

Skill Master class one
The Policy framework of Skill Development in India
TRANSCRIPT

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Prof. Vineeta Sirohi: Welcome to this skills master class on the policy framework of skill development in India. This is the first in a series of master classes on India's skill sector. The master classes aims to build understanding of India's skill system across the Australian vocational education and training sector, the VET sector. The master class will support increased participation by Australian VET providers in India's skill 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 M.Phil PhD program and Chairperson Equal Opportunity Cell at the National Institute of Educational Planning and Administration, New Delhi. 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 M.Phil PhD and postdoctoral on educational planning and administration. NIEPA is very pleased to partner with the Australia India Institute for the Skills Masterclass 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 their support for this series of Skills Masterclasses. This masterclass will examine the skills, policy reforms and regulatory frameworks governing vocational education and training in India including programs and related services delivered by Indian and foreign providers. Before we begin the masterclass, I would like to briefly introduce our resource person for this class Shri Kundan Kumar. Shri Kundan Kumar is an Indian

administrative of service officer of 2004 batch Bihar cadre. He is currently the joint secretary and advisor looking after three verticals in Niti Aayog namely managing urbanization, skill development, labour and employment and industry one. During his central deputation prior to Niti Aayog, he was private secretary to Union Defence Minister and Union Home Minister and Union Minister for Skill Development and Entrepreneurship. He also held the position of director cabinet secretariat. In this assignment, he contributed in policy formulation and implementation. He has acquired extensive experience in the field working as collector and district magistrate of four districts in Bihar. He has also held positions of managing director of Bihar food and supplies corporation and that of additional director of BPSM mission jointly funded by government of Bihar and DFID government of UK. Shri Kundan Kumar is recipient of the Prime Minister's Award for Excellence in Public Administration 2013-14, Presidential Award for Best Electoral Practice 2014, Chief Minister's Award instituted by Bihar State Road Development Corporation Award and Chief Minister's Award instituted by Bihar State Power Holding Company Award. Before I request our resource person to speak, I would like to mention that India has been deliberating on policy reforms and emphasizing on skills and vocational education for the past many decades at various forums and in education commissions. It was the first time in 2009 and 2015 that the government developed a separate policy on skill development. Now I request Shri Kundan Kumar to share his thoughts on the policy framework of skill development in India. Over to you Shri Kundan Kumar.

Mr. Kundan Kumar

Thank you Vineet a ma'am. Hello everyone, the topic of today's master class is policy reforms and the regulatory framework governing India's skilling ecosystem. The structure of today's presentation is as follows. First of all, I would like to mention the demographic dividend that India has and then I would talk about evolution of skill policy landscape in India. Then evolution of skill regulatory framework in India, achievements of skilling efforts in India, challenges in skilling ecosystem, way forward for skilling ecosystem.

Window of
Opportunity up to
2047:

India is one of the youngest nations in the world with an average age of 28.7 years with a youth population 15 to 29 years of 36.6 crores which is around 366 million. India accounts for nearly 20% of the world's total young population. It is estimated that around 80 lakhs which is around 8 million people enter the labour market every year and the working age population is expected to increase by 1 to 1.2 crore over the next decade. This gives India a significant advantage since its share of the working age population is high and rising vis-a-vis its dependent population with 60% of population in the working age group. This is an enormous opportunity likely to last till 2055 as well as a challenge for policy makers in terms of ensuring the provision of efficient pathways to the youth to acquire quality education and skill training enabling school to work transition through effective job matching and incentivising the generation of decent remunerative work. India has the potential to increase its gross domestic product

by 6.1% due to upskilling. While India has the advantage of a large cohort of young people and a huge working age population, other countries are facing a demographic decline and a dearth of working age people driven by low birth rates and an ageing population. This provides India an opportunity to become the skill capital of the world as articulated by the Honorable Prime Minister of India in 2015 by providing a range of services to other ageing countries in the labour intensive sectors such as care services, construction etc.

Giving impetus to
Policy Reforms
Timeline:

Over the last 15 years the country has witnessed a flurry of policies and initiatives in the skilling space to give impetus to industry collaboration and connect with national skill development cooperation was formed in 2008 as a public-private partnership company. The first skill development policy of 2009 was passed to provide an overarching policy framework to the skilling agenda of the country. Given that every department had its own budgets and schemes for skill development leading to duplication of efforts and wastage of resources, it was decided that a full-fledged department of skills and subsequently Ministry of Skill Development and Entrepreneurship to achieve convergence in skilling efforts will be set up. A dedicated Ministry of Skill Development and Entrepreneurship was notified by the Government of India in 2014 with the objective of achieving coordination and synergy in the country's disparate skilling efforts. The Ministry is responsible for coordination of all skilling efforts across the country, removal of disconnect between demand and supply of skill manpower, building the vocational and technical training framework, skill up-gradation, building of new skills and innovative thinking not only for existing jobs but also jobs that are to be created. The Ministry aims to skill on a large scale with speed and high standards in order to achieve its vision of a skill India. Skill development policy of 2009 was subsequently superseded by the more comprehensive national policy for skill development and entrepreneurship in 2015. The new policy for skill development and entrepreneurship 2015 is the key policy document used for the provision of skill development. It was launched by the Honorable Prime Minister on 15 July 2015. The vision of the policy is to create an ecosystem of empowerment by skilling on a large scale at speed with high standards and to promote a culture of innovation-based entrepreneurship which can generate wealth and employment so as to ensure sustainable livelihoods for all the citizens in the country to achieve this vision. The policy has four thrust areas. It addresses key obstacles to skilling including low aspirational value, lack of integration with formal education, lack of focus on outcomes, low quality of training infrastructure and trainers etc. Further, the policy seeks to align supply and demand for skills by bridging existing skill gaps, promoting industry engagement, operationalising a quality assurance framework, leverage technology and promoting greater opportunities for apprenticeship training. Equity is also a focus of the policy which targets skilling opportunities for socially stoked, geographically marginalized and disadvantaged groups. Skill development and entrepreneurship programmes for women are a specific focus of the policy. In the entrepreneurship domain, the policy seeks to educate

and equip potential entrepreneurs both within and outside the formal education system. It also seeks to connect entrepreneurs to mentors, incubators and credit markets, foster innovation and entrepreneurial culture, improve ease of doing business and promote a focus on social entrepreneurship. A number of initiatives have been taken by the Government to meet the objectives of the policy. The National Skill Development Mission was launched by the Honourable Prime Minister on 15 July 2015. On the occasion of World Youth Skills Day, the National Skill Development Mission seeks to provide a strong institutional framework at the Centre and States for implementation of skilling activities in the country. The Mission has a three-tiered, high-powered decision-making structure. At its apex, the Mission's Governing Council is chaired by the Prime Minister, seeks to provide overall guidance and policy direction. The Steering Committee, chaired by the Minister in charge of skill development and visages review the Mission's activities in line with the directions set by the Governing Council. The Mission Directorate, with Secretary Skill Development as Mission Director, ensures implementation, coordination and convergence of skilling activities across central ministries and departments and that of state governments. The Mission also has selected submissions in high priority areas. Seven submissions have been proposed, initially to act as building blocks for achieving overall objectives of the Mission. They are Institutional Training, Infrastructure, Convergence, Trainers, Overseas Employment, Sustainable Livelihoods and Leveraging Public Infrastructure. Integration of skills with the General Education has been identified as the key reform in the education skills system of the country for overall gains at the student, community and economy levels as envisaged in the National Education Policy 2020. The National Education Policy emphasizes vocational education and recommends the integration of vocational education into all educational institutions, schools, colleges and universities. It sets a target of exposing at least 50% of all learners to vocational education by 2025. The National Education Policy states that all schools should expose students of classes 6 to 8 to a variety of vocational crafts such as carpentry and metalwork and enable students of class 9 to 12 to opt for at least one vocation which will be aligned to NSQF which is National Skills Qualification Framework levels 1 to 4. The NEP addresses the issue of lack of vertical and horizontal mobility in the vocational education pathway and specifies a new National Higher Education Qualification Framework that will define graduate attributes and be in sync with the National Curricular Framework for School Education and NSQF that is National Skills Qualification Framework. To realize the intent and objectives of National Education Policy 2020, the National Credit Framework is being developed facilitating the integration of education and vocational training.

Strides Made in
Regulatory
Framework so Far:

The skill regulatory landscape in India, in independent India can be traced back to the 1950s with the launch of the Craftsman Training Scheme in 1950 and the setting up of the National Council of Vocational Training in 1956 to develop courses for the provision of long term skill training to students. This was

followed by the enactment of the Apprenticeship Act in 1961, the sector skill councils which are autonomous industry bodies started forming in 2010-11 to promote industry linkages and design industry aligned courses, conduct training of trainers etc. National Skill Development Agency is an autonomous body registered as a society under the Societies Registration Act 1860 under the Ministry of Skill Development and Entrepreneurship. It was set up in 2013 and it anchors the National Skills Qualification Framework and allied quality assurance mechanism for synergizing skill initiative in the country. The National Skill Qualification Framework was notified in 2013 with 10 levels. The National Skills Qualification Framework comprises 10 levels each defined by 5 parameters. It organizes all qualifications according to a series of levels of knowledge, skills and aptitude through National Skills Qualification Committee. With establishment of these entities the skilling ecosystem entered the formative stage of development. However, due to changing market dynamics and broad socio-economic trends there was a need for consolidation of the system, the skilling environment of India has grown up by leaps and bounds over the last decade through a deliberately crafted regulatory architecture and policy interventions. Common norms were notified on 15th July 2015 for uniformity and standardization of skill development. Previous to introduction of common norms there were 70 odd skill development programs being implemented by Government of India each with its own norms for eligibility criteria, duration of training, cost of training, outcomes monitoring and tracking mechanism etc. This multiplicity of norms and parameters had created a diffusive effect of skill development programs which needed to be streamlined in order to achieve the final outcomes envisaged. Common norms seek to rationalize the whole spectrum of skill development processes and systems including inputs, outputs, funding, cost norms, third party certification and assessment, monitoring and tracking mechanisms and impanelment of training providers. Common norms define the activities constituting skill development in the country, skill development courses and their alignment with the national skills qualification framework, broad input standards for training programs and the outcomes expected from these programs. The flagship scheme of the Ministry of Skill Development and Entrepreneurship, the Pradhan Mantri Kaushal Vikas Yojana PMKVY was launched under the National Skill Development Mission Stroke Skill India. It aims to encourage and promote skill development in the country by providing free short duration skill training and incentivizing this by providing monetary rewards to youth for skill certification. The overall idea is to boost both industry and employability of youth. National Apprenticeship Promotion Scheme which is NAPS was launched in August 2016 by Government of India to promote apprenticeship in the country by providing financial incentives, technology and advocacy support. The scheme has the following two components that is sharing of 25 percent of prescribed stipend subject to a maximum of rupees 1500 per month per apprentice with the employers and sharing of basic training cost up to a maximum of rupees 7500 per apprentice. The National Council for Vocational Education and Training which is NCVET

was notified by MSDE that is Ministry for Skill Development Entrepreneurship on 5th December 2018. NCVET subsumed the existing skill regulatory bodies namely National Skill Development Agency and National Council for Vocational Training and it became an overarching skill regulator. The NCVET regulates the functioning of entities engaged in vocational education and training both long and short term and establishes minimum standards for the functioning of such entities. The major functions of NCVET are recognition and regulation of awarding bodies, assessment agencies and skill related information providers, approval of qualifications, monitoring and supervision of recognized entities and grievance redressal. The NCVET will enable integration of fragmented regulatory system and infuse quality assurance across the entire vocational training value chain leading to better outcomes with an aim to make India a skill capital of the world and improve mobility of skill manpower. The National Skill Development Corporation International has been set up which aims to create a network of institution across India. Since its inception the Ministry of Skill Development and Entrepreneurship has been working to achieve its stated vision through dedicated flagship programs and initiatives focusing on the sectoral demands as well as the requirements of the youth and diverse social groups.

Key Agencies in the
Regulatory
Ecosystem :

It is aided in these initiatives by its arms that regulate the functioning of the skilling ecosystem, Directorate General of Training that is DGT, National Council for Vocational Education Training that is NCVET and 37 Sector Skill Council that is SSCs. At the state level we have state skill development missions, state directorates and department and that of technical training and education. State Council for Vocational Training and Regional Directorate of Skill Development and Entrepreneurship are involved in the administration of the ecosystem. The key arms and agencies of the ministries are as follows. The first one is Directorate General of Training that is DGT. The DGT is the apex organization for creation, expansion and coordination of the long term vocational training across the country. This includes the network of ITIs and other central institutes. DGT also operates vocational training schemes in some of the specialized areas through field institutes under its direct control. Development of these programs at national level particularly in the area concerning common policies, common standards and procedures, training of instructor and trait testing are the responsibility of the Directorate General of Training. National Council for Vocational Education and Training that is the NCVET is an overarching skills regulator and from December 2018 onwards it regulates the functioning of entities engaged in vocational education and training both long and short term and establishes minimum standards for the functioning of such entities. The third one is Sector Skill Council. Sector Skill Councils are autonomous not for profit industry led bodies in different sectors. They are involved in bridging the asymmetry in the skilling ecosystem by developing the course work and the curriculum in line with industry needs, creating qualification packs for every job role in their sector, training, assessing and certifying trainers, developing assessment guide books and training trainees. Thirty seven

Sector Skill Councils are currently operational. The fourth one is State Skill Development Missions. State Skill Development Missions intend to converge all short term skill training initiative under one umbrella at the state level. The fifth one is State Directorate or Department of Technical Training and Education and State Council of Vocational Training. Industrial Training Institutes are under the administrative and financial control of state government or union territories administration through state directorates or departments of technical training and education. There are state councils corresponding to the national council to deal all matters relating to vocational training at the level of the state. The state council which is affiliated to the NCVET functions as a state agency to advise the state government in carrying out the training policy lay down by the national council and to coordinate the vocational training program throughout the state. The sixth one is the Regional Directorate of Skill Development and Entrepreneurship. To ensure effective integrated development and monitoring of skill training and apprenticeship training at state level, the Ministry of Skill Development and Entrepreneurship, Government of India has decided to set up these regional directorates of skill development and entrepreneurship for each state and union territory.

Convergence Efforts by MSDE NSQF:	Standardization of curriculum and content through alignment to the national skills qualification framework that is NSQF. All major skill development programs being implemented centrally have adopted this framework. NSQF has organized more than 4000 skills qualifications according to series of level of knowledge, skills and aptitude. The mechanism of standardization provided under national skills qualification framework provides for qualification specific standards taking into account the sector and role specific requirements. Industry relevance and address of market demand is ensured through linkages with industry led sector skill councils.
Common Norms Standard skilling processes:	Standard skilling processes Standardization of input output matrix through common cost norms. Ministry of Skill Development and Entrepreneurship notified the common norms in 2015 which specify the input standards, outcomes, funding norms, fund flow mechanism, mechanism for monitoring and tracking and empanelment of training providers and assessors. Unified regulatory authority was also established.
NCVET:A unified regulatory authority:	Ministry of Skill Development and Entrepreneurship has set up a unified national skills regulator in National Council for Vocational Education and Training which is NCVET to ensure quality of skill delivery and credibility of certification in 2018.
SMART Portal : Standardization of input quality :	Standardization of input quality through smart portal. National Management and Accreditation of Training Centers is an accreditation and affiliation platform developed by Ministry of Skill Development and Entrepreneurship along with National Skill Development Corporation to bring in uniformity in the process of

accreditation and affiliation. This improves quality assurance across training centers.

Skill India portal :
Data convergence: Data convergence on Skill India portal. This portal would help convergence data related to all skilling programs in the country including central ministries, state governments and corporate on one platform. This would lead to accurate estimation and planning for training program, reduction in duplication and wasteful expenditure.

Takshashila: National portal for trainers and assessors : National portal for trainers and assessors, this is an online portal, Takshila which is being dedicated platform initiated by National Skill Development Corporation under Ministry of Skill Development and Entrepreneurship for the management of trainers and assessors of the Indian short term skill ecosystem functioning as the central repository of information concerning development of quality trainers and assessors. NCVET regulates the functioning of awarding bodies engaged in vocational education and training both long and short term by establishing minimum standards for their functioning in form of guidelines for recognition of the awarding bodies. Guidelines attempt to standardize operations and outcomes of the awarding bodies in the skills ecosystem through well defined parameters, processes and templates with fixed responsibility and timelines. Guidelines define an awarding body, its types, scope, recognition, tenure and process of recognition along with detailed parameters and their respective evidences. Post recognition an awarding body would be able to issue NCVET recognized certificate with national validity in the market relevant qualification through better infrastructure and resource leading to better opportunities in the job market. Ministry of Skill Development and Entrepreneurship is giving focus on the mobility of skilled manpower to other countries. Institutional arrangement has been made and actions have been taken to harness huge emerging potential in the job market.

Internationalization Efforts: G2G Agreements with other Countries: In this regard, Ministry of Skill Development and Entrepreneurship has signed 11 Government to Government Memorandum of Understandings as can be seen on the map on the slide. With Australia the Government of India has signed a memorandum of understanding on cooperation in vocational education and training which desires to strengthen and broaden cooperation in VET between the two countries. The update to an India Economic Strategy to 2035 presented to the Australian Government indicates that cooperation will be supported by an Australia India Future Skills Initiative to give Australian education skills and EdTech providers access to the Indian market, showcase Australian capabilities and position Australia as an education partner of choice. Ministry of Skill Development and Entrepreneurship has identified skill benchmarking as a high priority area in its foreign engagements. However, given the lack of any unified or collective global benchmark standards MSDE has decided to take up the issue bilaterally with selected countries. Presently, requirement of bilateral skills benchmarking has been recognised as an area of cooperation by India and

United Arab Emirates and Kingdom of Saudi Arabia. Further Ministry of Skill Development and Entrepreneurship has also taken up the matter during the bilateral negotiations with Australia, Singapore and other countries with a view to expanding and optimising the long-standing India-Australia education and skilling relationship and acknowledging the different systems in the two countries for recognition of education qualification. In 2022 it was decided to establish a Task Force on Educational Qualification Recognition. The Task Force will deliver a cooperative mechanism within six months of establishment to improve arrangements for the recognition of qualification including those earned through diverse delivery modes for access to higher education and to support employment opportunities. As an initial step to the objective of skill harmonisation and benchmarking of job roles NSDC International under the aegis of Ministry for Skill Development and Entrepreneurship has done a global assessment of demand for the skilled workforce in 16 destinations namely Australia, Bahrain, Canada, Germany, Japan, Kingdom of Saudi Arabia, Kuwait, Malaysia, Oman, Qatar, Romania, Singapore, Sweden, United States of America, United Arab Emirates and the United Kingdom. Various MOUs signed with Singapore based organisation, MOU signed between NSDC and National University of Singapore's Institute of Systems Sciences in May 2018 to collaborate in adequately skilling India's workforce in emerging technologies such as big data analytics, artificial intelligence and robotics. MOU signed between NSDC and Enterprise Singapore to provide Singapore companies with an opportunity to connect with investors and partners in India's skill development ecosystem. MOU signed amongst NSDC, TerraOrient Skills Academy, Private Limited and Singapore Polytechnic in February 2019 for setting up of Centre of Excellences for advanced skilling. Training of trainers has already commenced who would then be deployed in the Centre of Excellences. There exists a joint declaration of intent between Ministry for Skill Development and Entrepreneurship and German Federal Ministry of Education and Research and German Federal Ministry of Economic Cooperation and Development. The joint declaration of intent focuses on cooperation in the field of skill development and VET, dual apprenticeships and workplace based skill development, capacity building including competency based curricula, training of VET cluster managers, renewable energy, e-mobility, energy efficiency etc. Present engagement with Germany includes Indo-German vocational education training. The overall objective of the project is bring all the actors from public and private sector work together to create conditions conducive to improving cooperative vocational training in India. BMBF project has funded a complementary project on strengthening company models of dual VET in industrial clusters in Northern India through a bottom up approach. The aim of the project is to develop a corporate blueprint for dual vocational training that can be deployed to other clusters later on. IGNITE which is Indo-German Initiative for Technical Education. This project is a skill development project run by the GIZ and Siemens India in coordination with Director General of Training under the AEGIS of Ministry for Skill Development and Entrepreneurship. This program

provides support to selected government's ITI's in 5 selected trades namely electrician, electronics, mechanic, fitter, turner and machinists. The program is focused on strengthening the capacity of the ITI ecosystem by providing the following trainings in the blended online mode. BMBF project is funding a research project called COAL India which is Quality Analysis in Indian Vocational Education and Training Institution with a focus on industrial training institution and polytechnic colleges. The basic objective of the project is to develop and provide a demand oriented quality model that is explicitly adapted to the Indian context and will be operationalized and tested in practice. The main goal of the project is to develop a demand oriented quality model adapted to the national context with focus on ITI's and polytechnic colleges in 2 pilot region that is Delhi and Bangalore. The project is conducted in cooperation with 4 Indian universities namely Indian Institute of Management Bangalore, JNU, NIEPA and IGNOU. IMOVE and German training providers activities new skilled immigration act in Germany is also focusing on skilled people with a vocational qualification and even on young people who are searching an apprenticeship in Germany. German training providers are offering preparation and bridging course, transport and logistics, hospitality and tourism, agriculture and crafts. As per the budget announcement on 1st February 2023 to a skilled youth for international opportunities 30 skilled India international centers will be set up across different states. After the formation of skill development and entrepreneurship various steps and initiatives have been undertaken to evolve the skilling ecosystem of India from intermediate phase to maturity. Institutional framework and regulation as discussed earlier NSQF was institutionalized in December 2013 and a unified regulator called NCVET which is National Council for National Vocational Training in December 2018 was set up. Over 4500 courses were developed and offered for training across various sectors. District skills committees were set up with an objective of aggregating, demand and enabling a bottom up approach to skill delivery. Ministry for skill development and entrepreneurship is imparting skilling in both long term which is 1 to 2 years duration and short term course which is from 200 to 600 hours through various schemes like Pradhan Mantri, Kaushal Vikas Yojana, Jan Shikshan Sansthan, Craftsman Training Scheme which is run by Directorate General of Training etc. To deliver skill training, the Ministry of Skill Development has a strong network of training institutes which includes around 15000 industrial training institutes, 33 National Skill Training Institute, 571 Pradhan Mantri, Kaushal Kendra, 304 Jan Shikshan Sansthan etc.

Various Initiatives by MSDE:

As far as industry connect is concerned 37 sector skill councils represent various sectors of the Indian economy. However, 2800 plus MOUs have been signed between ITI's and industry partners. Centre of Excellence in Skilling Ecosystem is envisioned to be a one stop resource centre established in partnership with industry to raise training standards, boost productivity, address emerging skill gap and align training and research with industry needs. With the intent to overcome skill demand supply mismatch to have continuous supply of skilled

workforce and disseminate best practices, centres of excellence are recognised by the Ministry of Skill Development and Entrepreneurship. In this regard the Ministry has formulated the guidelines for recognition of institute as centres of excellence. So far the Ministry has recognised 6 institutes as centres of excellence. Coming to entrepreneurship, 40000 training program by the National Institute of Entrepreneurship and Small Business Development with 1.2 million participants including 5000 candidates from 145 countries have been promoted in last 8 years. In addition to that 200 start-ups have been assisted and 80000 candidates in entrepreneurship trained by Institute of Entrepreneurship. Coming to international mobility as discussed before MSD is giving focus on the mobility of skilled manpower to other countries. In this regard, Ministry for Skill Development and Entrepreneurship has signed 11 government to government MOUs.

Policy
Challenges in
Skilling
Ecosystem:

Now coming to the challenges of ecosystem, I would first of all talk about skilling which is not recognised as aspirational. Formal academic education is considered as a priority and skilling. Ecosystem at the high school level fails to attract adequate talent. A higher education degree is very aspirational in India because of the expected pay premium and elevated social status it offers to prospective graduates and there are not many avenues to move from vocational education to general education. Due to skilling being less aspirational it becomes a tedious task to mobilise the suitable candidates for various skill development programs. Talking about lack of mobility between education and vocational training it is observed that there is a disconnect between formal, non-formal and informal learning system that is a linkage between vocational education and mainstream general education. As a result students are unable to continue learning after a break. In this regard the implementation of national credit framework will go a long way. In addition stigmatisation of vocational education, that is vocational education is opted by those who fail to secure admission in degree courses resulting in difficulty in mobilisation. Skilling it has been found is not aligned to industry demand. Therefore interface with industry is a key challenge confronting the skilling ecosystem in general. With the skilling ecosystem working independent of the industry the candidates are not exposed to the requirements of the industry, enhanced and customised industry driven programs and most importantly on the job training. Involvement of MSME which is micro, small and medium enterprises in the skilling programs to train and generate a pipeline of human talent is a major gap that needs to be addressed. Further in remote areas where there is no industry presence it is hard for the candidates to entail on the job training. The targets allocated to training partners usually do not take into account industry in that district or in that state. Multiplicity of efforts and lack of convergence is another challenge that Indian skill ecosystem face. Over 20 central ministries and departments and numerous departments of state, state governments are implementing their own skilling schemes catering to a specific sector, geography, socio economic groups there is a need to have common consensus in the policy framework of these skilling

initiative to avoid duplication of efforts and wastage of efforts. Another challenge is that of shortage of quality trainers due to the lack of adequate and qualified trainer pool specially at block level institution and in far flung areas several states are not able to scale up skill delivery. This has resulted in the states being forced to employ a supply side driven skilling strategy in place of a market demand driven one. Making the job of a trainer aspirational by acknowledging and rewarding their contribution and ensuring an attractive remuneration is a major challenge. Further there is a substantial lack of network between training partners, trainers and the state skill development agencies resulting in suboptimal utilization of available trainers. Now having talked about challenges I would like to talk about the road ahead and the first thing comes here is how to make skills aspirational and how to integrate general education with vocational education. Skill training is not perceived as aspirational among youth. Ensuring proper counseling for both candidates and parents before enrollment in skilling courses and before placement in industry is important. Conducting aptitude and psychometric tests before enrolling the candidates for skill training program to gauge the interest and suitability of the candidate will be beneficial. Extending post placement support for all trainees may increase the retention rate after placement. Further preferential recruitment for NSQF certified workers by the industry will make the acquisition of skill training more aspirational. As per the national policy on skills development and entrepreneurship 2015, national skills universities and institutes will be promoted in states as centers of excellence for skill development and training of trainers either as de novo institutions or as part of the existing university landscape. Presently the Ministry of Skill Development and Entrepreneurship does not have any scheme to set up skill universities in the state. However the Ministry of Skill Development and Entrepreneurship has encouraged states to open skill universities with an objective to promote skills education in an integrated and holistic manner with general education so as to ensure pathways for progression and mobility across forms of education and skills. The state governments are free to set up skill universities through state act as has been done by some of the states like Haryana and Rajasthan. Integration of skills with the general education has been identified as the key reform in the education skill system of the country for overall gains at the student, community and economy levels as envisaged in the national education policy 2020. Another road ahead for Indian skilling system is the lifelong learning opportunities to be ensured, enabling lifelong learning opportunities through avenues for re-skilling and up-skilling is required. This will require access to online digital courses for candidates, trainers and assessors to re-skill and up-skill themselves on a regular basis. Fidgetal digital blended modes of training delivery must be explored, tested and adopted wherever feasible and viable to deliver skill development through alternative modes. Career progression pathways must be mapped out for each job role and trainees must be made aware of the merits of up-skilling and advancement through national skill qualification framework levels. Another road ahead for our system is how to promote entrepreneurship because it is not

always possible to provide placement to all those who have been skilled. Therefore in order to promote the development of entrepreneurial skills following our steps will go a long way, namely formation of dedicated entrepreneurship, development scheme for creation of micro enterprises, introduction of employability and entrepreneurship module in all skilling courses needs to be ensured to provide an avenue to the skilled candidates to choose the desired career pathways. Also proper utilisation of district industrial centres infrastructure can be done in collaboration with micro small and medium enterprises to use this to promote entrepreneurship at the remote level. Greater engagement with the lead bank officer, district level consultative committee consisting of district administration and banks and similar forums for providing credit linkages and finances for establishing micro enterprises will go a long way. Facilitating convergence for better accessibility is another area to work upon. The effort of convergence is aimed at providing an enabling platform wherein respective ministries and departments retain their flexibility and independence in respect of sectoral skilling programmes offered while working towards making skilling more aspirational collectively. Ministry for skill development and entrepreneurship's approach towards convergence is based on the premise of standardisation, unified regulation, data convergence etc. The proposed solution to achieving convergence is through namely candidate centric skilling for ease of access for a candidate to choose course of choice, common training delivery network comprising quality training centres with requisite infrastructure, cross utilisation of available training resources of other ministries and departments, adherence to common skilling norms with standardised and harmonised courses curriculum, assessment and certification. Talking about streamlining training delivery India needs to create a pool of certified trainers and their periodic refresher course and their centralised examination and assessment, publication of post of trainers and instructors and other mandatory staff as per the National Council for Vocational Education and Training norms. In addition a list of trainers needs to be available on open portal with whom training agencies can readily engage and speed up the training process. Steps which are going to help in this direction would be continuous modification and improvements in the curriculum of different trades as per the market needs through formation of a stakeholder committee. Modification in the curriculum to incorporate and focus on trades for emerging sectors for example gig and platform, industry 4.0, knowledge and care economy. Also developing a curriculum in local and vernacular language and aiding states and union territories specific nozzles to the job roles. Blended and online training delivery to remove the geographical boundaries and enable doorstep delivery of training towards the vision of skills for all is going to help. Recognition of standards for international mobility to enable global mobility of skilled personnel, a key priority area is to undertake special skill development training in key priority areas for unskilled persons in the districts with large overseas migrations. For this mutual recognition of academic qualifications and competencies and common internationally accepted framework of assessment and certification is

essential. Existing qualification packs may be reframed to align with global demand. It is important to provide global exposure to the trainers to imbibe best practices in skill training from advanced countries. Centers of excellence for foreign languages can be created in different states to harness existing cultural connections and youth aspirations and leverage the states competitive edge. Industry relevant training is another important area where we have to work again. Collaboration between the skill training institutions and industry for a healthy combination of both theoretical as well as practical learning experience is important. Further, the involvement of respective ministries and departments in respective sectors and sub-sectors in the designing and imparting of training program is crucial to bridge a large gap that exists in the availability of skilled human capital. Reputed industries may be on boarded as implementing agencies to provide industry relevant skills to candidates. The setting up of sector specific training centers in industry clusters is another strategy to engage greater participation from industry. The role of industries would need to expand beyond the current scope for an industry led ecosystem through active contribution of industries towards curriculum revision, training of trainers, mapping of skill gaps for upscaling, training delivery and captive placements. Further, there is a need to be more focused on upgradation of technology, machinery and equipment. As envisaged under National Education Policy 2020, industry experts and professionals can be brought into the vocational education and training fold to train candidates and lead training of trainers programs. Skills and Vocational Education Board. NCVET can be constituted as skills vocational education board empowered to conduct its own examination and award its own degrees diplomas certification to trainees which will be equivalent to academic degrees awarded by education board such as CBSE. This will facilitate permeability between the domains of general education and vocational education and destigmatize vocational education. I have tried to give an overview of scaling landscape of India which evolved over a period of time wherein I discuss the recent efforts made by the government and that by the private sector the challenges of the scaling ecosystem and the way forward. Hope you all find this lecture beneficial. Thank you.

Prof. Vineeta Sirohi:

I sincerely thank Shri Kundan Kumar for such an enlightening session. Tracing the evolution of the skill policy landscape and regulatory framework in India and the achievements of skilling efforts. I am sure the takeaways from this session such as making skills aspirational, enabling lifelong opportunities through re-skilling and up-skilling, promoting entrepreneurship, facilitating convergence, streamlining, training delivery and harmonization of standards for international mobility would definitely help in improving the skilling and BET system. I express my deep sense of gratitude to the Australia India Institute and the Australian Department of Education and NEPA for their support for the master class. I am also grateful to CIET NCERT for providing technical support in recording and editing of the master class. We declare the session closed now. Thank you all. Have a good day.