

Skill Masterclass Four
Challenges and Opportunities for Indian Skill System
Reforms and Foreign Involvement
TRANSCRIPT

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Prof. Vineeta Sirohi: Welcome to this skills master class on challenges and opportunities for Indian skills system reform and foreign involvement. This is the first in a series of master classes on India's skills sector. The master classes aims to build understanding of Indian skills system across the Australian vocational education and training sector, the VET sector. The master classes will support increased participation by Australian VET providers in India's skills system. I am Professor Vineeta Sirohi, lead researcher working in the area of skill development and vocational education and training also holding the position of chairperson steering committee MPhil PhD program and chairperson equal opportunity cell at the national institute of educational planning and administration. The national institute of educational planning and administration the deemed to be university, established by the erstwhile ministry of human resource development, now ministry of education government of India is a premier organization dealing with capacity building and research in planning and management of education not only in India but also in South Asia. In recognition of the pioneering work done by the organization in the field of educational planning and administration the government of India has empowered it to award its own degrees by way of conferring it the status of deemed to be university in August 2006. Like any central university NIEPA is fully maintained by the government of India. The institute is unique as it is the only institution in the country offering exclusively research programs that is MPhil PhD and postdoctoral on educational planning and administration. NIEPA is very pleased to partner with the Australia India institute for their skills master class series. The Australia India institute is an Australian organization that is dedicated to the Australia India relationship. Their work includes research and policy advice supporting the Australia India education relationship. They receive funding from the Australian government department of education for projects that support this work and we acknowledge and thank the department for the support for this series of skills master classes. This master class will examine challenges and opportunities for central and state government system reform and foreign transnational VET involvement where this is relevant to the Australian VET sector. Let me take the privilege to introduce Dr. Vinita Agarwal who is working as executive member national council for vocational education and training. The newly formed skilled regulator prior to this she was director general national skill development agency and senior economic advisor in the ministry of skill development

and entrepreneurship. She joined Indian economic service in the year 1985. Although she has worked in various fields she has over 20 years of experience in social sector having handled challenging assignments in ministries like labour, school education, human resource development, women and child development and in the ministry of skill development and entrepreneurship. She has a wide range of experience in formulation of legislation undertaking economic analysis and rendering advice for designing and formulating development policies strengthening delivery systems and monitoring and evaluating the public programs. Now let us listen to Dr. Agarwal on the challenges and opportunities for Indian skills in system reform and foreign involvement over to you Dr. Agarwal.

Dr. Vinita Agarwal Thank you. It's a great pleasure for me to be a part of this skills master class today. I will share some insights into the challenges and opportunities in the Indian skill ecosystem and the reforms undertaken by the government particularly the National Council for Vocational Education and Training that is NCVET the national skills regulator.

Scope/ Opportunities of Skilling & VET in India : There is a huge scope and number of opportunities for skilling or vocational education and training in India as we know that India is a young country. 62 percent of India's population is in the working age group of 15 to 59 years and 54 percent of its total population is under 25 years of age. Also it is estimated that about 16 million persons will enter the workforce every year. However as against this requirement only 2.4 percent of the workforce of age 15 to 59 years has received formal vocational or technical training and 8.9 percent of the workforce received training through informal sources. In fact 90 percent of India's workforce is employed in the non-formal sector picking up skills and knowledge in the workplace. So an estimated 679 million that is 90 percent of its existing workforce will need to be skilled, re-skilled and upskilled

Emerging Mega Trends: new Challenges & Opportunities : In addition there are other mega trends globally which pose new challenges as well as throw up opportunities for vocational education and training that is VET in India. One is the aging world population by 2025 one out of 10 people would be over 65 years in the western world while India has a surplus of 47 million people. Then technological advancements are making certain existing occupations redundant while new ones are emerging. Opportunities are also emerging for hyper localization and personalized retail service with integration of automation, virtual reality, and artificial intelligence. Further COVID has accelerated digitalization of work processes and brought to fore the need for digital skills.

Vision for Vocational Education & Training in India : In view of these trends the vision of vocational education and training in India is to strive to achieve quality of skills at par with global standards for making India the skilled capital of the world. Increase productivity of the existing workforce by up skilling, re-skilling and re-aligning. Effectively address any existing and future skill gaps as per the needs of the industry. Make VET a more aspirational, paying and

dignified career choice at par with general or professional education.

Key Challenges in Skill Ecosystem :

However there are a number of challenges in skilling which need to be addressed to achieve the vision of VET in India. First is scale and speed. Since only about 2 percent of the total workforce in India has undergone formal skills training a huge segment remains to be covered. Second is to ensure quality of training as the training outcomes are not of the desired level. Third there is lack of uniform standards and outcomes. There is multiplicity with over 80 different certifying bodies. More than 20 ministries are implementing over 40 schemes for skill development. Then there is geographical inequity. Many areas are still uncovered by skill development initiatives and there is uneven spread over the states. Further there is demand and supply disconnect with skilled unemployed coexisting with shortage of skilled manpower in the industry. Another big challenge is related to the low aspirational value of skill development as it is considered to be a measure of last resort amongst the youth.

Major Reforms to Address Challenges & Achieve Vision Of VET in India :

A number of reforms have been undertaken to meet the challenges and fulfil the vision of skilling in India. These include institutional reforms, measures to increase scale, enhance quality and employability, make skilling aspirational and focus on training in future and emerging skills.

Institutional Reforms :

If we look at the institutional reforms, the National Skill Development Corporation, NSDC was set up in 2008 as a public private partnership between government and industry bodies to involve private sector in skilling. The National Skill Development Agency, NSDA was set up in 2013 as a quality regulator to implement the National Skills Qualification Framework and outcome and competency based skilling. Then sector skill councils were created as industry led bodies from 2010 onwards. Today there are 37 SSCs engaged in creation of qualifications and national occupation standards. The Ministry of Skill Development and Entrepreneurship was created in 2014 to coordinate skilling efforts across the nation. The National Council for Vocational Education and Training, NCVET was notified on 5th December 2018 as the skills regulator. Further, to coordinate the skilling across 20 central ministries, common platforms were created for skilling like national policy on skill development; common cost norms for uniformity in training cost for public funded programs, a unified Skill India portal for capturing all government funded short term trainings.

Challenge of Increasing scale :

If we look at the challenge of increasing scale, a large number of trainings have been undertaken to include fresh skilling in the form of long term training of 1 to 2 years through over 15,000 industrial training institutes and short term training of over 53 lakh people through over 23,000 training centres and apprenticeship training. In addition, up skilling or reskilling is being undertaken to meet the changing needs of the industry. Another mode of training is recognition of prior learning to bring into formal stream those working in the unorganized sector.

So far, over 65 lakh people have been certified through this mode.

Enhancing Quality :

Looking at reforms for enhancing quality of training, there have been two major

reforms. One is the notification of NCVET as the skills regulator on 5th December 2018 to consolidate the fragmented skilling regulatory ecosystem and the second is to align all qualifications to a national skills qualification framework, the NSQF which was notified in December 2013.

NCVET : Coming to NCVET, it is entrusted with quality regulation by laying down standards for the functioning of entities engaged in the skill ecosystem that is the awarding bodies, the training providers and the assessment agencies giving recognition to them and monitoring their performance. NCVET's functions also include approval and alignment of qualifications to the NSQF as also grievance redressal of the recognized entities.

Regulatory and Enforcement Powers: To carry out its functions, the NCVET has both regulatory and enforcement powers. Under regulatory powers, the NCVET frames guidelines for laying down conditions of recognition and functioning of awarding bodies and assessment agencies, grant of recognition for awarding and assessment functions, disclosure of fees and charges by recognized bodies and protection of personal information of trainees. The enforcement powers allow NCVET to enter into agreements with awarding bodies and assessment agencies to enforce conditions of recognition, conduct inspections, take penal action for violation of agreement in the form of monetary compensation, monetary penalties, de-recognition of the recognized body. Thus empowered, NCVET has taken steps to improve the quality of training and improve the training delivery.

Improving Training Standards : In order to improve the quality of training, the NCVET has framed guidelines for recognition and regulation of awarding bodies as well as the assessment bodies. The process is on for the recognition across the country. So far, agreement granting recognition has been signed with 56 awarding bodies and provisional recognition has been granted to 23 awarding bodies and 52 assessment agencies. The recognition mandates the awarding bodies to award certification to learners in approved qualifications create qualifications and related learning material, affiliate and monitor the functioning of training partners, onboard assessment agencies to ensure fair and reliable assessments amongst others.

Improving Training Standards: Regulation of Assessment Agencies : Similarly, the recognized assessment agencies are mandated to conduct quality assured assessment, ensure availability of certified assessors, proctors, subject matter experts and undertake their performance rating, develop an assessment strategy and ensure availability of assessment tools. Then, to improve the training delivery, NCVET regularly monitors the performance of the recognized entities. It has also notified blended learning guidelines to address the infrastructure deficit in skilling as it promotes digital skilling. The guidelines define key components of a skilling program like theory, lab work, on-the-job training, internship, apprenticeship training, et cetera and delves into ratios of learning hours between online and offline mode for each component. They also provide for blended modes of assessments. Further, work is on to strengthen the standards for training of trainers and training of

assessors so that good quality trainers and assessors are available. Drawing trainers and assessors from amongst those engaged in the industry is being encouraged. In fact, a system for rating and grading of awarding bodies, training providers, assessment agencies is being put in place to infuse healthy competition and incentivize those performing well.

Standardization of Certificates :

Another major initiative has been that NCVET has developed standardized certificate formats to be given to the learners on successful completion of training in order to ensure uniformity of outcomes. A memorandum of understanding has also been signed with DigiLocker for hosting the skills certificates online in the personal DigiLocker of the learner. Further, NCVET is in the process of making a digital enterprise portal for digitalization of all its processes and interactions with the stakeholders. Another major reform by the government to improve quality of trainings has been the notification of the National Skills Qualification Framework in December 2013, which was anchored in the erstwhile National Skill Development Agency, also set up in the same year. NSDA has now been subsumed in NCVET since August 2020. So, the task of approval and alignment of qualifications to NSQF has shifted to NCVET.

NSQF :

NSQF is an outcome based nationally integrated education and competency based skill framework. It has 8 levels with level 1 being of lowest complexity and level 8 denoting highest complexity of skill competency, knowledge and professional ability. Each level is described by learning outcomes in 5 domains known as level descriptors such as professional theoretical knowledge, professional and technical skills and expertise, employment readiness and entrepreneurship skills and mindset, broad learning outcomes and responsibility.

Process Flow under NSQF Alignment :

A rigorous process is followed for alignment of qualifications to NSQF. Step 1 involves development of skill qualifications by awarding bodies after assessment of industry need, stakeholder consultations and validation by the industry. Step 2 involves desk scrutiny in NCVET of all mandatory documents for the NSQF alignment, further stakeholder consultations and approval by the National Skills Qualifications Committee in NCVET. This committee has representation from central skilling ministries, select states, industry as well as other academic and technical education regulators. Once approved, the qualification is hosted on the National Qualification Register which is the official national public record of all qualifications. So far, over 4000 qualifications which include over 30,000 national occupation standards have been aligned and approved. These qualifications are then used for training and as benchmark standards for recognition of prior learning that is RPL. The recognized ABs and other institutions, organizations of repute or industry can bring in qualifications for their approval and alignment to NSQF. Only such aligned qualifications are entitled to public funding and to a NCVET certificate which is recognized as a government certificate and will be eligible for getting credits for learning. A number of reforms for strengthening the NSQF are currently underway.

To make it more in tune with industry needs, accordingly the NSQF levels have been reduced from 10 to 8. The level descriptors are being revised. The entry

requirement, notional hours, nomenclature, et cetera are being standardized. The states are being encouraged to develop state specific qualifications like in heritage related and local traditional skills. The qualifications are being made available in Indian languages for wider reach. Industry participation in development and approval of qualifications is being emphasized upon. The qualifications are also being made more inclusive by including requirements of persons with disability, green jobs and gender. To facilitate up skilling and industry based training, a mechanism has been established for approval and alignment of even national occupation standards and micro credentials. Further, a mechanism for adoption of qualifications has also been formulated in order to reduce duplication of qualifications, maintain uniformity in them, and avoids wastage of resources in developing similar qualifications and to cater to the capacity issues in terms of qualification development at especially the state level and help them to focus on development of local job roles. The adoption guidelines permit a recognized AB to acquire awarding rights with respect to already approved qualifications, conduct trainings and certify the trainees. NSQF also helps in formalizing skills learnt informally through their assessment and certification. India has a large population who has acquired skills by working without any formal certification. Recognition of prior learning through assessment of their proficiency and training to bridge the gap is done against NSQF aligned qualifications which are benchmark standards. This process helps the persons with experiential learning to get certified for their skills and get access to the formal system of employment, education and training. NCVET is currently in the process of preparing guidelines on the processes to be followed for effective RPL.

challenges of skilling:

Then as I had mentioned earlier, one of the main challenges of skilling is its low aspirational value, making VET as the last preferred option amongst the youth. To change this perception, a number of steps have been taken. First ABs is being encouraged to develop multi-skill and cross-sectoral qualifications which have a ready job market. Multi-skilling builds a wide range of competencies and knowledge in the workforce for performing multiple independent tasks. It can prove to be valuable for both employees and employers as it will lead to more job opportunities, better cognitive development, increased job security and better growth prospects for employees. And for the employer, they will improve efficiency, reduce cost and enhance quality. Cross-sectoral skilling on the other hand will enable the learner to apply a skill across diverse and related sectors thereby enhancing his creativity, innovation and output. The examples of the same can be predictive maintenance, industrial, internet of things technician, which involves the amalgamation of the two sectoral NOSs from automotive and IT and ITES as well as an integrating NOS which brings the learnings of the cross disciplines together for the job role. In addition, qualifications have been developed for training in 261 new emerging and futuristic disciplines across sectors which shall prepare the youth for industries, OEMs with global presence. This includes training in areas like precision farming, drone technology, health tech, 3D printing, electric vehicle, automotive amongst others as also foundational skills in technologies like artificial intelligence and machine learning, internet of things, robotics, 5G technologies, et cetera. These skills are also in high demand in the international job market.

Initiative to enhance employment opportunities for the trained Youth:

Another initiative to enhance employment opportunities for the trained youth is the inclusion of employability skills including 21st century professional skills, digital literacy, communication skills, English speaking skills, digital payments, financial and legal literacy, customer service, et cetera as a part of all skill courses.

The National Credit Framework :

Finally, I would like to touch upon a major reform which is underway and is expected to raise the aspirational or VET to another level that is the formulation of the national credit framework or the NCERF. The NCERF which flows from the national education policy 2020 would be a game changer which seeks to remove distinction between general and vocational education, ensure flexibility and mobility between the two, establish academic equivalence and multiple entry multiple exit pathways in general and vocational education and between them. NCERF will thus enable transformation of India by providing high quality education opportunities integrated with effective skills to reap the demographic dividend making education and skilling truly aspirational. The NCERF will integrate the national higher education framework, the national school qualification framework and the national skills qualification framework and provide for assignment, accumulation, storage and transfer of credits. It provides for creditisation of every hour of learning and all types of learning whether it is academics, vocational skills or experiential learning with no differentiation in credits assigned for different areas of learning, arts or sciences, curricular or co-curricular activities. So, total learning hours for credits under the NCERF shall subject to assessment include not only classroom teaching or learning and laboratory work in any subject, but also class projects, VET, field visits, industry attachments, sports and games, yoga, physical activities, performing arts, handicraft work, on the job training, internship, apprenticeship, experiential learning, community work to name a few.

Assessment Of Defined Learning Outcomes Is Mandatory For Earning Credits :

However, assessment of defined learning outcomes is mandatory for earning credits. Also there are assessment bands which are stages at which the student or learner needs to be formally assessed for progression in academic or vocational or skilling streams. For example, in academics 12th board exam needs to be crossed to move to the next band that is an undergraduate program. For assignment of credits in a scheme of study across school education, higher education and vocational education and training, the total notional learning hours in a year have been kept at 1200 except for early school education where it is less. A minimum of 40 credits would be earned for 1200 hours of learning per year which would imply that one credit is equal to 30 hours of learning. Relevant experience and proficiency levels earned may also be creditised subject to assessment and added to credit points earned. Learning in different modes like online, physical or blended are also eligible for assignment of credits. In addition, credit levels will be assigned across school, higher and vocational education which will help in mobility across streams and also help in establishing a mechanism for equivalence. Credit levels will be based on cumulative number of years of learning. Both academic and vocational learning will have 8 levels. In the

academic stream, levels 1 to 4 have been assigned to school education, 4.5 to 8 to higher education with level 8 being for PhD. VET will also move from level 1 to level 8 based on the competency acquired and other level descriptors.

Special Provisions in National Credit Framework (NCrF)

The NCrF also has certain special provisions which will enable educational acceleration for gifted children with exceptional learning abilities or competencies to move up the education and skilling ladder without going through the prescribed formal education or learning hours and only by means of assessing the learning outcomes for assignment of credits and the credit levels. It also supports learning of differently abled persons at their pace as also of out of school youth subject to their achieving the desired learning outcomes determined by successful assessments for recognition of prior learning. However, assessment methods for such special assessments have to be very strict, objective and above board and adhere to high standards so as to keep the credibility of the NCrF intact. NCrF also allows for establishing academic equivalence between general and vocational education streams. For example, a 10th grade student who has done short term training qualifications at the appropriate NCrF level and accumulated 40 plus 40 credits can get a 12th certificate after doing a language course prescribed by the academic regulator.

Multiple-Entry
Multiple-Exit :

Secondly, it also provides multiple entry and multiple exit options. For instance, in the case of undergraduate degree of either 3 or 4 year duration, the candidate can exit with a certificate after completing 1 year of study, with a diploma certificate after completion of 2 years of study or with a degree after completion of a 3 or 4 year program. The candidate can exit at these stages, work and re-enter to pick up the diploma or degree as the case may be. However, for earning credits, it is essential that the learner is able to achieve the learning outcomes as defined by the respective regulators or the recognized AB in the case of VET. As a result, even OEMs are coming forward for formal recognition of their programs. Mechanism for approval of national occupational standards and micro-credentials has been introduced so that normal training programs within a company can also be formalized and credited. So, VET providers need to enter the formal system by becoming a recognized awarding body or assessment agency of NCVET or a training partner of a recognized AB in order to be able to issue NCVET certificate to the trainees which is a nationally recognized certificate of the government within the skilling space. Finally, I would like to say, that in today's world, movement of manpower across borders is imperative thanks to globalization and technological revolution. The Government of India has been engaging with other countries with this objective. NCVET has also been engaging with skilled regulator of Australia, the ASQA and of New Zealand to exchange best practices in strengthening regulatory processes to address objectives of ensuring quality and outcome-based monitoring. India has also been engaging with the ILO for developing a South Asian regional qualification framework for free mobility of people across the South Asian region. Further, given India's favourable demographic dividend coupled with the aging population in many parts of the world, Indian skilled workers have immense opportunities globally provided they have the right skills. The manpower deficit countries, on the other hand, also need the support of skilled workers from countries like India. The technical intern training program of

Japan is one such example where selected candidates from India intern in Japan for 3 to 5 years.

These select candidates are required to be trained by sending organizations in Japanese language, their lifestyle orientation and relevant domain training. To facilitate such free mobility of people, bilateral mapping of qualifications and training the youth as per international training standards and credible assessments of training becomes important, particularly in those countries and sectors in which the demand is high. Further, as I had mentioned earlier, even OEMs on the industry are coming forward to get their globally accepted training programs aligned to the NSQF with commensurate certification. Accordingly, qualifications of RedHat have already been aligned and approved. Similarly, globally credible and established names in the EdTech skills ecosystem such as Pearson VUE have sought NCVET's recognition as an assessment agency to be able to formally assess training programs in India and particularly to assess training programs of OEMs and other such global players.

Globally credible multinational companies such as Microsoft, Apple, et cetera have also evinced interest in getting recognition as an award in body.

Opportunities for Foreign Transnational Involvement :

There are thus many opportunities for foreign providers involvement in the VET ecosystem like developing qualifications of global standards and mapping the standards bilaterally for mutual recognition and acceptance of trained people. Second, partnering for movement of the workforce with India's skills certificates through exchange of information on emerging demand of manpower in their respective countries and assessment of trained persons as per the needs of the destination country. Thirdly, they can get involved in training as a NCVET recognized body. This recognition can be as an awarding body or as an affiliated training body of a recognized AB or as an assessment agency like Pearson VUE. This can help in undertaking vocational training in the origin country following destination country requirements and standards. At another level, there can also be mutual collaboration between academic, technical and vocational institutions for international equivalence of courses, provision of credit transfer and promoting exchange with school boards and universities. So, in my talk today, I have tried to capture the existing challenges and opportunities in the Indian skilling ecosystem and the reforms undertaken to address them. Reforms which have brought skilling in India on one platform and integrated it across the centre, states, industry, private and international players. These reforms include reforms for qualitative improvement of training by defining standards for functioning of entities in the skill ecosystem and strengthening the NSQF amongst others. Also, reforms for enhancing the employability of trainees and the aspirational value of skilling by integrating it with academic education through the national credit framework. I also touched upon the approaches adopted for enhancing the reach of the skill ecosystem through policies like blended learning, recognition of prior learning and creating opportunities for international collaboration. I hope you find this useful. Thank you.

Prof. Vineeta Sirohi: I would like to sincerely thank Dr. Agarwal for such a comprehensive session illuminating the challenges on the Indian skills ecosystem and also the reforms to address these challenges. The session also covered international collaboration in VET. I express my deep sense of gratitude to the Australia India Institute and the Australian Government Department of Education and NIEPA for their support for the masterclass. I also thank CIET and NCERT for providing technical support in recording and editing of the masterclass. Thank you all. Have a good day.