory for Korean companies meeting certain conditions to provide vocational training at the workplace. Companies not only train their employees, but also pay up to one percent of training tax. This is a large amount of money but when they provide good quality training the government gives the money back. In terms of the investment necessary, the TVET system needs four times the money relative to general education. In Australia, they spend seven times the money and their vocational education system is excellent. They too have a training tax system for industry contributions.

The expert from Korea also talked about the global stigma attached to the VET, with only a very few exceptions. He said that Korea has fought against the stigma since the 1950s, but much of Korea is still not stigma-free because it is deep-rooted and will need longer time to be eradicated. However, the economic success of VET is helping to bring about change.

The speakers from Singapore reinforced the key points that were made by the speakers from Germany and Korea. In addition, given the fact that Singapore has an aging population, they discussed challenges of re-skilling and lifelong learning, which are also relevant to India. Intake for part-time courses is increasing very fast and they are shifting focus towards training working adults. The lessons

from Singapore are also that assessment of progress must be done very regularly, there must be close coordination between different stakeholders – governments and the different departments within it, educational institutions, industry and businesses and the public. There must be continual review of skills maps, career pathways and training curriculum.

It is evident from all these international experiences that: 1) India must evolve its own model of vocational education, be prepared to fail, and to learn from its failures; 2) This calls for creating a flexible and responsive system of vocational education in which frequent reviews, careful reflection, and appropriate changes linked to the national development goals are a regular feature; 3) work-integrated or OJT is a key component of successful models in other countries and this is the best way forward for India too, although details will have to be tried and perfected as in Korea; and 4) companies in India must also be encouraged and incentivised to provide OJT to the maximum number of people. All this will ensure that training is demand-driven and relevant to the economy. The TISS-SVE model has also established the fact that institutions providing vocational education can become self-supporting in time after receiving financial support in the early stages. This is a very attractive feature that can be leveraged considerably in future planning of the role of academic institutions in TVET.

#### **10. OTHER CHALLENGES:**

Vocational education at the secondary and tertiary level can ease the transition from school to work while supplying employers with skilled workers. It should be offered in secondary and higher secondary schools beginning at age of 15, but the vocational education available presently in Indian schools is completely outdated. As mentioned earlier, there must be a strong initiative to integrate vocational education into mainstream school and higher education in order to make these courses more attractive to students. Else, vocational education

will continue to be perceived as an inferior form of education as it is practiced as a parallel path.

Dual vocational education, which combines structured OJT with classroom training, leads to certified skills that are relevant to employers and portable in the labour market. The real value of vocational education is that all students need both liberal education as well as vocational education and manual training for occupations. Education through occupational experience stimulates intellectual development and the manual training offers a new view of knowledge and knowing. At the same time, the student learns about competence, democracy, play and work, culture, educational process, and society. Countries with strong vocational training programmes are in a better position to avoid rising youth unemployment, even in difficult times.

Given that IT-ITeS have become a horizontal sector with the emergence of digital enterprises and technology-enablement, there is a need to digitally empower people and bridge the gaps between digital haves and have-nots and the informal and formal sector. There is a need for more people to be made digitally-equipped so that they understand the power of technology to create more inclusive

jobs in the social sector. Matching up the array of courses on offer with the needs of the economy is another critical challenge. In terms of high-end educational qualifications, offering technology-driven vocational programmes in areas such as Big Data, Machine Learning, Deep Learning, 3D printing, robotics, etc., is critical so that Indian youth can handle the jobs of tomorrow that will require skills and aptitude for working with machines.

The ultimate vocational education programmes that have existed in the country until now are the professional education programmes for educating doctors, CAs, Company Secretaries, engineers and so on. These programmes are distinguished by the fact that they are self-driven, through councils of practitioners, rather than employer-driven as is the case of vocational education driven by the SSCs. The models for participation of industry in vocational education requires considerable reworking.

Lastly, employers both in government and in the private sector, must help strengthen vocational education by extending eligibility to the youth with skills qualifications for all jobs they advertise. They must also be willing to pay a premium for skilled workers. ■

# SKILL INDIA THE WAY FORWARD IN HIGHER EDUCATION

A national consultative seminar

Online media partner

October 15-17, 2018 | #SkillIndia

NSN  
NATIONAL SKILLS  
NETWORK



PART II

# Report of The National Consultative Seminar

**October 15-17, 2018**

**Venue:** Tata Institute of Social Sciences, Mumbai

**Organised jointly by**

**Maharashtra State Skill Development Society**

**- Government of Maharashtra,**

**Tata Institute of Social Sciences - School of Vocational Education**

**and Observer Research Foundation, Mumbai**

## Inaugural Session

The seminar was inaugurated by the Finance Minister of Maharashtra, Shri Sudhir Mungantiwar, on 15 October 2018, in the presence of several distinguished experts and guests from the skilling sector. Other speakers at the inaugural were Union HRD Minister Shri Prakash Javadekar; Shri Sambhaji Patil Nilangekar, Minister of Skill Development and Entrepreneurship, Government of Maharashtra; Shri Anil Sahasrabudhe, Chairman, All India Council for Technical Education; Shri Kirit Somaiya, Member of Parliament and Chairperson, Standing Committee on Labour; Mr. Jorge Coarasa, Senior Economist, Health, Nutrition and Global Practice, World Bank; Shri Rajesh Aggarwal, Joint Secretary and CVO, Ministry of Skill Development and Entrepreneurship; Shri Aseem Gupta, Secretary, Department of Skill Development and Entrepreneurship, Government of Maharashtra; Shri Satish Pradhan, Member, Governing Board of TISS; Shri Dhaval Desai, Vice President, Observer Research Foundation; and Prof Neela Dabir, Dean, School of Vocational Education, TISS.

**Mr. Satish Pradhan** of TISS welcomed the dignitaries and the participants and highlighted the need for equitable income generation in the country in his speech.

**Shri Prakash Javadekar** joined the

function through video conference. His speech covered a broad range of concepts in vocational education. He recommended that just like TISS, other institutions must offer skill-based programmes since graduates from mainstream education often lack skills to ensure employability. He said that the Ministry is also conceptualising a new programme called BA professional, BSc professional and BCom professional, where the students opting for these courses will be required to complete 1,000 clock hours of extra skill-based course along with their three-year degree course. The tentative break up of 1,000 hours would include courses in soft skills, communication skills, ICT skills and some specific skills, all corresponding to Level 5 of the NSQF.

**Mr. Aseem Gupta** observed that there is a fundamental disconnect between the market and usefulness of products in the education system. The need of the hour is for the education system to lead to gainful employment for the youth. He reinforced Mr. Satish Pradhan's view on the urgent need to channelise the potential of India's demographic dividend. To prevent frustration among educated youth, government needs to restructure the skilling and education ecosystem collectively, as the two need not exist as parallel systems any longer. Higher education needs to partner with skilling.



Shri Prakash Javadekar, Minister of Human Resource Development, Government of India, delivered his address at the inaugural session



Prof. Anil Sahasrabudhe, Chairman, AICTE speaking at the inaugural session

Mr. Gupta said that Maharashtra is in the process of planning for skills universities which will be structured differently. It will be nimble-footed with regard to courses, and will allow students to opt for courses of their choice through electives. There will be greater scope for learning outside the university and colleges through on-the-job training. The Department of Skill Development and Entrepreneurship has requested the Governor of Maharashtra to make it mandatory for all the colleges and universities within Maharashtra to offer every undergraduate and postgraduate student the option to take up to three skill-based courses, on a voluntary basis.

**Mr. Dhaval Desai** spoke about the case study prepared by ORF of the model of vocational education pioneered by the School of Vocational Education (SVE) at TISS. ORF's report 'Scaling Vocational Education' documents the demand-driven model that TISS has pursued in partnership with more than 800 Skills Knowledge

Providers from industry where students receive practical skills training. TISS offers a mix of short-term certificate courses as well as Diplomas, Advanced Diplomas and B.Voc degrees and the theory component of their education is done through approximately 234 Hub Partners. The current enrolment in B.Voc is over 8,000 students, which is the largest enrolment by far, in a single institution in the country. The TISS model is therefore scalable and replicable, and the report will be of use to all institutions that would like to take up vocational education.

**Mr. Sudhir Mungantiwar** was the Chief Guest for the occasion. In his address, he stated that there is an abundance of skills in the country, but we need to devise a way to use these skills effectively. He observed that there are more job seekers than job creators and this situation needs to be rectified through skilling. He pointed out that a report presented in the Vidhan Sabha 10 years ago stated that of all the skilled people in Maharashtra, only two percent

have received training through government sources. He shared the example of Singapore, which after its independence, trained its youth in the finance sector, and are now a leading financial services provider in the world. They learnt and adopted from the best models from all over the world. The Minister also emphasised the need to provide demand-driven skill training.

**Mr. Sambhaji Patil Nilangekar** said that the population needs to be transformed into the best competitive skilled workforce. He reiterated that skill should lead to employment and therefore the challenge is to develop multiple dimensions of skill in an individual. Skill universities are an effort in that direction. In the entire spectrum of skilling, ITIs are at one end and IITs on the other. For ITI programmes, the curriculum was designed by the higher education department in the State, but since the last four years, efforts are underway to get the syllabus designed by industry to match their requirements. If any industry approaches

an ITI with a curriculum that will help create jobs, ITIs are given the necessary approvals within a stipulated time period. Also each ITI has been attached to different industries so as to facilitate a mentor industry system. Currently, there are more than 417 ITIs attached to different industries in Maharashtra. In addition, he said that Maharashtra has also encouraged entrepreneurship through start-up programmes in urban and rural areas, in each district of the State.

**Mr. Kirit Somaiya** focussed on the need for skill universities to train people in an effective and inclusive manner. Since the late 1990s, mobile and internet technology has helped India become a centre for providing competitive labour. Mr. Somaiya cited the World Bank report (August 2018) placing India as the sixth largest economy of the world owing to the service sector that has grown rapidly in the last 20 years. India has developed the best business processing system in the world starting from credit system,

# SKILL INDIA THE WAY FORWARD IN HIGHER EDUCATION

A national consultative seminar

Online media partner

October 15-17, 2018 | #SkillIndia

NSQ  
NATIONAL SKILLS  
NETWORK



Release of the report, 'Scaling Vocational Education - A case study of TISS-SVE', prepared by

the Observer Research Foundation by Shri Sudhir Mungantiwar, Minister of Finance, GoM

preparing balance sheets, transcription and editing of the world's top languages and books. He added that India has the capacity to become the third-largest economy as early as 2023.

**Prof. Neela Dabir** shared the journey of evolution of TISS-SVE since its inception in March 2011 when TISS signed an MoU with AICTE for incubating the National Vocational University. She explained the elements of the TISS model emphasising the key elements that allowed it to scale rapidly and reach a large number of students (nearly 20,000) in just six years. Over the years, 30 B.Voc courses, seven Post Graduate Diploma courses and many short-term and customised courses for corporates have been rolled out in more than 90 locations in 22 states across the country.

**Mr. Rajesh Agarwal** began by stating that India's youth population needs to be trained over the next 10 years in order to achieve the target of skilling 110 million people. He observed

that as of now, skill education remains terminal in nature, but needs to be made progressive so that students do not hit a dead end after entering skill education programmes in different sectors. He acknowledged that there is a huge information gap because job seekers and employers are unaware of each other. Mr. Agrawal emphasised that in the future every individual will have three to four careers on an average and thus, the concept of lifelong learning is going to be important.

**Mr. George Coarasa**, Chief Economist, World Bank (India), stated that there is a wave of technology taking over the world, which is shaping every single industry and enabling enterprises. It allows fragmented markets to be aggregated and organised, leading to tangible benefits for people from all strata, as consumers. However, the benefits for people as producers in the economy is not automatic and cannot be taken for granted. He mentioned that the World Bank wishes to partner with the

Government of India and the state governments to enable school education, higher education, skill development, health, nutrition, child development and sanitation.

**Prof. Anil Sahasrabudhe**, Chairman, AICTE, stated that skilling is important and must start at the school level. He hoped that the new education policy of India will cater to the same. He also felt that skill universities are necessary and should be set up. He was certain that in the future every institution will have skill sets on offer. PMKVY was introduced to provide technical and other types of skills sets for school dropouts who could not continue their formal education. He stated that there is no need to open new schools or colleges because the existing infrastructure of polytechnics and various colleges can be used. However, there is a need for teacher training programmes that prepare teachers to promote and sustain skilling. Prof. Sahasrabudhe suggested that polytechnics and colleges could adopt ten schools in their neighbourhoods, and

induct skilling programmes in these schools.

He said that Maharashtra government is the first state in the country in which one of the polytechnics in Kolhapur is allowed to run a B.Voc programme. He focused on the need to change the mindset of people to make them aware that there is another channel for completing graduation. In addition, there is also a provision of the National Employability Enhancement Mission (NEEM) that contributes to students getting higher salaries. ■



# Keynote addresses

*The four keynote addresses spread over two days were designed to give participants a perspective of the skill development sector by incorporating expert viewpoints from academia and industry. The titles of the four talks and the names and affiliation of the speakers are as follows:*

**Keynote Session 1:**

*Changing Landscapes in the Skills Ecosystem –*  
**Prof. Santosh Mehrotra**, Chairperson, School of Social Sciences – I, Centre for Informal Sector and Labour Studies, Jawaharlal Nehru University

**Keynote Session 2:**

*Modalities of Skills Education for the Social Sector –*  
**Dr. Sandhya Chintala**, Vice President, NASSCOM

**Keynote Session 3:**

*Integration of Existing Ecosystems in Skills Development in India –*  
**Mr. Dilip Chenoy**, Secretary General, FICCI, and former MD and CEO, NSDC

**Keynote Session 4:**

*Financing and Economics of Skill India –*  
**Mr. Jayant Krishna**, Former Executive Director and Chief Operating Officer, National Skill Development Corporation (NSDC)

In the first keynote address, **Prof. Santosh Mehrotra** set the agenda for the seminar by outlining challenges for skills education and training in India. He pointed out that in 2015-2016, approximately 38 percent of the workforce in the manufacturing sector had just primary education or less, about 19 percent had eight years of education and 32 percent had secondary education (Grades 9-10). In the services sector the situation is slightly better with only approximately 27 percent of the workforce having primary education or less, 16 percent with eight years of education and 37 percent having secondary or higher secondary education. So more number of educated people were working in the services sector as compared to manufacturing.

He said that a major problem was the lack of formal TVET in the country with 93 percent of the workforce having no vocational education and only five percent of the workforce having formally acquired skills education. The



Prof. Santosh Mehrotra (inset), Chairperson, School of Social Sciences – I, Centre for Informal Sector and Labour Studies, Jawaharlal Nehru University delivering his keynote address

education of the human capital base is poor despite the fact that secondary education is available to 85 percent (verify) of the population, higher education to 26 percent and the fact that 90 to 95 percent of the population is expected to be literate by 2021. Massification of education has not translated into higher learning levels of the workforce. There is a need for greater investment in education, which is less than four percent of the GDP at present. Structural shifts are also needed in order to align industrial policies to education and skill development policies. There must be provisions for diversion of students into TVET early on in schools and the focus needs to be on Science, Technology, Engineering and Mathematics (STEM) in higher education. He pointed out that East Asian economies not only had industrial policies in place, but offered better general education and had higher levels of penetration of VET in their population. This is why

East Asia became the factory of the world and is currently at the forefront of Industry 4.0. Prof Mehrotra said that the model for skills education and training being used by India is narrow. In contrast, the interpretation of vocational skill is much broader in Germany. This means they train people for at least 2-3 years and give them a broad occupational foundation so that people are able to adapt to the requirements of the changing world economy.

Prof Mehrotra made five observations regarding the Indian system:

1. Vocational education should begin at the age of 15, in secondary and higher secondary schools. The NSQF has specified that vocational education must be provided at secondary education level in all government schools. However, the vocational education available in secondary schools at the moment is outdated and does not provide vertical mobility to students. In the last few years, the University system has begun offering B.Voc courses and

some degree of vertical mobility.

2. The Vocational training provided in the private sector supported by the National Skill Development Cooperation (NSDC) offers only short-term training courses and institution-based practical training. This is grossly insufficient and consequently it is not possible to offer vertical mobility to trainees.

3. The ITIs, whether public or private, offer no upward mobility to trainees, unless they acquire supplementary education through the National Institute of Open Schooling (NIOS) or general education along with ITI training. However, ITIs offer 1-3 years of training, and despite their weaknesses, are very important as a training provider for majority of students.

4. There are over 17 ministries of the central government that offer short-term skilling opportunities similar to that of the NSDC providers. Again, there is no possibility of upward mobility and the quality and value to students is suspect.

5. With regard to enterprise-based training provided by employers, the first problem is that only one percent of all enterprises in the country are registered to provide such training. In Germany, most of the training is demand-driven and is financed and conducted by the employer. In India, most of our system is government-financed and supply-driven. The level of skills already available with the existing workforce are also not certified. An important requirement in the Indian system is the RPL but the ecosystem has missed out on building this capacity. No apprenticeships are being offered. OJT is an absolutely critical part of training going ahead, but opportunities for OJT are in short supply. Most workers acquire skills during OJT, but are employed in the unorganised sectors and in unregistered enterprises. Only 36 percent receive enterprise-based training offered by large companies.

The Indian skilling ecosystem is fixated on the number of trainees/students to be skilled, but it is not capable of meeting the quantitative challenge of skilling. In terms of standards, there

are nearly 6,000 NOSs compiled into over 2,300 QPs, that have been prepared by international consultants who are not really conversant with the ground realities of India. Even courses that are NSQF-compliant are not up to the mark.

The Sharda Prasad Committee, of which Prof. Mehrotra was a member, had analysed the skill ecosystem for the Ministry of Skill Development and Entrepreneurship (MSDE) in 2016, and pointed out the very poor outcomes of the top-down training model adopted by the Ministry. Students receive poor quality of education of three months duration before being sent into the labour market and most of them end up getting only informal work. As NSDC reports indicate, as much as 60 percent of all trainees were employed in the unorganised sector. Thus, there is a need to ensure that the people are trained for formal work. Duration for RPL training should be three months and not for just one week as it is now. There is a need to ensure that large sections of the illiterate population not only upgrade their skills, but also receive some degree of training in cognitive skills.

The second speaker, **Dr Sandhya Chintala**, began by pointing out that the Information Technology (IT) industry is expected to become a trillion-dollar industry by 2022 and contribute towards making India a five-trillion economy by 2025. In order to reposition India in the global skills landscape, there is a need to club the domestic as well as international industries. The objective is to bridge the gap between the haves and the have-nots and also between the formal and informal sectors. The construct to do this includes skilling as well as re-skilling and up-skilling of those who are already employed. How can we put a process in place so that our workforce can be continuously skilled? How can we create a sustainable and future-ready talent pipeline from schools, school dropouts, the unorganised sector, the blue-collar workers, white-collar workers and beyond? The need of the hour is to reimagine and reinvent individuals and businesses. The power



Dr. Sandhya Chintala, Vice President, NASSCOM, delivering her keynote address



Dilip Chenoy, Secretary General, FICCI, delivering his keynote address

of disruptive technologies is a boon towards achieving this even though it also brings with it a lot of automation that has to be dealt with.

She said that about 54 percent of the people would continue to remain in the old workforce for at least the next five to six years. Approximately, 37 percent of the workforce will have to learn to work with machines. Although this number is 10 percent currently, it will increase to 70 percent in time, and for collaboration with machines, the attitudes, aptitude and competencies will all need to change. On being asked as to how to help the youth who hardly have any education, Dr Chintala said that collaborations in order to make training better, faster and inclusive is the way forward.

About nine percent of the workforce is in the intellectual fields of big data, 3-D printing, social media, robotics, automation, etc. A greater number of unorganised sector employees will be working in these areas soon. Thus, there is a need for more people to be digital adept so

that they understand the power of technology to create more jobs leading to inclusion of the social sector. Technology is the enabler but at the end of the day it is the people that matter, so how can people be transformed?

The IT-ITeS sector brings digitalisation to people through their cross-cutting impact. A decade ago, it was only some sections of the economy such as manufacturing and financial services, but now, every other sector is getting a technological facelift. The social sector must be enabled for this digitalisation process so that by 2050, India can emerge as a superpower. NASSCOM has itself become a SSC in this sector in order to try and bring about the inclusion of all industries. The people between 15-35 years of age can still be enabled. The 35 to 59 year age-group is a worrying factor, because they have to learn how to un-learn, re-learn, and move on. It's a huge problem because there is scarcity of faculty to help do this, so disruption is the only way out.

The enormous growth of internet-enabled cell phones will ensure that digital programmes can be made available widely. The purchasing power parity in the lower income group people who have up to Rs 1.5 lakh worth net income annually will go down in the next five years. Digitally empowering the have-nots is the only way to help them move up the ladder. The way to do this is to use technology for virtual education and ensure the best quality education for upskilling and upgradation. There is a need to build equity of access to quality education and skills, then equity of access to employment opportunity, entrepreneurship and ways to learn. Hence, the three-year programmes cannot be the end of learning – lifelong learning is the need of the hour.

**Mr. Dilip Chenoy's** presentation was on the topic of integration of the existing ecosystems for skill development in India. There are fragmented efforts in skill development in the country and each group is disconnected

from the other as well as the employment landscape. Schemes such as the PMKVY and the DDUGKY have similar goals but are run by different ministries (MSDE and Ministry of Rural Development respectively). The effort through this keynote was to deliberate on ways to integrate all platforms and better coordinate all programmes.

Mr. Chenoy discussed the models and schemes for skilling adopted by the stakeholders in different skills ecosystems such as that of the Ministry of Human Resource Development, the Ministry of Skill Development and Entrepreneurship, the Ministry of Textiles, the Ministry of Small and Medium Enterprises, and state governments, among others. He mentioned that the way to integrate all the efforts under these different ministries in the state and Central governments is through the NSQF.

The MSDE is the ministry handling the PMKVY. It offers different skill development

programmes such as the Apprenticeship Training Scheme, Craftsmen Training Scheme, Craftsmen Instructor Training Scheme, and the Skill Development Initiative, which were previously with the Ministry of Labour. Over 2,300 government ITIs and Kaushal Kendras are running the PMKVY. These offer RPL and provide training at the appropriate level as well as certification to students. The National Rural Livelihood Programme (NRLP) serves the rural people, and for the urban poor, the government has floated the Pradhan Mantri Yuva Yojana (PMYY) under the MSDE, which is providing support for entrepreneurship. There is also the National Apprenticeship Promotion Schemes (NAPS) such as the National Employability Enhancement Mission. The Ministry of Small and Medium Enterprises (MSME) also has its own programmes such as the automobile industry scheme or the management development programme. The ministry also runs the Central Manufacturing Technology Institutes for skill development across the country.

The Ministry of Human Resource Development has charge of vocational education in secondary and senior secondary schools (Grades 9-12). The CBSE has its own programmes and the Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE) under the NCERT and has the responsibility for developing the curriculum. NCERT is working on revising this curriculum based on the NSQF. There are also other apprenticeship training schemes and Jan Shikshan Sansthas (JSS) all over the country and B.Voc courses are available in higher education. However, the best skills programmes that have existed until now are the professional education programmes for educating doctors, CAs, Company Secretaries and so on. These programmes are distinguished since they are self-driven (through councils of practitioners). They are not employer-driven as in the case of the SSCs. The latter is a different concept and needs to be taken note of.

The idea behind the NSQF was to integrate all these programmes but this goal has

not yet been achieved due to shifting priorities. The NSQF certification levels range from 1 to 10 and course content needs to be developed for all of these levels in every sector of the economy. In 2013-14, the four broad sectors of agriculture, manufacturing, non-manufacturing and services were to take up five job roles each and specify the end-to-end qualification levels for these from Level 1 to Level 10. When the new government came in and the PMKVY was launched, instructions were given to the SSCs to focus on courses only up to Level 4. The challenge in this ecosystem is that there are different types of qualification and different certification bodies, so one of the attempts of the NSQF was to address standardisation. The school education system has close to 30 boards in addition to the central boards such as the CBSE, ICSE that are mandated to create standards for vocational education at the secondary level and beyond. The other challenge now is to get NOSs and QPs developed for higher levels of the NSQF.

Mr Chenoy also addressed the debate of short-term vs long term courses. He felt that short-term courses can be intense and not necessarily inferior to long-term ones. He also emphasised that lifelong learning is critical and people must get the opportunity to be trained while they are employed. He discussed several models for doing this and pointed out that in practice this is difficult to implement. But for online courses, there aren't enough institutions offering skill development courses that are available at night, on weekends or at flexible times. Mr. Chenoy pointed to the example of Germany, which has been successful in training people as per industry needs. They also use the concept of lifelong learning to constantly upgrade the skillsets of the employees with the changing demands of the industry.

The last keynote was delivered by **Mr Jayant Krishna** on financing and economics of skills programmes, which has been one of the major concerns for stakeholders in the skills ecosystem. Very few initiatives have been able to reach the stipulated target without



Jayant Krishna, former Chief Operation Officer, NSDC, delivering his keynote address

compromising the economic viability of the investments. While industry participation is key to all skill development initiatives, there is no one solution to effectively address the economics of the same. In the absence of serious efforts from any stakeholder other than government, most skilling programmes are failing to address the real challenge of training the workforce in an economically sustainable manner. Mr. Krishna addressed the challenges related to the economics of the skill development process and financing models.

India's GDP makes us the fifth largest economy in the world. India's young workforce is good for the country for two reasons: the cost of the young workforce is much lower to the companies and this enables them to be competitive not only from the domestic, but also from the global viewpoint. Also, the young workforce will remain economically viable for the country for a longer period of time. He pointed out that India must

learn from the example of China which has a larger population. Around 50 percent of the Chinese workforce has received formal skills training. The country has a large service sector just as they have a strong manufacturing sector. He emphasised that unless industries in India start paying a differential premium in salaries to skilled people over unskilled people, there will not be any inspirational stories in skilling.

Mr. Krishna also said that opportunities for skilling must be provided at locations with available demographics. While this is ideal, it isn't really happening at the moment, so there is a dearth of people where opportunities are available and vice versa. Invariably, youth seeking to be armed with skills and finding relevant jobs are faced with relocation. This isn't preferred due to lack of social security, no back-up in terms of housing or healthcare. If the skilling challenge is not taken seriously during the next decade, India will miss the promise of



district and for the first time NSDC decided to pay 70 percent of the cost and also support in terms of targets for three years. The idea that people at the bottom of the pyramid should be paid for their training started out as a good concept. The youth did not know what their prospects are, where the next pay is going to come from, so they or their families could not be expected to pay for skills training. However, this concept has been abused enormously. Some worthwhile assets have been created, but how does one fight greed? A lot of people think that a voucher system will work better than PMKVY and other systems. NSDC has collaborated

with a large number of partners but several of them are not the right ones. Rules are made for genuine partners but fly-by-night operators misuse it. If the rules are made stringent, genuine partners will find it difficult to work. It is a struggle to move out of this situation. Much of training in India started out being free, but now there is no choice but to run free programmes and paid programs in the same neighbourhood. Therefore, there is an urgent need to redesign the common norms of financing the entire skill ecosystem and not be content with simply making annual inflationary adjustments. ■

the demographic dividend. He suggested that perhaps the expectations of the country from the skilling efforts was too high, given the fact that the quality of student input into the various skilling initiatives is generally not very good. Youth are often not well-prepared to benefit from these courses. As mentioned in the ASER reports, the learning outcomes of students is poor, so the task of skilling and reskilling a large workforce of half-a-billion people is indeed a serious challenge. It is important that people in the workforce who do not have adequate education and skills join the skilling efforts and learn. India, which is currently ranked 138th in the global Human Development Index, which looks at issues of healthcare, education including skills, quality of life etc., may slip further. This is also something that needs to urgently improve. Mr. Krishna stated that NSQF is an excellent idea and if operationalised properly, a number of issues related to skilling in India will be addressed. It will allow vertical mobility, as well as criss-crossing with mainstream education.

However, it is essential to operationalise it, align different courses in the skill education system of the country and also work out the issues of movement and mobility. Else, it will just remain a theoretical framework. SSCs have brought in industry knowledge in terms of job roles, occupational standards and qualification packs. It has also helped in setting standards in skill education and identifying the available jobs. During the last decade, developments in terms of skill-gap studies, setting up of skill development corporations at state level, and facilities for free and large-scale training programmes have been of great help. Refinement in each of these areas is necessary.

The financing and economics of skills remains a black box. The courses under Skill Development Initiative Scheme (SDI) scheme started the practice of compensation for training partners. They came up with remuneration starting from Rs. 25 to Rs. 30 per hour for each student, with the maximum being Rs. 45. The PMKVY has to have one training center in each



# Plenary Sessions

*The six plenary sessions were carefully chosen so as to throw light on some of the burning issues in the skill development sector. The focus was mainly on higher education with just one session devoted to short-term courses that can also be conducted by industry.*

## Plenary Session 1 Concepts in Skilling – Understanding NOS, QPs and related terms

The skilling ecosystem in India is extremely complex owing to several reasons such as adaptation of international concepts, involvement of multiple stakeholders, and government interest in fast tracking the process of skilling, among others. There are a variety of terminologies and concepts that need clarity and understanding from stakeholders as well as participants in the skills ecosystem. Some of these, such as the National Occupation Standard (NOS), Qualification Packs (QPs), job roles, sectors, and others need to be enunciated and explained by experts through their understanding of the origin, logic and functioning in the current scenario.

**This session was chaired by Mr. Ajay Mallapurkar, Consultant, TISS-SVE. The speakers for the session were Ms. Deepti Saxena from NSDC, Mr. Narendra Mohapatra from Electronics Sector Skill Council, Mr. Raj Gilda from Lend A Hand Foundation and Dr.**

**Sangeeta Pikale from Health Sector Skill Council.**

**Ms. Deepti Saxena** made the first presentation focussing on the concepts commonly used in the skills ecosystem as well as their role and framework in the higher education system:

- Skill is the ability to apply knowledge, use know-how to complete tasks and solve the problem, as defined in the NSQF notification.
- NSQF defines the formal outcome of an assessment and the validation process. It is obtained when a competent body determines that an individual has achieved learning outcomes commensurate with given standards. Therefore, just any qualification cannot be considered as recognised. It needs to be evaluated and assessed by an authorised body.
- National Occupation Standards (NOS) specify the standard of performance,



Plenary Session 1: Concepts in Skilling – Understanding NOS, QPs and related terms

knowledge, and understanding when carrying out a particular activity in the workplace. So, NOS is basically the corresponding occupational standard for any qualification. The Qualification Packs (QP) are groups of NOSs. The QPs developed earlier were narrow and efforts have been made to rationalise and align them. The rationalised QPs have compulsory NOSs and some electives (also called options). These are more comprehensive and contain skilling requirements that fulfil the needs of organised as well as unorganised sectors where an individual is expected to multitask. Electives may be selected based on the need and market demand.

The NSQF was launched in December 2013 with a focus on competencies-based framework – competency emanating from knowledge and practice resulting in acquisition of skills. The NSQF framework is operationalised by the National Skill Development Agency (NSDA),

recently renamed to National Council for Vocational Education and Training (NCVET). The NSQF Levels 1-10 basically define five descriptors focusing on the competencies and promotion of lifelong learning. Courses aligned with NSQF are recognised across India as well as some other countries.

Recognition of Prior Learning (RPL) is another feature of the NSQF meant for individuals who have missed formal education or who might have not been certified in the skills they have. In case there is a gap, there is also a provision for bridge courses to update them with the latest skills.

QPs and NOS are developed by Sector Skill Councils (SSCs). There is active participation from industry in developing the NOSs along with SSCs. Therefore, demand-driven qualifications, which are required by the industry, are created. The SSCs submit the qualification to National Skill Development Council (NSDC), which is the implementation body within MSDE. Once

qualifications are submitted by the SSC to NSDC, a due diligence and review of these qualifications is performed. This is then tabled to the Qualification Registration Committee (QRC) where they are approved and submitted to NSDA, which forwards it to National Skill Qualification Council (NSQC) – another entity under MSDE with regulatory authority. Once these are approved by NSQC, these qualifications are uploaded on the National Qualification Register (NQR). NQR is the repository of all approved qualifications coming from multiple awarding bodies irrespective of its origin in SSC or state ministry, central ministry or private institutes. The qualification packs on the NQR can be taken with the permission of NSQC.

The framework which is currently used in education is as follows: Vocational education is on offer in Classes 9 and 10 in schools corresponding to NSQF qualification Level of 1 and 2 respectively. In Classes 11 and 12, students can pick up another qualification that corresponds to Level 3 and 4 of NSQF.

After Class 12, students can either exit or go to community college or opt for a B.Voc course that has multiple exit and entry opportunities available. Students can exit after each year of B.Voc. There are 1,000 hours of courses for each year. On exiting, first year students are given a Diploma, second year students receive an Advanced Diploma, and a B.Voc Degree is given post completion of the third year. In the higher levels of skilling, the vocational skill components increase progressively and there is corresponding decrease in generic skill components. Credits are calculated as per the UGC guidelines. For the theory component, one credit equals 15 hours of classroom teaching and one credit of OJT or practical training equals 30 hours. The qualifications are available, but in order to adopt them for B.Voc programme, a curriculum is developed for those qualifications that incorporates the general education as well as vocational theory and practical or OJT component.

A pilot with the Himachal Pradesh government has been initiated wherein instead of picking up the qualifications, there is an effort to look at the NOSs because vertical progression in one qualification might end with limited opportunities for the students since it provides just one line of progression. So instead of picking up just single skill NOS, the effort is to broaden the scope by picking up NOSs with multiple skills. This will enable multi-skilling of students and lead to better job opportunities.

In conclusion, Ms. Saxena emphasised the need to re-think short-term training programmes like PMKVY to ensure that it leads to quality, productivity and efficiency of workers along with a critical review of the contribution of SSCs. She reiterated the need to develop specialised QPs for the unorganised sector and higher education segment instead of force-fitting them into the initial framework that was developed for the organised sector.

**Mr. Narendra Mohapatra** began his presentation by underlining that skills knowledge is always a driving force for the economic growth of any country. Countries with higher standards of skilling deal more effectively with challenges and opportunities.

The Electronic SSC came into being in 2009 with a vision to create an ecosystem for empowering individuals through skilling on a large scale, in as little time as possible. The ESSC aims at maintaining high standards to promote a culture of innovation and entrepreneurship for generating wealth, employment and livelihood for citizens. This is done through fundamental tools of standard QPs and NOSs. They used NOSs to develop curriculum and assessment tools for certification.

The development of NOS is a cyclical process through research, analysis, and identification of occupational details. These NOSs are identified and developed as per industry requirements, validated and finally approved – all, in consultation with industry. There are huge opportunities in this sector as they currently employ five million workers and

hope to employ nine million in the next four to five years. In India, hardly any manufacturing happens in the electronic sector till date. The industry still imports 70 percent of electronics for assembling. The need is to increase manufacturing of parts for electronics sector within the country.

**Mr. Raj Gilda** shared the evolution of his organisation since 2004-2005 with the focus on integrating vocational education as part of secondary and higher secondary education.

The Introduction to Basic Technology (IBT) course pioneered by Vigyan Ashram is being offered in Maharashtra for more than 30 years now. This IBT course, now known as Multi-Skill course, is a multi-sectoral course covering a range of modules including electrical wiring, plumbing, construction, healthcare, cooking, food processing and switching. The current skilling system is not multi-sectoral because there is a single SSC for each sector. There is a need to develop multi-sectoral SSCs.

The curriculum for multi-skilling consists of technical skills including welding, carpentry, plumbing as well as skills such as healthcare, food processing and agriculture. Lend a Hand Foundation studied both the Agriculture SSC and the Automotive SSC in detail. They looked at the existing job roles and NOSs under each sector and mapped the curriculum of multi-skilling courses with these NOSs. They identified seven to eight NOSs within the agriculture SSC that more or less covered the curriculum. They also looked at the approved job roles of the automobile SSC and identified a similar number of NOSs that can cover the technical part of these job roles. Thus, for the first time in India, components from the automotive SSC and agriculture SSC were clubbed to create a curriculum for a multi-skills course. This course, called Multi-skilled Assistant Technician, got NSQF certification aligned with Level 2. It is basically the new avatar of IBT course.

The job role of Multi-skilled Assistant Technician is the only one that has emerged from mainstream education board (CBSE) to be

recognised under NSQF system. Otherwise, it is driven by the SSCs.

**Dr. Sangeeta Pikale** began her presentation by pointing out that there are 300 laws and Acts that govern the healthcare sector. Small nursing homes have as many as 74 compliances to ensure. So, while staffing, they look for people who can multitask.

One limitation in skilling in the healthcare sector is language. According to her, the language of communication is English for almost everything in the healthcare sector. The staff has to learn the language and also the medical terminology (which has words from Latin and Greek) in order to join this industry because the leader of the team is either a doctor or the hospital owner. The healthcare worker also needs to be able to understand what the doctor wrote, which is often difficult to read and interpret because of their handwriting, and also be able to translate and explain it to the patients.

For lower levels of NSQF corresponding to job roles of ward boys and assistants, there is no responsibility assigned to the person doing the job as per the NSQF level specification. There

is no job role in healthcare that can actually say no responsibility, because everything involves dealing with patients. Even the tasks of shifting unconscious patients from the stretcher to the bed has to be done properly, as per certain protocols, to avoid any damage to the patient. If not done properly, the responsibility is supposed to be of the doctor-in-charge.

Some of the trainers are not accredited, but they do their best providing OJT to students who eventually perform their jobs with care. Today, 99 percent of the healthcare workforce is not covered by the various councils (medical, pharmacy, nurses and the physiotherapy councils). The industry has created a workforce based on their needs. Lots of doctors have created their own skilling methodology, which are not NSQF-aligned as of now.

In conclusion, there is a need for multi-skilled workforce in the healthcare sector that can multitask, work with great responsibility and handle the unique requirements of the job. OJT in the SME units in the health sector helps trainees learn these multiple skills.

## Plenary Session 2 B.Voc Courses at Universities and Colleges – The Learning So Far

In 2015, the UGC began to provide grants to the tune of Rs 1.85 crore to colleges across the country to start Bachelor of Vocational Education (B.Voc) courses, to skill students, largely in the service sector. After almost three years, it is time to evaluate the efficacy and success of the models adopted by the colleges. It is also important to understand the basis on which these colleges chose the respective sectors to provide training in, procured trainers and students, assured employability and utilised the grant in the most efficient manner. Since these BVoc courses are run within the established

institutes of higher education, it is imperative to understand if this could be an important way going forward in skilling through integrating it with formal education.

**The speakers for the session were Prof SS Mantha, former Chairperson of AICTE; Mr. Gopu Kumar, Joint Secretary, UGC, Pune; Mr. Agnelo Menezes from St Xavier's College; Mr. Swapnil Kamble from Fergusson College; and Prof Neela Dabir, Dean, TISS-SVE. The session was chaired by Dr. Leena Wadia, Senior Research Fellow at Observer Research Foundation.**





Plenary Session 2: B.Voc Courses at Universities and Colleges – The Learning So Far

**Prof Mantha** provided a historical perspective on the B.Voc courses. The skills framework was created way back in 2011-12 and the School of Vocational Education at TISS was funded by AICTE. There is a need to understand the spirit with which the skill framework was created. About seven to eight years ago there were two government bodies – the Ministry of Labour and Ministry of Education looking into skill/vocational education. Both had their own frameworks, both were rationalised with a single name, which we see today as the NSQF. Fundamentally, skills training is required for two groups of people in this country – those who drop out of schools and colleges or those who had never gone to school, and those who are in colleges and who will probably graduate to get a degree or diploma. The gross enrollment ratio of about 25 percent are people who are in colleges and will go on to get a degree or diploma. The remaining 75 percent are outside the higher education system, those who dropped out of colleges or probably have never been to a school.

The skill part that is required for both the groups is similar, but their education part is different. The skill training must be aligned to industry needs and hence, employment. But skill modules are terminal in nature and therefore do not attract the people to take them up as a

profession. Terminal in nature means that if a person is trained to be a vendor, she/he remains vendor for the rest of her/his life. The spirit of NSQF is to change this, to allow for vertical mobility, through Diplomas, Advanced Diplomas and Degrees, but this has not really manifested as yet.

Within the universities, there was a 'cafeteria' programme of UGC and technically it is there even today. This programme provides students with a menu of different modules from different sectors. Along with the graduation programme, she/he can pick up two to three courses from the menu. This provision was for skilling students for better employability. The initiative never really succeeded, because students were picking up disparate modules just because they liked them. Their choice of courses did not aid employment or provide them with employable skills.

B.Voc started as a programme in 2013, with first approval given in 2012. It had a methodology where the skills were to be institutionalised in the current education system. The NSQF defined 10 Levels and the B.Voc course corresponds to Level 7, which is the graduation degree; level 6 is Advanced Diploma and level 5 is equal to the Diploma. At every certificate level, skills acquired correspond to a job role to achieve a seamless

fit within the industry at that certification level. A student can exit at level 4 (equivalent to Class 12) and can get a job because he has already received approximately 1,000 hours of skills training cumulatively from Level 1 onwards. The intention was that a student could exit at Level 4, be employed for a while, then come back to join Level 5, collect credits (since skilling sector is credit-based) and gradually move up to level 7. The colleges/institutions, which received the UGC grant to initiate B.Voc programmes, did not succeed. When the students completed their B.Voc education, it was just another degree and not an extension to BSc, BCom, etc. This is because the spirit was lost somewhere in implementation. Prof Mantha concluded with the thought that despite these hurdles, there is a lot of potential available for implementation of B.Voc programmes in this country.

**Mr Gopu Kumar** began his presentation with a look at the progress UGC has made through the B.Voc course in last three years. It was initially launched in the Eighth Five-year Plan as part of the vocational education programmes. Three kinds of courses were proposed: i) vocationalisation programmes; ii) career-oriented programmes; and iii) add-on courses. Then, during the Twelfth Five-year Plan, UGC announced the scheme of providing vocational education under NSQF with multiple entry and exit points.

Mr. Gopu Kumar enunciated the three main schemes under NSQF: i) Community Colleges initiated in 2013-2014; ii) B.Voc programmes started in 2014-2015; and iii) Kaushal Kendras in 2015-2016. For B.Voc programmes, each institution is eligible for a grant of Rs 1.7 crores for three years. If they are interested in offering any additional courses, then UGC would provide an additional Rs 25 lakhs per course for a maximum of four courses.

Mr. Kumar stated that 115 institutions have received grants for offering B.Voc programmes till date covering 225 courses and recently, in 2018, when proposals were invited for the second time, nearly 331 colleges were

approved and the number of courses being offered has gone up to 760. The target set by the ministry for the UGC for students to be trained under its programmes was around 1.5 lakh, whereas in 2018-2019 the actual intake was 1,12,050. The intake in existing institutions is 34,500 and the approved intake for the year 2018-2019 was 77,550. Intake in B.Voc courses alone was 19,050 students. The financial assistance in the form of grants allocated so far is Rs 241.06 crore and projected estimates to cover newly sanctioned courses is going to be Rs. 480 crores.

Some concerns raised by the institutions included lack of awareness among students and parents, and unavailability of qualified teachers for the B.Voc programme. With regards to jobs, the minimum eligibility criteria is still given as B.Sc and B.A, whereas B.Voc is missing from the list. For a medical lab technician, even now, the criteria is stated as B.Sc in lab technology whereas it should have included B.Voc in medical lab technology. So, such lack of equality needs to be addressed among employers for these courses to gain more popularity.

Another major concern is the degree of participation of SSCs. This should be higher because they play a major role in formulating the syllabus and assessing skills. In several cases, SSCs do not have the curriculum and the colleges and institutions end up formulating the curriculum with the help of industries. The assessment that is to be done by the SSC is done by the skill assessment board of the institution itself because there is a provision in the guidelines that wherever the SSC is not able to assist in assessing students for the skill component, institutions can have their own skill assessment board with the membership as prescribed in the guidelines.

**Prof Agnelo Menezes** spoke on behalf of St. Xavier's College Mumbai, which is among the first colleges in the country to start the B.Voc programme on Software Development for Science, Arts and Commerce students. Despite this, St. Xavier's College is in the process of

phasing out these courses. Prof Agnelo touched on the reasons for this – lack of funds, difficulty in sustaining faculty and students, inconvenient timing of the courses for working students and poor results of students.

They started with five students but it picked up in the second year to become 50 students. He wondered if students were applying merely because of Xavier's brand image. It gave students an entry point into the college because the percentages of students entering the B.Voc courses were on the lower side. But till last year, intake has always been a large number and they had extremely enthusiastic students. Students were interested for the sake of the job they would get but when alumni were invited back to share their experience with the current students, their reports were very dismal. Students got disheartened and some students began to drop out.

He emphasised on the need for three 'F's' – Finance, Faculty and Final output. St Xavier's College was sanctioned a grant of Rs. 1.7 crore for initiating a B.Voc programme. He shared that of the Rs. 1.7 crore, till date, they have received only Rs. 65 lakh, of which, Rs. 50 lakh was for capital expenditure that was immediately spent. Since the reimbursement for the recurring expenditure did not happen, offering an attractive salary package to the faculty got difficult. The college quickly started failing financially. The attrition rate was high despite the salary package, because faculty were also not happy with the way the courses were run. These had to be run in the middle of the day since they had a very tight programme. This discouraged the faculty members from continuing at Xavier's because it consumed their whole day.

Xavier's, as an autonomous college was able to adopt the B.Voc course into the autonomy framework. This kept the syllabus with stringent criteria for examinations and so on. Students were not able to match up to that expectation, which is where the third 'F' – final output – comes in. The college found that the

final results were not up to the mark. Although efforts were being put in by students, there were the factors of timetable, faculty, and lack of finance that forced them into the corner and the college had to take the call to withdraw from the B.Voc courses.

In contrast, **Mr Swapnil Kamble** from Fergusson College painted a completely opposite picture. Fergusson College started B.Voc courses in 2014 with inadequate infrastructure but skilled teaching staff. Before taking up the responsibility of coordinating the B.Voc course, Mr Kamble studied the B.Voc structure offered at School of Vocational Education at TISS. He also confirmed a similar experience as that of St. Xavier's College in receiving only 50 percent of UGC grants, while the second instalment has not yet been received. However, Fergusson college became autonomous in the interim, due to which, they could increase the fee from Rs.15,000 earlier to Rs. 45,000 per year. Finances could therefore be managed and they did not need to compromise on recruiting skilled trainers from industry.

He elaborated further on the structure and growth of the college's B.Voc programmes in Media Studies and Journalism. They have 50 students per batch for the 2014-2017 and 2015-2018 batches. More than 180 students of two batches have graduated till now. Nearly 75 percent students are placed in some employment, but most are self-employed as the industry is highly unorganised. The grants from the UGC were used to set up the multipurpose labs, audio-visual facility, newsroom, computer labs, audio-visual production equipment, software units, photography studio, lights, digital cameras, channel equipment, audio-visual classroom, 2D-3D labs, etc.

The response for B.Voc courses have been excellent post the first batch, after which, they hired better staff and created better syllabus and infrastructure. The structure of B.Voc in Photography was such that a student can produce a short film after completion of three years since they get trained in photography,

video editing, and audio-visual production. They tried to cover two QP sets per year and provide broad-based training incorporating the NOS, QPs, and NSQF.

He shared that in the coming future, they have planned for an industry-based studio, which will be specially designed for sound engineering with state-of-art infrastructure. They are also planning to launch Masters in Vocational Courses and introduce a research culture. The syllabus is planned to be delivered in a semester pattern and it has skill components where they train for Level 4 to Level 7 of the NSQF.

He reiterated that there is a lack of administrative guidelines from the UGC. Since Pune university was not sure about guidelines for B.Voc courses, the first batch did not receive their degree certificate from Pune university. However, they are all employed. Although there are multiple exit points in a B.Voc course, they are also looking to provide multiple entry points so that students who relocate do not lose out on opportunities.

The last speaker, **Prof. Neela Dabir** of TISS shared the experience of the evolution of B.Voc programme at TISS-SVE. A grant of Rs. 10 crore was given to TISS by the AICTE to incubate the National Vocational University in March 2012. The grant MoU stated that they have to start offering courses in a work-integrated training mode using Hubs and Industry Partners. TISS-SVE has been extremely successful in demonstrating such a model for offering vocational education through a school and is now ready to host a Vocational university, which is pending government decision.

In the beginning, TISS-SVE was expected to run the programmes in the community college model. It was difficult to implement it at that time because the equivalence process for SSC and HSC certification was not in place. Therefore, TISS began with a batch of Grade 8-qualified students and by that time, UGC had also announced the B.Voc schemes. Therefore, it was decided that TISS would work in the higher

education space and not get into the community college model.

Prof. Dabir briefly summarised the model of providing vocational education at TISS, which is described in detail in a **case study prepared by ORF<sup>1</sup> and the five-year report by TISS.<sup>2</sup>** Vertical Anchors (VAs) are the domain experts and they develop courses based on the skill-gap analysis and industry demand. The Vertical Anchors continuously develop new courses in consultation with industry partners. A Centre of Excellence (CoE), much like an SSC or a Board of Studies, is set up at TISS. The members of the CoE are drawn from industry and academia and have more than 20 years' experience in their respective verticals/sectors. They vet the syllabus and content designed by the VAs. The Hub partners are identified by the VAs and TISS-SVE signs agreements with them after conducting due diligence. The Skill Knowledge Providers (SKP), where the students can go for work integration, are supposed to be identified by the hub partners. The students are placed with the SKPs for skill training. They spend 60 percent of their time on OJT and 40 percent on theory. TISS-SVE does the monitoring, examination and certification.

The programmes that are offered are B.Voc, PG Diploma, and Certificate courses. Multiple entry-exit is possible as each year has stand-alone certification in the form of Diploma, Advanced Diploma and the Degree. The trainees also get stipend during the course from their industry placements. The model is based on the German TVET model, modified to suit Indian conditions. Currently, there are 19 different verticals in which courses are being offered. TISS-SVE has 234 Hubs and more than 800 SKPs across India. The institute has developed 30 B.Voc courses and seven courses of PG Diploma. The current B.Voc student strength is 8,000 and of the 500 students who have completed B.Voc, 98 percent got jobs and two percent are pursuing higher education. In all, in the last five years, SVE has trained 20,000 trainees at 93 locations spread across 22 states.

Prof. Dabir concluded with the lessons learned during the journey. The nature and functions of vocational school should be different from a conventional school in a university set-up. TISS-SVE is also a NEEM agent and the students are getting placements for OJT under the NEEM scheme. The course curriculum has to be dynamic and not rigid. The most significant

feature of the model is the financial sustainability. The project grant from AICTE was exhausted in March 2017. It is important to note that from April 2017, the TISS-SVE has been fully self-sufficient in terms of finances, and does not need external grants for its routine operations.

## Plenary Session 3 Skills Universities – The Emerging Model

With renewed interest in skills education and training, various state governments, private players and even the central government have supported the idea of setting up standalone skills universities that will focus on imparting work-integrated training and offer skills-specific courses. While some are still struggling with teething problems, others have been able to build relatively successful models that need evaluation. It is pertinent at this stage to learn from their trials, challenges, failures and successes as samples for the upcoming skills universities.

**The speakers for the session were Prof. Raj Nehru of Shri Vishwakarma Skill University, Haryana; Ms. Neeti Sharma of TeamLease Services and TeamLease Skills University, Vadodara; and Mr. Abhinav Madan, MD, Skill Development Vertical, Centurion University. The session was chaired by Mr. Aseem Gupta, Principal Secretary, Department of Skill Development and Entrepreneurship, Government of Maharashtra.**

**Mr. Aseem Gupta** began the session by posing a few questions: i) Why do we need skill universities? ii) Why can't the formal universities give us what we expect from skill universities? iii) How are skill universities going to be different from the regular universities?

He reiterated the suggestion made by Mr.

Rajesh Aggarwal in the inaugural session that the existing formal education system should become more skill-oriented. He expressed the fear that any institution dedicated to skilling will never measure up to the social status of pure academia and therefore, it will always be perceived as something lesser. So, will the skill universities be able to serve their purpose?

**Prof. Raj Nehru** shared his experience of establishing the Vishwakarma Skills University in Haryana. The major challenge that industry faces is the crisis of talent. There is no need of separate skill universities as every university should be a skill university, he emphasised. Society views skill education as the lowest rung of the education ladder, hence no respect or dignity is associated with the word 'skill'. The biggest challenge with skill-based programmes is that even though they offer training in some specific skill sets, the student faces a dead-end after certification. There is no clarity on vertical progression. There is also the issue of parity. If a student learns something in skilling, whom should they compare themselves with in mainstream education? Another challenge associated with skill education is that it is not aspirational.

Today skills universities are trying to create a model for themselves by focusing on job roles and not just on theory. Unlike



Plenary Session 3: Skills Universities – The Emerging Model

regular universities, skill universities should operate differently. He described that while establishing the Vishwakarma Skill University, a survey was conducted in Haryana with almost 20,000 youngsters from ITIs, students of Grade 10, diploma, engineering and postgraduates as well. The responses demonstrated that 60 percent had an aspiration for becoming a graduate, almost 75 percent of the respondents voiced the need to have OJT into the curriculum and 82 percent stated that they wanted to earn while learning. Interestingly, they also found that as many as 60 percent of the agricultural students say that they don't want to pursue a career in agriculture, 72 percent of respondents said they are ready to relocate and 97 percent respondents said they have one or the other skill. In fact, everyone had a minimum of two skills, but did not have a certification for the same.

After analysing the results, they approached like-minded industries and created a team of experts from outside. They studied the existing job roles and the changes that may emerge in the next two to five years. They recognised that there are approximately 10 to 12 percent of jobs, which may not exist over the following five years. They also recognised that 30 to 32 percent of jobs will go through a

significant change and that 58 percent of the jobs will not change. So they mapped those 58 percent of jobs, which are critical and not getting the skill sets from the open market. They created a curriculum for two areas – one was manufacturing and other was mechatronics. They decided to develop these two programmes as three-year graduate programmes. The curriculum was aligned with the NSQF, bifurcated into the credit system where they allocated 30 credits in one semester, 12 for the classroom, six for workshop and 12 for OJT.

Prof. Nehru concluded with stating that their efforts are focusing on addressing the whole spectrum of vocational education by bringing progression, respectability, and acceptance by working with the government.

**Ms. Neeti Sharma** focussed on understanding the difference between skills universities and regular universities. The concern of employability cannot be addressed unless the skill curriculum is part of day-to-day routine of current universities. It is critical that government agencies disseminate awareness to potential trainees and their parents, that vocational education diplomas and degrees are employment generating. Government also needs to ensure that people trained in vocations

are declared eligible for government jobs.

As of now, parents clearly want their children to be in mainstream/regular education and not vocational education. She suggested offering vocational courses in regular universities as a parallel option till vocational education is accepted in the society. With adequate support from industry in terms of student placements, the success of vocational education needs to be demonstrated.

In her concluding remarks, she urged the industry to accept the skills certificates for providing employment. Since several agencies are offering various kinds of vocational skilling, the certification needs to be authenticated and standardised to ensure greater acceptance by employers. Everyone concerned have to push the industry to accept certified workers.

Ms. Sharma concluded that in the present scenario, the social stigma attached to skilling could be a huge deterrent for students to opt for vocational courses, but this may eventually fade away over the years with better salaries and recognition of skills.

**Mr. Abhinav Madan** shared the origin of Centurion University as a private engineering college. The founders of the university felt very strongly that their presence in rural/tribal area must offer some relevant programme to the local community. Vocational education was the obvious choice. In the engineering college, they had a mechanical workshop. So, the first vocational course was in Mechanics, which was offered for the youth for free. Many students got jobs in Balanagir Industrial area of Odisha. The state is also known for tourism in the country. So, they partnered with a tour company for a six-month course. The course was for school dropouts and did not charge any fee. Inspired by this experience, they established an ITI as the next step.

In 2010, Centurion became a university. As soon as they received university status, Centurion affiliated five ITIs. Industries had demonstrated that they considered youth who are Grade 10 qualified as unskilled, ITI

qualified students as semi-skilled and those with a diploma and above as skilled. Therefore, they introduced Diploma courses that were in demand in the industry.

In 2010, they also became NSDC partners in order to skill the school dropouts. They focussed on higher skills and integrating skills in higher education, but a large part of focus was on bottom of the system, where the young people from Assam, Chattisgarh, eastern UP are working.

Mr. Madan highlighted that there is no clarity on career progression and that is where the universities need to play a role. That, he said was one of the key reasons for the failure of B.Voc programmes in colleges and community colleges. In the rural areas, the job is not only to build infrastructure, educate and give certifications, but also to equip young people with information about the availability of jobs in various industries.

In his concluding remarks, he said that to build a successful model, we need to study the area, provide good infrastructure and control quality of training. The next step has to be about learning – distance learning happens in the classrooms, applied learning happens in the lab so that students can learn in the classrooms and apply their learning in the lab. Students need to be offered hands-on skills, which will help them get jobs. Skill university builds pathways for career progression after short-term training and it need not have all the features of a traditional university like a large campus. However, what matters most is industry alignment and training infrastructure to ensure work-integrated learning.

## Plenary Session 4 Understanding International Best Practices for India

There are a few countries that have been able to successfully implement a vocational education and training system that are reaping results. Although India has borrowed a few aspects from international models, their viability in the Indian context is still questionable. It is therefore important to discuss global models in the Indian context and chalk out a most feasible way that can be adopted in India. Some countries that are known for successful experiments are South Korea, Germany, Singapore, China and Switzerland.

**This session was chaired by Prof Neela Dabir of TISS. The speakers were Dr. Daniel Neff from German Office for International Cooperation in Vocational Education and Training; Dr. Young-Saing Kim, KRIVET, South Korea; Ms Annie Gomez and Mr Ankur Gupta from Temasek Polytechnic, Singapore.**

**Dr. Daniel Neff** shared the details of the German Vocational Educational model and its elements in higher education. The German TVET system has developed over a long period of time, as far back as 700 years. The general education systems are very hierarchical in Germany. Everyone goes to primary school up to Grade 4, and then teachers recommend them to one of the three secondary schools – Hauptschule, Realschule and Gymnasium. Only if students have gone up to Grade 13 (Gymnasium), can they move up into universities. There are normal universities, technical college/polytechnic college and the new Dual colleges.

The German model is truly demand-driven because the industries convey the need for certain skill sets and any new job descriptions to the government, which would initiate the process of developing courses for the same. The institutions in the vocational system develop the curriculum that is completely aligned to industry

needs. The government ensures that industry need and curriculum go hand in hand. The government makes a legal framework so the role of the schools, chambers (associations of companies, which provide training and conduct exams) and industries are all regulated in a legal framework and everyone can clearly know what their specific responsibilities are. At the same time, the government not only finances vocational schools, but also finances the research on vocational education. The research part is important as the system needs to evolve in tandem with industry requirements and must be monitored carefully. These kinds of research spaces are very essential for a system to be dynamic.

The dual TVET offers two types of certificates and are much closer to the industrial norms than higher education outcomes. The dual college system was developed and implemented because the industries demanded these kinds of institutes. There is also high demand for mobility across different life cycles, trying to upskill or jump from one institution to other to upgrade skills. Although it is said that students are not stuck to the VET system and can always change their careers, the reality sometimes is different. However, there is an understanding that there is always the possibility of upward mobility, of doing a Masters' degree.

**Dr. Young-Saing Kim** shared the background of TVET and its evolution in Korea. Education in Korea faced massive challenges after the war. One textbook was shared by three students. Korea tried to replicate the German model, but failed five times. Then they developed their own system. The education in Korea started with one textbook shared by three people after the war. The purpose of vocational education is to make school meaningful



Plenary Session 4: Understanding International Best Practices for India

throughout the life. There is a need to develop the intelligence and skills of students, which will result in better learning by employing techniques such as 'learning by doing' and not by mere book learning. Education through occupational experience stimulates intellectual development. In 1960, Korea was a predominantly an agricultural society and now only two percent of the population is engaged in agriculture. The income rose from Korean Dollars 100 per capita in 1950 to Korean Dollars 32,000 per capita today. The credit goes to systematic skill training of the population for producing goods that have a demand in the global market. They supplied skilled workers for the export-oriented industries beginning from wigs in 1959 to textiles in 1970, and automobiles in 1980. They shifted their focus from light to heavy chemicals and knowledge-intensive industry and electronics. They also ensured completion of projects in a timely manner.

Korea has mandatory workplace vocational training for firms meeting certain conditions. They believe in training their employees and pay nearly one percent of training tax. This is a big amount of money and when they provide good training, the government gives the money back. Their experience has showed that vocational education is capital intensive. It is four

times more expensive as compared to general education.

The purpose of vocational education is to make school meaningful throughout the school life of students. It should create better educated and more skilled workers, with the ability to earn more, and to meet the industry needs. At the same time, it should have an indirect and positive effect on the aims and methods of general education. Vocational education at the secondary and tertiary levels can ease the transition from school to work, while supplying employers with skilled workers. Dual vocational education, which combines structured on-the-job training with classroom training, leads to certified skills that are relevant to employers and profitable in the labour market. Countries with strong vocational training programmes are in a better position to avoid escalation of youth unemployment, even in difficult times.

From the 1960s to 2020s, Koreans transformed TVET system for growth. They established effective vocational education system by promoting vocational high schools and vocational colleges. The vocational high school, which started at Grade 9, was the foundation of vocational education system. They transformed the TVET system to meet the industry demands every 10 years to prevent it

from getting outdated.

Korea's string of early failures has provided them a chance to evolve a system that is almost perfect. Their apprenticeship system is supported by the Government. They now have multiple types of apprenticeships within a quality-integrated system. The first type is the industry-led type where industries have in-house training with enough curriculum, so that the students are given complete training in practical as well as other training using the facilities of the industrial complex and the Sector Council. Another is the joint-practice type where if the company does not have enough good trainers, it shares this responsibility with schools and other educational institutions. The third is the stronghold-school type where the school receives all infrastructure from government. The last is the single-school type that are the small schools with specific skill oriented training.

Dr. Kim also talked at length about the integrated model of TVET and higher education where Uni-Tech is a new concept of educational system, integrating secondary and tertiary VET. This concept aims to nurture a field-oriented workforce, by linking high school, college and industry. The trainees of Uni-tech can simultaneously acquire both theoretical knowledge and practical skills through an integrated curriculum developed by schools and industry. In the Uni-tech system, the selection of students for high school entrance is also linked to the college entrance. In other words, the selected students for the Uni-Tech will continuously study from high school until college. The technical VET in Korea has widely been credited for effectively supporting the rapid growth of the economy in the last 40 years and it was recognised by UNEVOC in 2013. In his concluding statement, he listed some critical factors for successful TVET development in Korea. These include:

- Centralised policy leadership and efficient governance building
- Industry's participation and contributions
- Communication and coordination among

stakeholders

- Flexible and adaptive environmental change
- Endless trial and error with reflections.
- Aligning TVET to the National development plan

**Mr. Ankur Gupta and Ms Annie Gomez** shared the next presentation. Mr. Gupta began by describing the components of a successful skill ecosystem – industry needs, demographic shifts, youth aspirations, technological change and socio-economic trends. The needs and aspirations of the youth population has to be balanced with the needs of the economy, society, and national development goals and this is a very complex goal. Singapore is a digital service hub, and financial marketing hub and is really at the forefront in both these areas, but skill development for Singapore has been challenging.

The number of schools are shrinking due to negative demographic trends and even the intake in the polytechnic is shrinking. However, intake for part-time courses is increasing rapidly, so Singapore is shifting from training in schools to training working adults. He shared that Temasek Polytechnic is part of an education initiative of the Government of Singapore. Students who are not able to do well in secondary schools take up vocational and trade courses in specialised schools and they can progress to polytechnic, junior college and onwards towards universities. This provides them with a pathway so that they are able to perform and do well and meet various criteria. Singapore has three ITE's (Institute of Technical Education) and five Polytechnics, which is in proportion of the population.

In his concluding remarks, Mr Gupta talked about the lessons Singapore learnt, which is not about skilling or re-skilling but was about higher skilling. That there should be a continual review of skills maps, career pathways and training curriculum and that there has to be close coordination between ministries, educational institutions, industry and the public.

Ms. Gomez continued the presentation

by sharing that all the courses held in Temasek Polytechnic are market-driven. The courses in legal studies started primarily because there was a demand for well-trained legal support staff. They planned the entire curriculum, removed a lot of law subjects and put in a lot of management and IT-related subjects. Teaching style is such that it facilitates problem-based learning to teach content. They don't teach, but make content available to trainees through online resources. Trainees are asked to work in groups on real life problems. They are given some guidelines to follow. They meet periodically for consultations. This pedagogy takes learning outside the classrooms and is based on the trainee's own pace of learning. When they complete a task, they come and

meet. Attendance is marked at the end of every day.

There are some compulsory sessions where students carry on their discussion. Earlier, the students used to come from teacher-centered background. But here they were responsible for their own learning. This way they learn a lot of skills such as time management, independence, problem resolving etc. They train students in hotel management, fine dining system, aircraft maintenance, veterinary science and gaming.

In her concluding remarks, she said that in their polytechnic, they have very little restriction on the type of pedagogy, so they strive to make learning problem-based and experiential, which is more relevant.

## Plenary Session 5 Analysing Employability in the Skills Ecosystem

Various stakeholders are experimenting with skills education and training by way of short-term certificate courses, diplomas, and degrees, but there is an urgent need to evaluate the employment prospects that these offer. Are these courses targeting relevant job profiles or generic ones? Is there a demand for these job profiles in the industry? Are industries interacting with these colleges? These are a few questions that need to be answered by all the major stakeholders. This session showcased the opinions and viewpoints of members of industry as well as researchers who are tracking the employment prospects of skills education projects in the country.

**The session was chaired by Mr. Bhaskar Natarajan, Head, Programme Execution, Tata Strive. He mentioned their experience in training youth in the age group of 18 to 30 years with a focus on employability. The speakers for this session were Ms. Sabina Dewan from Just Jobs Network, Dr. Srirang Bichu from Apex Kidney Foundation, Mr. Jatinder Singh of**

**PHD Chamber of Commerce, Mr. Ritesh Singh from Taj Hotels and Mr. Saurabh Palsule from National Career Services.**

**Ms. Sabina Dewan** introduced Just Jobs Network as an applied research organisation that focuses on creating more and better jobs, and suggest ways of skilling the workforce to match the needs of the 21st-century economy. They provide information to the private sector and grassroots organisations on aspects such as market demand and also on research questions related to skilling and employability. She discussed the results of a global survey in India that found three-fourths of all Indians believed that the children will grow up to be better off financially than their parents. The fundamental point is the need to meet this optimism with pathways to more and better jobs for youth. The only way to create these pathways is through appropriate education and skills that make young people employable.

In the present system, one out of 10 persons is currently unemployed and the



Plenary Session 5: Analysing Employability in the Skills Ecosystem

unemployment rate among youth is rising. The 92 percent employed in the informal sector have very low-productivity jobs, which also means low wages along with low-quality jobs. The youth population in India, between the ages of 10 to 29 years, is 350 million. That is higher than any industrialised country in the world. The number of youth who are not in education and not in employment rose from about 27 percent in 2012 to 30 percent in 2015. Why is it that the current skilling system is not able to provide better employment for India's young people? If we look at PMKVY, only 10 out of the 34 sectors was studied and yet more than 30 percent were placed in these sectors. This shows that the skilling system is not working properly. It is very supply-driven rather than demand-driven. There is a need for more industry participation in the apprenticeship programme and industry must also be willing to pay a premium for the higher skilled group. The way our SSCs are operating is ineffectual and industry is not involved in it.

The second challenge she mentioned is the mismatch between where the labour market demand is and where young people are going through organisational skill training. One of the reasons the mismatch exists is because of the flawed way we assess demand. The

organisations that are doing skills training do not really know where the jobs exist. We don't do enough demand assessment and when we do, we do them top-down. For instance, the skill gap reports created by the NSDC was a top-down exercise where they identified industries and sectors with the number of jobs that we can anticipate will exist. But the reality is that India has a highly segmented population with a highly segmented demand. The young people of the country are divided on the basis of caste, religion and educational background. Not every youth in this country is going to get a job in the sectors that we think the demand exists in.

She concluded by saying that there is a need to talk about education and skills as a continuum and not separately.

**Mr. Ritesh Singh** of Taj Hotels, Resorts and Palaces spoke of the role his team in Organization Effectiveness and Development played in ensuring that organisation process is working well, and how they can make them better. Taj has been a classic Indian brand for more than 150 years now and they have been at the top of their game. It is the people in the frontline who actually create the connect with the guests. The strategy that they looked at was the need to strengthen their frontline and many

interventions and incentives were taken around inverting the pyramid.

Taj began their journey with TISS-SVE by putting in place a programme they called the Golden Threshold programme. It is a three-year programme in which students spend the first 18 months on food and beverage service, which is a very critical part of the hotel industry, then move into the front office and post that into house-keeping. Taj Hotels became a Skill Knowledge Provider for TISS-SVE where for five days a week students worked in their hotels getting their OJT and for one day TISS-SVE provided classroom training. Taj partnered with TISS-SVE to prepare the entire curriculum and design. The OJT and classroom training is so tightly mixed today that the hotels are the beneficiaries and are gradually becoming dependent on these trainees.

Currently, the Taj Group has 15 hotels participating in this programme and they have seen positive response coming from all stakeholders in the first two years itself. They are confident that when the batch graduates at the end of the third year, it will not just be Taj Hotels, but the entire travel and tourism and hotel industry that will benefit.

**Dr. Shrirang Bichu** talked about how Apex Kidney Care started training dialysis technicians in 2010. He gave an overview of the dialysis industry: how much it was in demand; how expensive it was and how carefully dialysis must be done; how there was not enough reliable data on patients to project for the future needs in this space; and that one of the main problems is a shortage of skilled dialysis technicians. State funding is very poor and insurance penetration is low, so affordability of dialysis is also an important factor.

Technicians must know their job really well, as mistakes can cause discomfort to the patients and also be dangerous for them. Getting well-trained students and making them job-capable is therefore very important. It is not just taking care of the patient, but also taking care of the machines as well as other critical inputs such as extremely pure water. Day-to-day

maintenance is required and this is generally the responsibility of the dialysis technicians. The sector is staff intensive given that one dialysis machine is used for three dialysis sessions per day (each four-hour session) and the patients come thrice-a-week for the rest of their lives. He pointed out that the need for technicians is huge: there are approximately 30,000 dialysis technicians in India today and another 30,000 will be needed in the next three to five years, so the employability of the dialysis technician is completely demand-driven. Another important fact is that there is a shortage of trainers.

Employability in this sector depends on the incidence of patients requiring dialysis treatment and on whether sufficient dialysis services are available in the region that can cater to the local population. Dr. Bichu said that their trainees come from very poor homes and don't have money for fees, transportation, housing etc. The course is extremely difficult involving long hours of work, but they are fortunate that the dropout rate is extremely small. They have trained approximately 500 students so far and every student has been employed from the very first day of the completion of the course. Many students are also being subsidised through their foundation and through trusts and charities.

Apex Kidney Care is a Vertical Anchor with TISS-SVE and has developed the syllabus and examination system. They have also opened Hubs to expand their training facilities. One such Hub in Kerala has a very large number of students illustrating the regional differences in the preference for a particular sector by students.

In his concluding remarks, he mentioned that with the salaries in this sector going up due to the presence of international chains and the corporate sector, conditions are favourable for the expansion of their training programme. The major challenge will be to get good students and trainers at the same time.

**Mr. Jatinder Singh** described the work being done by the PHD Chambers of Commerce, which is over 130-years old. Several

of its members are NSDC partners, some are on placement and assessment bodies and many of the members serve on the boards of SSCs and on consultative committees set up by MHRD. He reaffirmed that skill education has to be totally demand-driven and highlighted the need to look for innovative solutions to make skill development more cost-effective. He also highlighted the need to provide skills training for the differently-abled, so that all persons with disability can be mainstreamed through skill development. He also stressed on the need to ensure focus on certain difficult areas such as North-eastern India, tribal regions, rural populations and urban slums.

He discussed the critical success factors of the NSQF Levels 1 to 4. At Level 1, retention of students is crucial. This can be done by giving them employable skills which should be linkable to employment, and many of the PMKVY schemes are aiming to do that. The courses must be delivered with significant industry linkages and be certified by the industry. At Level 2 there is a need to create strong job-oriented vocational options, so that interested students can find jobs at the end of the school (Grade 10). Levels 3 and 4 of vocational education

must have considerable academic rigour in the curriculum.

He also touched on the possibility of machines replacing human workforce. He emphasised that we need to apply analytics to predict skill demands and avoid wastage of resources. In his concluding remarks, he stressed on the need to integrate quality STEM education from the primary level as most of the jobs are going to be tech-based. India can leapfrog into some of these sectors as it did in Telecom.

**Mr. Saurabh Palsule** started his session with a documentary film describing the work being done by National Career Services (NCS) which is a project of the Central government. NCS is essentially a platform that connects youth to jobs in the market that are created under Skill India, Make in India, and Digital India. It has been brought under PMKVY and fills the gap between the training providers as well as the employers in the industry. The NCS has the database that can be assessed by the skill providers, and the training partners can enrol themselves on the portal to get the candidates required from various streams. NCS also has counsellors to help candidates choose between streams.

## Plenary Session 6 Short-term courses in the skills ecosystem – An overview

Various government bodies and higher education institutes are running short-term courses to enhance the skilled workforce. There are several approaches to offering these courses and this session aimed to understand the viability and sustainability of these approaches.

**The speakers for this session were Mr. Tanmay Nayak from National University Student Skill Development Programme (NUSSD) at TISS, Ms. R. Vimla, CEO,**

**Maharashtra State Rural Livelihood Mission, Mr. Yogesh Patil from Maharashtra State Council for Vocational Training, Mr. Nitin Jadhav from Maharashtra State Skill Development Society and Ms. Rupali Awghade from Dr. Babasaheb Ambedkar Research and Training Institute. The session was chaired by Mr. Tanmay Nayak.**

**Ms. R. Vimla** explained the work being done by Maharashtra State Rural Livelihood Mission (MSRLM) for the empowerment of



Plenary Session 6: Short-term courses in the skills ecosystem – An overview

women through SHGs. Maharashtra has three lakh SHGs of women connected to 35 lakh households throughout the state. The mission works on three fronts – i) to enhance the rural productivity, 2) to provide additional livelihood, and 3) to emphasise skilling. Skilling is intended to give women employable skills. The DDUGKY has been introduced for them. The courses which are designed are mainly short-term courses because the target population in the age group 15 to 35 years are often Grade 8 dropouts. Most of the short-term courses are in 15 sectors including hospitality, tourism, short-term computer courses, retail, etc. The training is residential because most women find it difficult to commute. The duration of most courses is of three months and they are offered through 20 institutes (one in each of the 20 districts) throughout the state. However, some courses are for longer term – running for about six months, or even eight to nine months. These duration of the courses are based on the needs of the industry.

Since villages do not have many opportunities, the very first step is the opportunity to get skilled. While the scheme provides the

platform, some students also chart their own path. They have not only been absorbed by the industry, but many of them have opted for formal education. Approximately 25 percent of students have gone in for the higher education at their own expense.

Industry standards are adhered to ensure quality training. Trainees enter NSQF level certified courses so they maintain all the standards that a normal institute maintains. More than 75 percent of trainees have been placed and are working. However, one area in which the trainees struggle is fluency in the English language, and some thought needs to go into how English speaking skills can be developed among adults in the community.

In her concluding statement, she said that the government has to make a policy regarding the different possibilities for imparting skill training. Every department of government comes with a different model so it is not necessary that there is one particular model of success.

**Mr. Yogesh Patil** said that the basic objective of setting up the Maharashtra State Council for Vocational Education and Training

(MSCVT) is to establish industrial training institutions across the state, in every tehsil. Between these and the private industrial training institutes, they are training on average 1,08,000 candidates per year. All training institutes have 80 to 90 training courses which are directly affiliated to National Council of Vocational Training (NCVT). Training institutes are also coming up with add-on courses, both short- and long-term. These courses are designed as per the requirement of the industry.

In 2013 Maharashtra government issued a directive that said that training institutes were not permitted to run without affiliation by the government for the purpose of standardisation of certificate courses, fees structure etc. The MSCVT was established in 2017 as a regulator, for achieving four objectives: 1) to design courses as per requirement of the industry; 2) to sanction Vocational Training Institutes (VTIs) with infrastructure as per norms and standards and uniform certification; 3) to provide uniform and standardised assessment tools; and 4) to monitor VTIs, which is a continuous process. Currently 44 VTIs are functioning all over Maharashtra.

At a recent meet in Hyderabad with potential employers and trainees, employers offered to employ trainees from MSCVT approved institutes. The students who came and interacted also said that their career growth has been phenomenal. They joined at the lower level and attained supervisory level in a short period. This was possible because of dedication in teaching as well as the attitude which was ingrained into the students during the course.

**Mr. Nitin Jadhav** briefed the participants about the Maharashtra State Society for Development of Skills (MSSDS). It was formed in 2013 under the Society's Act with a basic goal to train 45 million youth till 2022. It is a model agency for all skilling agencies in Maharashtra running in parallel with Maharashtra State Council of Vocational Training (MSCVT). MSCVT runs long-term courses and MSSDS runs short-term courses, which are approved by NCVET, SSC, NSDC. An ecosystem is in place

for empanelment of Vocational Education and Training providers, assessment and certification as well as placement of students. This ecosystem is managed online. Till date, 4,400 Vocational Training Providers within Maharashtra have been empanelled, 4,00,000 students have been trained through this ecosystem and 2,00,000 students have been placed. All the courses have NSQF approval for levels 1 to 10.

**Ms. Rupali Awale** spoke about BARTI, an autonomous institute under the social work department of Maharashtra. They have been running skill development programmes since 2012 through various models.

She briefed about special programmes and successful models for skilling people belonging to scheduled caste category. This social strata of the society is really unprivileged. BARTI also has initiated research and training for skill development. She stated that a supply-driven system should be replaced with demand-driven skill development. They tried a model of training and employment, in which, they tie-up with the industry to provide trained manpower. Another model is with MSME cluster which is the group of industries that use common skills. Each cluster represents 150 industries. They use same machinery and common facilities as a participating cluster. Such clusters train people and they employ them. The placement ratio is above 90 percent. The experience has shown that certification and where the students get the training is most crucial part of the skilling process.

BARTI's challenge was to mobilise students from SC strata – first to bring them into the programme and then into the mainstream. They focussed on rural people who really need the job or self-employment to earn a livelihood.

**Mr. Tanmay Nayak** emphasised on the effectiveness of the skilling courses. He cited Prof. Prahlad on skilling 500 million people by 2022 and said that this would remain an unmet target unless the skilling courses had the required rigour. Serious efforts were made at introducing short-term courses with rigour with



a thought that it will be as effective as a long-term programme. However, as the required level of rigour is missing from several organisations offering short-term programmes, they have turned out to be of inferior quality.

The three-day seminar received an overwhelming response from the colleges and Universities engaged in offering B.Voc. courses.

It was an excellent opportunity to understand the nuances of offering skill training in the higher education space in India. The experiences and perspectives of different stakeholders in the skill ecosystem along with the Vocational Education and Training systems in developed countries like Germany, South Korea and Singapore helped in giving a wide exposure to the participants. ■

---

i Leena Chandran Wadia, Antara Sengupta, Sanchayan Bhattacharjee, "Scaling Vocational Education: A Case Study of TISS-SVE", Observer Research Foundation, October, 2018

<https://drive.google.com/file/d/1wr-4WHHsRutsZVVboQ6m83htgsOaBvdv/view>

ii TISS-SVE, 2017 "Incubation of National Vocational University: Project Report March 2012-March 2017", Tata Institute of Social Sciences - School of Vocational Education, May 2017

[https://s3.ap-south-1.amazonaws.com/tiss-public/photogallery/591d8b50ca7dd\\_Final%20Project%20Report%202017-2.pdf](https://s3.ap-south-1.amazonaws.com/tiss-public/photogallery/591d8b50ca7dd_Final%20Project%20Report%202017-2.pdf)

# About the Authors



## Leena Chandran Wadia

Leena Chandran-Wadia is a Senior Fellow at ORF's Mumbai Centre. She has researched and published extensively on policy issues relating to Education, Renewable Energy, Public Health and Sustainable Agriculture.

Leena served on the task force set up by the Karnataka Knowledge Commission in June 2015 to prepare the Karnataka State Education Policy. She also served as Chief Consultant, Technical Secretariat to the Committee on Draft National Education Policy, 2018, chaired by Dr. K. Kasturirangan.

## Antara Sengupta

Antara is a Research Fellow at ORF's Mumbai Centre. She is currently working on projects that involve assessing skills education and training in India.

Her research focuses primarily on Indian higher education, skills education, training in the face of current demographic and economic changes in the country.



## Sanchayan Bhattacharjee

Sanchayan is an Associate Fellow at ORF's Mumbai Centre. He works primarily in education and skill development. His research focuses on exploring the integration between skilling and educating India's young population. He has previously worked as a journalist in the education sector and writes on the use of technology in education.



**NEELA DABIR**

Neela Dabir has nurtured Tata Institute of Social Sciences - School of Vocational Education for more than five years and has successfully implemented the work integrated training model of Vocational Education in the higher education domain.

**Dr. Prerna Sharma**

Dr. Prerna Sharma is currently in the School of Vocational Education at TISS. She has been an educator for several years, prior to which has worked with the United Nations High Commissioner for Refugees, ADAPT (erstwhile the Spastics Society of India) and SHARE, a community based organization working to empower women. Her work and research interests lie in the areas of child rights, disability and inclusion, human rights, concerns and issues of senior citizens as well as vocational education.



**Tejeshree Pardule**

Ms. Tejeshree Pardule is from the social development sector with interest in vocational education. She has worked in Kotak Education Foundation prior to joining SVE for the Seminar.



SCHOOL OF  
VOCATIONAL  
EDUCATION



ORF