

Gist of

# KURUKSHETRA

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Initiatives to Promote  
**Skill Development and  
Entrepreneurship**

**Skill Development in India:**  
Thoughts and Ideas

**Skill Development:**  
A Way Forward

**Skill Development:**  
Artificial Intelligence  
and Machine Learning

**Skill Development and  
Entrepreneurship** among  
Youth and Women

# INCREDIBLE RESULTS

## CSE 2018 Results

11 Ranks in Top 50

28 Ranks in Top 100

183 Ranks in the Final List



Rank 11  
Puja Priyadarshni



Rank 16  
Dhodmise Trupti Ankush



Rank 21  
Rahul Jain



Rank 24  
Anuraj Jain

## CSE 2017

5 Ranks  
in top 50

34 Ranks  
in top 100

236 Ranks  
in the final list



Rank 3  
Sachin Gupta



Rank 6  
Koya Sree Harsha



Rank 8  
Anubhav Singh



Rank 9  
Soumya Sharma



Rank 10  
Abhishek Surana

## CSE 2016

8 Ranks  
in top 50

18 Ranks  
in top 100

215 Ranks  
in the final list



Rank 2  
Anmol Sher  
Singh Bedi



Rank 5  
Abhilash Mishra



Rank 12  
Tejaswi Rana



Rank 30  
Prabhash Kumar



Rank 32  
Avdhesh Meena

## CSE 2015

5 Ranks  
in top 50

14 Ranks  
in top 100

162 Ranks  
in the final list



Rank 20  
Vipin Garg



Rank 24  
Khumanthem  
Diana Devi



Rank 25  
Chandra Mohan  
Garg



Rank 27  
Pulkit Garg



Rank 47  
Anshul Agarwal

## CSE 2014

6 Ranks  
in top 50

12 Ranks  
in top 100

83 Ranks  
in the final list



Rank 4  
Vandana Rao



Rank 5  
Suharsha Bhagat



Rank 16  
Ananya Das



Rank 23  
Anil Dhameliya



Rank 28  
Kushaal Yadav



Rank 39  
Vivekanand T.S

## CSE 2013

5 Ranks  
in top 50

62 Ranks  
in the final list



Rank 9  
Divyanshu Jha



Rank 12  
Neha Jain



Rank 23  
Prabhav Joshi



Rank 40  
Gaurang Rath



Rank 46  
Udit Singh

# KURUKSHETRA – FEBRUARY 2020 ISSUE

## SKILL DEVELOPMENT

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## Chapter 1- Initiatives to Promote Skill Development and Entrepreneurship

### **Significance of skilling and entrepreneurship:**

- It will help address the existing skill gaps by enhancing skilling opportunities in market relevant skills for both domestic and global markets.
- It will increase access to formal training.
  - According to a 2015-16 report released by MSDE, less than 5 percent of India's workforce is formally skilled. This is very low when compared to say South Korea (96%), Japan (80%), US (52%).
- Creation of trained workforce for the country will help increase employment opportunities and thus help reap the demographic dividend.
- It will also aid the economic development of the country. Skill development leads to improved productivity, employment, self-employment, economic growth and subsequent poverty reduction.
- The availability of skilled labour could act as a sufficient incentive for financial investment in the country and hence also aid Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI).
- It will help inculcate entrepreneurial spirit.
  - About 54 percent of India's population is under 35 and close to 15 million enter the workforce every year. The only way to ensure enough jobs for all would be through creating an environment for entrepreneurship and innovation.
  - Entrepreneurship is central to the growth and development of a society.

### **Initiatives taken:**

#### **Ministry of Skill Development and Entrepreneurship:**

- A separate Ministry of Skill Development and Entrepreneurship was set up in 2014 to coordinate all skill development efforts across the country.

#### **Cabinet Committee on Skilling:**

- Recently, a Cabinet Committee on Employment & Skill Development under the chairmanship of the Prime Minister has been set up for more focused attention on Skilling.

#### **National Policy for Skill Development and Entrepreneurship, 2015:**

- India's first integrated National Policy for Skill Development and Entrepreneurship 2015 is a welcome move. The Policy acknowledges the need for an effective roadmap for promotion of entrepreneurship as the key to a successful skills strategy.
- Vision: 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 livelihood for all citizens in the country.

#### **Skill India Mission**

- Skill India or the National Skills Development Mission of India is a campaign managed by the National Skills Development Corporation (NSDC) of India.



- The National Skill Development Mission (NSDM) was launched to provide a strong institutional framework to implement and scale up skill development efforts across the country and to train a minimum of 300 million skilled people by the year 2022.
- Under the Mission, 20 Central Ministries/Departments including Ministry of Skill Development and Entrepreneurship are involved in the implementation of more than 40 schemes/programmes on Skill Development.

#### **National Skill Development Corporation:**

- National Skill Development Corporation is an important wing of the Ministry of Skill Development.
- It was set up as a Public Private Partnership Company with the primary mandate of catalysing the skills landscape in India.

#### **National Skill Development Fund:**

- The National Skill Development Fund has been set up by the Government of India with an initial corpus of Rs. 995.10 crore for skill development in the country.

#### **National Council for Vocational Education and Training (NCVET):**

- A lacunae in skill development has been the fragmentation of the skilling ecosystem. There was duplication of roles and responsibilities of different agencies. To address this, the government has merged the existing regulatory institutions in the skill development industry - the National Council for Vocational Training and National Skill Development Agency to establish the new National Council for Vocational Education and Training. This has paved the way for a single regulator in the country.

#### **Pradhan Mantri Kaushal Vikas Yojana:**

- The Ministry of Skill Development & Entrepreneurship (MSDE) is implementing its flagship scheme [Pradhan Mantri Kaushal Vikas Yojana](#) (PMKVY 2.0) 2016-20 with an objective to provide skill training to one crore prospective youth, pan India over four years. The scheme is implemented through the National Skill Development Corporation.
- The scheme targets providing meaningful, industry relevant, skill based training. Under this scheme, the trainees are also offered a financial reward and a government certification on the successful completion of training and assessment. This helps them in securing a job for a better future.
- A 20-hour mandatory module on entrepreneurship in short term skill training programme would play a huge role in converting PMKKs into entrepreneurship hubs.

#### **Skill India Portal:**

- Skill India Portal was conceptualized by MSDE and was launched in 2015.
- It converges skilling data from various central ministries, state ministries, corporates on a single platform.
- This has enabled data driven decision making by policymakers and removed information asymmetry in the skilling ecosystem.

#### **Apprenticeship training:**

- Unlike industrial giants like Germany and Japan, which have 3 million and 10 million apprentices respectively, India has just 0.4 million, which amounts to less than 0.1 percent of the employed workforce.

- In a move to enable an apprenticeship based approach to skilling, comprehensive reforms have been introduced in the Apprenticeship Act, 1961 and the government is providing incentives to the industries to absorb more apprentices.
- The National Apprenticeship Promotion Scheme promotes apprenticeship training and provides a sustainable model of skill development with better outcomes.

#### **STRIVE scheme:**

- The MSDE has introduced Skills Strengthening for Industrial Value Enhancement (STRIVE), aimed at integrating and enhancing delivery quality of Industrial Training institutes.

#### **Recognition of Prior Learning (RPL):**

- This has helped successfully certify lakhs of candidates in the unorganized sector.
- This skill certification scheme helps recognize existing skills of the youth through a process of assessment and certificate programme, thus leading to a better livelihood.

#### **The National Skills Qualifications Framework:**

- The [National Skills Qualifications Framework \(NSQF\)](#) organizes qualifications according to a series of levels of knowledge, skills and aptitude. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.
- This has ensured that standards and productivity is ensured across varied segments and job roles.

#### **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY):**

- Under DDU-GKY, the flagship training programme of the Ministry of Rural Development, around 10 lakh youths have been trained.

#### **SHREYAS:**

- The SHREYAS (Scheme for Higher Education Youth in Apprenticeship and Skills) programmes in Industrial Training Institutes (ITIs) have been focussing upon creating opportunities for skilling the workforce for future driven jobs and industry oriented courses aligned to industry 4.0.
- With this scheme, the government aims to forge a close functional link between academia and industry on a sustainable basis and enhance the employability of the Indian youth through 'on the job work exposure'.

#### **Coordination with other ministries:**

- The Ministry of Skill Development and Entrepreneurship is working in close co-ordination with other ministries to work towards enhancing skills relevant to the concerned ministries.

#### **Inclusive approach:**

- There have been schemes which have been announced to ensure skill development in regions affected by extremism like the [Left Wing Extremism \(LWE\)](#) affected regions and Kashmir.
- There have been schemes focussing on the skilling of women from minority communities.
- 18 national skill training institutes are imparting skill training exclusively for women.

#### **International co-operation:**

- The central government has signed 19 MOUs with different countries to ensure global mobility through cross-country internship programmes and hiring of Indian workforce for special projects and requirements.
- International partnerships help boost skill development opportunities, training and employment.

#### **Way forward:**

- There is a need to increase scale and improve quality of skilling.
- There is also a need to focus on new age technologies like Internet of Things, 3D printing, AI, solar technologies and geo informatics among many other emerging fields.
- There is a need to further build awareness around skilling and promote vocational training to move towards the vision of “Kushal Bharat. Kaushal Bharat”.

**Also read:** [Skill India Mission](#)

## **Chapter 2- Skill Development in India: Thoughts and Ideas**

India has made huge progress in the field of Skilling, but keeping in mind its huge potential and large number of people to be skilled, sustained and innovative effort in the right direction involving all stakeholders is the need of the hour. The authors of the article suggest certain policy approaches and measures to truly make India the skill capital of the world.

#### **Focussing on rural areas:**

- Given the fact that the majority of the Indian population still resides in rural areas, skilling of rural India assumes great importance.
- This would need focussed attention and increased resources from the governments. There is a need to come up with a viable model for skilling in rural areas.

#### **Skilling to be made aspirational:**

- Given the lack of well defined career progression and low awareness, there is low acceptability towards vocational training in India. This needs to change.
- To strengthen the skilling ecosystem, there is a need to gauge the youth's aptitude and interest and the industry demands. The matching of demand with supply keeping in mind the youth's aspiration could give a leg up to Skilling in India.

#### **Reskilling and Upskilling:**

- Given the rapid changes in technology, India also requires a sustainable re-skilling and up-skilling ecosystem to make the existing workforce be future ready.
- The designing of the courses and curriculum should continuously be updated to keep it relevant and future ready.

#### **Encouraging online skilling:**

- Introducing and popularising a hybrid system of online skilling to complement the traditional brick and mortar skilling ecosystem is a viable step forward.
- Online skilling offers some advantages:
  - Cost effectiveness.

- Increases the reach of rural youth to formal training systems.
- Offers flexibility with respect to time and pace of learning and choice of courses.
- Given the limitations of online courses such as the lack of hands-on-training, there could be a hybrid model, of online theory sessions along with practical training videos and models for manufacturing sector skills.

#### **Private sector participation:**

- Private sector and industry participation should be leveraged in strengthening the skilling ecosystem. Enhanced industry linkages would be beneficial for both the industry as well as apprentices.
- They can also engage in providing entrepreneurial mentorship and hand-holding during the initial phases.

#### **Linking skilling with entrepreneurship:**

- The skilling curriculum should also deal with soft skills and basic knowledge of entrepreneurship. This will help diversify employment opportunities for the youth.
- There is also a need for necessary credit support along with market linkages for the start ups. Incubation centres could aid the development of new ideas.

#### **Promoting apprenticeship:**

- The need to strengthen and popularize apprenticeship in India is immense and immediate as it is one of the best ways of on-the-job skilling and increasing employability.

#### **Integrated portal:**

- An integrated portal for job seekers and job givers could help increase the employment opportunities by augmenting matchmaking. This will help make skilling aspirational for the youth.

#### **Skilling for future jobs:**

- Given the rapid technological advancements and increasing prominence of new age technologies like Artificial Intelligence, Machine Learning, Robotics, 3D printing, Internet of Things and Blockchain, there needs to be increased focus on skilling for these developments.

#### **Skilling for global markets:**

- The curriculum must align itself with global standards and help India skill labour force for global markets. This can be facilitated by setting up specialized market research cells.
- This approach will increase the potential job opportunities for the Indian labour force and also help attract foreign investment into India.

#### **Improving quality of training:**

- There should be a continued focus on quality of training provided during skilling. This would need monitoring and regulation of skilling centres.

## **Chapter 3- Skill Development: A Way Forward**



**Demographic dividend:**

- The National Policy for Skill Development and Entrepreneurship, 2015 notes that 54% of India's population is below 25 years of age and 62% of India's population is aged between 15 years and 59 years.
- The average age of the population in India is 29 years as against 40 years in the USA, 46 years in Europe and 47 years in Japan.
- The labour force in India is expected to increase by 42% while the labour force in the industrialized world is expected to decrease.
- This demographic dividend is expected to last for the next 25 years. This can become a demographic advantage to India if the right skills are imparted to the youth.

**Concerns:****Low productivity jobs:**

- Out of the total workforce of 52 crore, around 49% are employed in agriculture whose contribution to the economy is around 15% of the Gross Value Added (GVA).
- With the advent of government focus on infra-sector, there has been a structural shift of employment from agriculture to non-farm sectors like construction, trade and transport. These need semi-skilled labour.
- The high growth sectors have not been able to generate sufficient number of jobs. Hence, the overall productivity of Indian labour remains low.

**Need for new jobs:**

- The Indian economy will need to generate nearly 70 lakh jobs annually to absorb the net addition to the workforce. Considering the shift of labour force from low productivity employment, 80-90 lakh jobs will be needed in the coming years.

**Employability:**

- Employability of the Indian workforce has been a big challenge.
  - As per India Skills Report 2019, the employability of final year students of ITIs and polytechnics has declined in recent years.
- Lack of focus on industry linkages and core employable skills are the main reasons for the downturn in employability.

**Unemployment:**

- Labour Force Participation Rate (LFPR) has declined over the years by 5-6 % from 2011-12 to 2017-18. Unemployment rate has been higher among the educated. This indicates that despite increasing pace of skill development, unemployment rate among the youth has not declined.
- The mismatch between demand and supply of skilled labour is one of the causes for increasing unemployment rates among youth.

**Limited formal training:**

- In India, only around 2% of the population in the 15-59 years age group have received vocational training, and about 6.1% have had informal vocational training.
- About 83% of the workforce is engaged in the unorganized sector with limited training facilities.

**Way forward:**

**Increasing employability:**

- Skill development plans and strategies should be developed based on geography and sector. This would depend upon the availability of infrastructure and assessment of skill requirements.
- Training capacities of trainers in training institutes need to be upgraded to ensure the availability of qualified trainers.
- MSDE should have a single regulatory body with branches in all states to lay down minimum standards for all players in the skilling system and should issue National Skills Qualifications Framework (NSQF) aligned certificates.
- Internship in industries can help increase interactions between industry and trainees which will help close the skill gap and reduce the need for training centres.

**Scaling skilling and training:**

- To address the requirement of skilled workers in the unorganized sector, scaling up of RPL is required under the PMKVY using bridge training, apprenticeship, work based learning, etc.

**Increasing employment opportunities:**

- An overseas employment promotion agency can be set up at the national level under the Ministry of External Affairs to train and certify Indian workers keen on overseas employment, in line with international standards.

## Chapter 4- Skill Development: Artificial Intelligence and Machine Learning

**Technological growth:**

- Technological innovation has experienced exponential growth in the last two decades.
- Artificial Intelligence (AI) and Machine Learning are being promoted in various sectors to enhance productivity and efficiency. Automation is being pushed even in services such as healthcare and transport.

**Concerns:**

- These innovations have not only impacted the economic growth potentials but also resulted in rapid transformation in labour market globally.
- New technologies like Artificial Intelligence (AI) and Machine Learning can potentially shape new jobs and change the interaction of humans and machines. There is the threat of skill instability due to the fast changing technology leading to skill gaps. This could adversely affect the employability of the labour force.
  - The country presently faces a dual challenge of severe paucity of highly-trained quality labour and non-employability of large sections of the educated workforce that possess little or no job skills.
- A large proportion of the labour force is employed in the informal sector with limited exposure to skill development. The skill gap due to the evolving technologies could accentuate the existing inequalities in the society.

**Way forward:**

**Up-skilling and re-skilling:**

- The changing structure of manufacturing industry demands relevant up-skilling and re-skilling of the labour force to ensure they remain relevant.
- It is also important to have policy focus on equipping the youth with new age skills to match and maintain their global competitiveness.

**Focussed attention:**

- The states must realign their approach towards skill development and emphasise upon minimum number of candidates who must be trained with skills required for industry 4.0.

**Scaling up facilities:**

- Up gradation of ITIs as centres for new age skills training for candidates can be an important way forward.

**Restructuring curriculum:**

- There is a need to review and upgrade the curriculum of vocational education in consultation with the industry experts. The under-qualified instructors would need upgradation with new training.

**Soft skills:**

- Though technical skills are important, soft skills are also equally necessary. Soft skills such as creativity, problem solving and critical thinking are in high demand as they help expand the application of the new technologies.
- Soft skills allow the workers to be adaptable and flexible to navigate the new demands in their evolving roles.

**Involving private sector:**

- The skilling programmes should invariably involve industry and industry experts who are at the forefront of adoption of the emerging technologies. There is also a need for the promotion of strategic involvement of the private sector.

**Other emerging technologies:**

- There is a need to focus on new age skills like Internet of Things (IoT), Big data, 3D printing, Virtual reality and Robotics. These skills will equip youth to take up high paying jobs in the domestic and international markets.

## Chapter 5- Skill Development and Entrepreneurship among Youth and Women

**Skilling Youth:**

Considering the existing skill gap and the need for formal and quality skilling to ensure adequate job opportunities for the youth, there is a need to focus on the following aspects.

**Integrated approach to skilling:**

- Skill development and entrepreneurship culture needs to be built from the bottom to the top.
- Schools should have mandatory skill and entrepreneurship classes.
- There is a need for an integrated approach where skill development can be made an integral part of the education system at all levels.

**Skilling as a tool for rehabilitation:**

- Government schemes should target both the school drop outs and those pursuing higher education post school.
- In the case of children and unemployed youth found in conflict with the law, skill development initiatives can be used for reformation and rehabilitation.
  - Delhi Police's project YUVA (Yuva Udyamita Vikas Abhiyan) under PMKVY involves skill training of 3000 deprived youth.

**Focus on rural areas:**

- Given the fact that the rural areas house a large chunk of the youth population, skill development programmes in rural areas could not only contribute in improving productivity but also enable the rural young people to access emerging employment opportunities beyond the agricultural sector.
- Institutes for entrepreneurship training such as Rural Development and Self Employment Training Institutes (RUDSETI) need to be promoted. The convergence with national employment programmes such as the National Rural Employment Guarantee Scheme (NREGS) provides an opportunity for imparting skills training in rural areas.

**Skill development in women:****Challenges:**

- Although women constitute almost half of the demographic dividend, the female labour participation rate has remained lower than male participation.
- Women account for the most unpaid work.
- Women are over represented in the informal sector.
- They face significant wage differentials vis-a-vis male counterparts.
- Poor ratio in participation of women in labour force gets repeated in poor ratio in participation of women in skill development courses.
  - As per the All India Survey on Higher Education (2015-16), females constitute only 17% of the total enrolment in polytechnic colleges.
- Women face a multitude of barriers in accessing skills. Women are discouraged from getting into vocations which are traditionally considered tough; such as automobiles and construction works. This restricts job opportunities for women.

**Way forward:***Focused attention:*

- The skewed ratio shows that skill development initiatives need to have a targeted focus towards women.
- There is the need for exclusive training facilities for women.

*Sector specific policies:*

- Sectors like hospitality and tourism industry which require soft skills can help absorb a large number of skilled women into the workforce. Appropriate policy measures should be made in this direction.
- Skill development programmes should encourage women to venture into traditionally male dominated areas.

#### *Affirmative actions:*

- In order to overcome barriers and facilitate participation, proactive measures like providing hostels, scholarships, transport, training materials and loans to women should be implemented.
- There is a need to make the skill training centres accessible to women mainly in the rural areas.

#### *Collaboration:*

- Skill development initiatives under MSDE need to work in synergy with policies of Ministry of Women and Child Development. This collaboration would be more effective for women.
  - Schemes of MWCD such as Support to Training and Employment Programme for women (STEP), Swavalamban, etc. which focus on skilling of women should be synergistically integrated with programmes of MSDE.

### **Need for promoting entrepreneurship:**

#### **Job creator:**

- In India, approximately 12.8 million strong labour force enters the job market annually. It is not possible for the existing governmental and non-governmental institutions to generate enough jobs to accommodate all job seekers.
- It is imperative that a part of these job seekers venture into entrepreneurial activities so that apart from making a living for themselves, they can create job opportunities for others too.
- Entrepreneurship based on innovation has immense growth potential.

#### **Economic growth:**

- Entrepreneurs are the essence of economic growth. The employment created acts as a source of income for many others, they produce new and innovative products and services, drive greater upstream and downstream value chain activities.

#### **Quality of life:**

- Entrepreneurship also involves innovative problem-solving initiatives which can simplify the lives of people.

### **Measures to promote entrepreneurship:**

- The number of local entrepreneurs emerging annually in India is very low. The Global Innovation Index 2019 ranks India 52 out of 129 countries in innovation performance.
- Accelerating entrepreneurship based on innovation is crucial for India. The National Policy for Skill Development and Entrepreneurship focuses on promoting entrepreneurship.
- There is a need of supportive environments for entrepreneurship to flourish. For instance,
  - Access to funding.
  - Entrepreneurial culture.
  - Supportive regulatory and tax regimes.
  - Educational systems that support entrepreneurial mindsets. Schools should develop entrepreneurship labs.



- Coordinated approach that links public, private and voluntary sectors.
- Mentoring for access to markets, credit and appropriate technologies can help hand hold the entrepreneurial efforts in their infancy stages.
- Appreciating the complementarity of skill development and entrepreneurship, the skill development courses should focus on inculcating entrepreneurial courses among the trainees.
- An all inclusive approach to strengthen the entrepreneurship development scenario in the country which is competent, quality conscious, market savvy, innovative and has globally competitive entrepreneurs needs to be carefully mentored and encouraged.

## Chapter 6- Skill Development: Imperative for Achieving Growth Targets

Skills and knowledge are the driving forces of economic growth and social development for any country. The Government of India has set a target of a \$5 trillion dollar Indian economy by 2023-24. This requires impressive growth rates. Skill development can be an enabling factor in achieving these growth targets.

### **Labour productivity:**

- The Indian economy has traditionally been a credit fuelled economy. The labour productivity has been relatively low given the fact that a majority of the workforce is employed in the unorganized sector and the agricultural sector is plagued by disguised unemployment.
- Skill development will help increase the productivity of the Indian labour force and the productivity of the Indian economy.

### **Boosts trade opportunities:**

- Higher productivity will decrease the cost of Indian manufactured products. This will ensure India's competitiveness in the global market.

### **Skill development and entrepreneurship:**

- Better skills and knowledge developed through skill development training will provide the young an opportunity to take up entrepreneurial activities.
- This, apart from helping them make a living for themselves, can create job opportunities for others too. The employment created acts as a source of income for many others and creates demand in the economy.
- Entrepreneurship helps produce new and innovative products and services and hence, helps drive greater upstream and downstream value chain activities.

### **Help reap the demographic dividend:**

- Creation of trained workforce for the country will help increase employment opportunities and thus help reap the benefits of demographic dividend.

### **Inclusive growth:**

- Skill development leads to economic growth and subsequent poverty reduction. Poverty reduction will aid the economic development owing to better demand and savings in the economy.

### **Attracts foreign investment:**

- The availability of skilled labour could act as a sufficient incentive for financial investment in the country and hence also aid FDI and FPI.

#### **International job opportunities:**

- Skilling will empower individuals to gain access to even international employment opportunities. These outbound migrants can contribute to the Indian economy in the form of remittances.

#### **Conclusion:**

- Large scale skill development is thus an imminent imperative. The Skill India Mission will need to keep the momentum going to achieve India's ambitious growth targets.
- Innovative skill development initiatives will help to actualise the inert potential of the Indian economy.

## **Chapter 7- Women Entrepreneurs in India: Opportunities and Challenges**

Quote by Dr. A P J Abdul Kalam -“Empowering women is a pre-requisite for creating a good nation. When women are empowered, a society with stability is assured. Empowerment of women is essential as their thoughts and value systems lead to the development of a good family, good society and ultimately a good nation.”

#### **Need for women entrepreneurship in India:**

##### **Economic growth:**

- Women's increased participation in the economic activities and their entrepreneurial endeavours will lead to economic growth.

##### **Narrowing gender gaps:**

- Women entrepreneurs inspire other women to start businesses leading to job creation for women, which ultimately helps in bridging the gender gap in the workforce.
- It will help increase the female Labour Participation Rate in India. This will enable women to be part of mainstream economic development.

##### **Spin off effect:**

- Enabling women benefits future generations because women tend to spend more on their children's education and health, which in turn boosts productivity.
- Women entrepreneurship is seen as an effective strategy to solve the problems of urban and rural poverty.
- Apart from contributing to the economic well being of the family and communities, women entrepreneurship aids poverty reduction and women empowerment, thus contributing to the achievement of Sustainable Development Goals (SDGs).

##### **Effect on company culture and safety at workplace:**

- Studies have shown that women led companies tend to have better company culture, higher values and better transparency, and higher sensitivity to safety issues.

- Higher number of women in the workforce also leads to the much-required diversity at workplace and brings some advantages to the efficiency of the company.

**Current status:**

- In the modern era, more and more women are taking up entrepreneurial activities especially in medium and small scale enterprises.
- Women's enterprises are mostly micro sized or proprietary, and a majority are informal.
- The largest number of establishments under women entrepreneurs is clustered in the southern states of India.
- The women entrepreneurial activities have been mostly limited to a few sectors like handloom, handicrafts and fashion, food processing units, educational sector and beauty and wellness industry.

**Way forward:**

- While there are a large number of schemes for promoting women entrepreneurship, the schemes have to be sensitive to the special needs of the women entrepreneurs.
  - Women entrepreneurs have limited access to bank loans, lack networks, market intelligence and knowhow to start and expand their business.
- Programmes and policies need to be customised to encourage and also support entrepreneurship among women.
- Women entrepreneurs must be moulded properly with entrepreneurial traits and skills to truly empower them to compete, sustain and strive in the economic arena.

**Additional information:**

- The Indian Tourism and Hospitality industry is 34<sup>th</sup> as per the ranking in Travel and Tourism Competitiveness Index released by the World Economic Forum.

## Chapter 8- Skilling the Youth through Science and Technology

India's science, technology and innovation policy, 2013 emphasizes that science, technology and innovation should focus on faster, sustainable and inclusive development of the people. It aims to bring all the benefits of science, technology and innovation to the national development, and bring sustainable and more inclusive growth. The Department of Science and Technology has initiated support for research and entrepreneurial skills among youth through various programmes.

**Skill development training through science and technology:**

- Skill development training through science and technology aims at development of skills through training intervention by developing special curricula and creation of models for offbeat and innovative skill areas.

**Student start-up NIDHI award:**

- Student start-up NIDHI (National Initiative of Development and Harnessing Innovation) award aims to take forward student innovations in New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC) to commercialization stage and accelerate the journey from idea to prototype by providing initial funding assistance.

- NewGen IEDC aims to inculcate the spirit of innovation and entrepreneurship amongst the young S&T students, and encourage and support start-up creation through guidance and mentorship.

#### **NIDHI-STEP/TBIS and NIDHI-PRAYAS:**

- National Initiative of Development and Harnessing Innovation (NIDHI) - Science and Technology Entrepreneurs Parks and Technology Business Incubators (STEP/TBIS) are institutional linked facilities promoted by the Department of Science and Technology to nurture innovative and technologically-led new ventures during the start up phase.
- Promoting and Accelerating Young and Aspiring Technology Entrepreneurs (PRAYAS) is one of the nine programs of the Department of Science and Technology to support young innovators to turn their ideas into proof of concepts.

#### **KIRAN scheme:**

- Knowledge Involvement in Research Advancement through Nurturing (KIRAN) is an exclusive scheme for women with the mandate to bring gender parity in Science and Technology.
- It aims to provide opportunities to women scientists and technologists for pursuing research in basic or applied sciences in frontier areas of science and engineering.

#### **AWSAR initiative:**

- Augmenting Writing Skills for Articulating Research (AWSAR) is an initiative of the National Council of Science and Technology Communication to encourage, empower and endow popular science writing among young PhD scholars.

#### **Technology based Entrepreneurship Development programme (TEDP):**

- Technology based Entrepreneurship Development Programme (TEDP) primarily focusses on the training and development need of S&T entrepreneurs in specific technological areas.
- The participants are provided hands on training in indigenous technologies developed by R&D institutions that are available for commercial exploitation.

#### **CSIR's Integrated Skill Initiative programme:**

- This involves integrated skill initiatives in diverse areas by the CSIR labs.

## **Chapter 9- Vocational Education across Schools in India**

#### **Demographic dividend:**

- With over 60% of its population in the productive age group, India has entered a period of demographic dividend which is approximated to last another 37 years until 2055.
  - The United Nations Population Fund defines demographic dividend as the economic growth potential that can result from shifts in a population's age structure, mainly where the share of the working age population is larger than the non-working age (or dependent) population.
- In order to realize this economic potential, it is imperative to ensure that India's youth is equipped with employable skills.

#### **Vocational education:**

- Vocational education refers to education programmes that are designed to prepare individuals for specific occupations.
- It imparts specific competencies in defined areas through knowledge, attitude and practical training.

### **Benefits of vocational training:**

- There are ample benefits to vocational education.
  - Vocational training leads to higher average daily wage rates, increased work participation and lower unemployment rates among vocationally educated labour in comparison to untrained labour.
  - It provides an alternative career path to those not pursuing tertiary education.
  - Vocational education can even serve as an impetus for entrepreneurship.

### **Challenges:**

- The school education sector is plagued by the issue of high dropout rate. Students perceiving low returns from education drop out of school to enter the labour market.
- Very low and stagnant enrolment in vocational streams.
  - Less than 2% of the classes 11-12 students chose to pursue vocational stream between 2014 and 2017.
- Despite the benefits of vocational education the coverage of vocational education in schools in India is low.
  - As per the Unified District Information System for Education (UDISE) 2016-17, only 4084 schools offered National Skills Quality Framework compliant vocational education in the country and this too, is not evenly distributed between the states.
  - The coverage of vocational education still remains less than 5% in almost 75% of the country.
- Vocational education sector faces the issue of low industry linkage, inadequate number of trained teachers, etc.

### **Government measures:**

- Post independence, vocational education found significance in the 1964 Kothari Commission report which suggested increased focus on vocational training. Subsequently, the education policy of 1986 envisaged introduction of a systematic, well planned and implemented programme for vocational education.
- The Department of School Education and Literacy at MHRD is in charge of developing and formulating national policies on vocational education at the school level.
- Under the [Samagra Shiksha Scheme](#), the government is implementing the centrally sponsored scheme of vocationalisation of school education.
- The Central Board for Secondary Education also offers vocational education at both the secondary and higher secondary stages.
- The National Institute of Open Schooling also offers over 100 vocational courses via open and distance learning mode.
- The [AICTE](#) has recently introduced degree/diploma programmes in vocational education.
- The draft National Education Policy 2019 aims to integrate vocational education in all schools and provide access to vocational education to at least 50% of the learners by 2025.

### **Way forward:**

- Vocational education should take centre stage in public policy. The foundation for strong skill sets should be established at the school level. There should be expanded access to vocational education in schools and greater integration of vocational education with general academic stream.



- Revamping the spectrum of vocational education will lay the bedrock for India to realize the sustainable development goal to promote lifelong opportunities for all.

#### **Additional information:**

- The World Bank's World Development Report 2019 is titled the "Changing Nature of work".

## **Chapter 10- Skill Development and Healthcare**

There is a definitive and important role for skill development in health service delivery, given the many benefits from such an intervention. The return on investment on health sector skill development is clearly high and desirable.

- It would help reduce shortage of skilled health workforce.
  - The NSDC report of 2015 notes that as against the required health workforce of around 7.4 million by 2022 for India, there were only around 3.6 million health workers in 2013.
  - The National Health Profile 2018 of India reports around 5.8 million health workers in India.
  - This leads to a density of only 30 health workers/10000 people which is far below the threshold of 44.5/10000 required to achieve SDG-3 as prescribed by WHO.
  - The Universal Health Coverage goal of the New National Health Policy 2017 also recognizes the challenges of shortage and inequitable distribution of health workforce.
- It helps improve health outcomes and increases access to quality health services.
  - Apart from focussing on adding new members to the workforce, the government programmes would also have to focus on re-skilling and up-skilling of available staff through job training.
  - The increased number of skilled workers would help serve the underserved, marginalized populations.
  - It will help in improving their health outcomes and address inequities.
- It helps empower women workers by creating additional jobs.
  - India has intensified access to health services through the Ayushman Bharat Programmes via 150,000 health and wellness centres.
  - It would create 1.5 lakh jobs for mid-level health providers and community health officers.
  - Increasing the number of health jobs is a major opportunity to rapidly increase the participation of women in the labour market.
- Leads to economic growth and development.
  - Skill development for health and resulting health improvement can prove beneficial for the economy as well.
  - It has been estimated that every dollar invested on health gives 9 to 10 times economic return.
- Payback across multiple SDGs:
  - United Nations High Level Commission on Health Employment and Economic Growth (ComHEEG) highlights that investment in the health workforce can have a significant payback including:
    - SDG 1 Poverty elimination
    - SDG 3 Good Health and Wellbeing
    - SDG 4 Quality Education
    - SDG 5 Gender Equality
    - SDG 8 Decent work and Economic Growth

#### **Conclusion:**

Skill Development in Healthcare Delivery will contribute to India's progress towards Universal Health Coverage, accelerate economic growth and create employment. It is an "everyone-win" situation for the country with maximum benefits to rural and underserved settings.



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