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Improvising Skill Development & Employability Potential through Higher Education, Research & Innovations in India

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ABSTRACT: Education, research and innovations contribution in to the field of youth and adult education on skills development in India is a focused study in this review paper. It is in line with the skills acquired in formal education to prepare youth and adults for the world of work ranging from informal learning on the job, apprenticeship and enterprise-based training, to learning off the job in government and non-governmental training institutions. Role of National Skill Development Corporation India (NSDC) and UGC is referred and illustrated. It also highlights livelihood programs run by Govt of Rajasthan under Make in India trails. The objective is to look in to the current policies supporting skills development programme. Identification of gaps between government and private programs that need to be filled is duly intended during the study. The aim is to collect lessons learned from past policy interventions, how higher education institutes can contribute in successful skill development of the country which is the flagship programme of the government.

KEYWORDS: Skill development, vocational education and training, NSDC, UGC, Livelihood, Make in India

I. INTRODUCTION

India has gradually evolved as a fast developing modern economy due to the abundance of qualified, capable, motivated and flexible human capital. However, there is a need to further develop and empower the human capital to ensure that country is standing tough and tall in global competiveness. The term skills development is used to describe a wider array of institutions and activities influencing employment and earnings. When referring to the preparation of youth and adults for employment, a subtle shift in understanding occurs. The discussion begins to shift from talking about education to talking about skills. Attention extends to informal learning on the job, structured apprenticeships and other enterprise-based training, along with government and non-governmental training programs besides technical and vocational education. Skills development is a much broader concept, more diverse, hence, more difficult to monitor. Despite the utmost important and attention given to education and training, there is still a shortage of skilled manpower in India to address the mounting needs and demands of the economy. In the current scenario, the government is dedicatedly striving to initiate and achieve formal/informal skill development of the working population via education/vocational education/skill training and other upcoming learning methods. The paper will focus on the topic of skills development with special reference to India. It is in line with the skills acquired in formal education to prepare youth and adults for the world of work ranging from informal learning on the job, apprenticeship and enterprise-based training, to learning off the job in government and non-governmental training institutions. It attempts to make a distinctive contribution in to the field of youth and adult education. The paper is organized in four parts:

- 1. First Part begins by exploring what is meaning of skills development, general concept and current scenario in India
- 2. Second part is an overview of different source of skills development in India.
- 3. Third part is the core of paper, highlighting contribution of higher education institutes, Make in India Initiative.
- 4. Fourth part reflects on reform, conclusion and recommendations.



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Concept of Skill Development

A growing number of countries have achieved the goal of universal primary education and others are moving closer to this goal. Young people who expect to pursue further education and training to improve their chances for employment and higher earnings get benefited from these goals.

Skill: A skill is the learned ability to carry out a task with pre-determined results often within a given amount of time, energy, or both. In other words the abilities that one possesses. Skills can often be divided into **domain**-general and domain-specific skills. For example, in the domain of work, some general skills would include time management, teamwork and leadership, self motivation and others, whereas domain-specific skills would be useful only for a certain job. Skill usually requires certain environmental stimuli and situations to assess the level of skill being shown and used. People need a broad range of skills in order to contribute to a modern economy. Skill development has always been an important agenda for all the governments India has seen so far. When it comes to a fast developing country like India, the desired set of skills is of much more importance than any other economy. Different types of skills are needed to be developed in an individual in order to meet lifestyle and industrial needs. A few can be named as *Labor Skill*, *Life Skill*, *People Skill*, *Social skill*, *soft skill*, *hard skill*, *etc*. Realisation of type of skill required for a specific job or task is an essential need of the hour.

Skill Development: According to the International Labour Organization (ILO), "Skill development is of key importance in stimulating a sustainable development process and can make a contribution in facilitating the transition from an informal to formal economy. It is also essential to address the opportunities and challenges to meet new demands of changing economies and new technologies in the context of globalization." The objective of Skill Development is to create a workforce empowered with the necessary and continuously upgraded skills, knowledge and internationally recognized qualifications to gain access to decent employment and ensure India's competitiveness in the dynamic global market. It aims at increasing the productivity and employability of workforce (wage and self-employed) both in the organized and the unorganized sectors. It seeks increased participation of youth, women, disabled and other disadvantaged sections and to synergize efforts of various sectors and reform the present system with the enhanced capability to adapt to changing technologies and labour market demands. Skills development can help build a "virtuous circle" in which the quality and relevance of education and training for all genders fuels the innovation, investment, technological change, enterprise development, economic diversification and competitiveness that economies need to accelerate the creation of more jobs.

Current Scenario of Skill Development in India

A committee has been set up under the 'Skills Innovation Initiative' at National Skill Development Agency (Government of India) to bring new ideas and practices to the national level. This will benefit in implementing and



uniform skill development program across the nation. The skill development of the working population is a priority for the government. The objective of National Policy on Skills (2009) is to expand on outreach, equity and access of education and training, which it has aimed to fulfil by establishing several industrial training institutes (ITIs), vocational schools, technical schools, polytechnics and professional colleges to facilitate adult leaning, apprenticeships, sector-specific skill development, e-learning, training for self employment and other forms of training. However, a fresh look at this policy was much needed in the frequently changing and more demanding industry needs. It led to the introduction of the National Policy on Skill Development and Entrepreneurship, 2015. The objective of this policy is to meet the challenge of skilling at scale with speed and standard (quality). It aims to provide an umbrella framework to all skilling activities being carried out within the country, to align them to common standards and link the skilling with demand centres. The effort is also to identify the various institutional frameworks which can act as the vehicle to reach the expected outcomes. This policy links skills development to improved employability and productivity.



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Vocational education and Women:

Vocational education and training can help widen the opportunities for young women. Women form a significant proportion of this work force in India; however, they are largely concentrated in the informal sector, engaged in vocations characterized by low earning, low productivity, poor working conditions and lack of social protection. Even when employment is not improved, the option to pursue a technical or vocational pathway in secondary education can lead to higher retention and educational attainment. Students who elect not to continue their schooling in an academic curriculum may choose to stay in school beyond the compulsory schooling age when a vocational option is available. Many evidences have shown that technical and vocational education is more effective when focused on skills closely linked to market demand. Hence, initiatives should be formulated accordingly. A focussed Vocation-based training is the missing link between education and employment.

II. DIFFERENT SOURCES OF SKILL DEVELOPMENT IN INDIA

India is one of the youngest nations in the world with more than 54% of the total population below 25 years of age. India's workforce is the second largest in the world after China's. While China's demographic dividend is expected to start tapering off by 2015, India will continue to enjoy it till 2040. India has the advantage of the "Demographic Dividend" (younger population compared to the ageing population of developed countries), which can be cultivated to build a skilled workforce in the near future. As compared to western economies where there is a burden of an ageing population, India has this unique 20–25 years window of opportunity. This "demographic dividend" means that as compared to other large developing and developed countries, India has a higher proportion of working age population vis-à-vis its entire population. It is estimated that by about 2025, India will have the 25% of the total global workforce. Only way appears to reap benefits of demographic dividend is to utilize skilled workforce. India has immense potential to not only meet its own demand, but become a worldwide hub for outsourcing skilled manpower. Government of India has set up a target to impart necessary skills to about 500 million people by 2022, in line with the skilled man power requirement of future. In view of this great advantage, not only government, but many private sector players have come forward to enhance skill development among youth of India who will play a key role in shaping future of India.

Private Sources: Private sector plays a major role is overcoming the gaps in government policies. However, their motive is to expand and scale up their very own enterprises. Thus, their process of skill development may vary. For instance, process flows like this:

Problem recognition: where the skilled workforce is required.

- Identifying the desired set of skill needed to complete the operation.
- Finding right candidates to be trained.
- Developing skills and improvement in performances.
- Place on job and candidate earn salary for the task.

This type of skill development is very selective and doesn't benefit a larger pool of unemployed youth. As not everyone have same calibre, interests and remarkable motivation to do anything different or offbeat. Therefore, a common platform is needed to increase number of chances for every unemployed youth in country. Skill development programs should be designed in such a way that more and more individuals get benefit. Skills development is the intended output of education and training efforts and it should be an enabler for growth. Skills development, therefore, must be able to:

- Improve productivity in the workplace and the competitiveness of a businesses, and
- Improve the quality of life of workers, their prospects of work and their mobility.

Efforts are being made to mobilise private sector investments in various forms. Govt is proposing to set up a good number of ITIs (Industrial Training Institutes) and ATIs (Advanced Training Institutes) with active involvement of the private sector. *Employers are active trainers, but not all employers train and those who do, do not train all workers*.

Government Sources: Directorate General of Employment & Training (DGE&T), Ministry of Labour and Employment has implemented various remarkable skill development programs across India such as:

- Craftsmen Training Scheme (CTS)
- Advanced Vocational Training Scheme (AVTS)
- Apprenticeship Training Scheme (ATS)
- Skill Development Initiative Scheme (SDIS)
- Special coaching scheme for SC/STs

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Vocational Rehabilitation Centres for Handicapped (VRCs)

All above mentioned scheme has a definite target and a target group. Each scheme has its own objective and goals to be achieved. Different schemes aid in development of respective target group. Thus, it enables government plans to have a national scheme for uniform skill development across the nation. However, upon analysing available schemes and initiatives closely, the education and skill development sector has not adequately responded to this emerging need, making it imperative to provide skill development and training in marketable skills and services. Thus there is an urgent need of more exclusively directed programs, initiatives and schemes to utilise the golden opportunity of demographic dividend in favour of our developing economy. India has gradually evolved as a knowledge-based economy because of its abundant capable, flexible and qualified human capital. However, there has been a constant a need of further development and empowerment of human capital so that country's global competiveness is ensured.

The Ministry of Skill Development & Entrepreneurship

Pradhan Mantri Kaushal Vikas Yojana (PMKVY): A flagship scheme of Govt of India. The objective of this skill certification and reward scheme is to enable and mobilize a large number of Indian youth to take up outcome based skill training and become employable and earn their livelihood. Under the scheme, monetary reward would be provided to trainees who are successfully trained, assessed and certified in skill courses run by affiliated training providers.

Udaan: Udaan is a Special Industry Initiative for Jammu & Kashmir in the nature of partnership between the corporate of India and Ministry of Home Affairs and implemented by National Skill Development Corporation. The programme aims to provide skills training and enhance the employability of unemployed youth of J&K. The Scheme covers graduates, post graduates and three year engineering diploma holders.

STAR (Standard Training Assessment and Reward): This National Skill Certification and Monetary Reward Scheme, was operational between August 2013 and September 2014. In its place NSDC is the designated implementing agency working through various Sector Skill Councils (SSC)

Vocationalization of Education:

- a) At School level: The Centrally Sponsored Scheme of Vocationalization of Secondary Education of Ministry of HRD, Government of India lists out a crucial role for NSDC and its Sector Skill Councils (SSCs) in implementation of NSQF. The trainings conducted in the scheme are based on the National Occupational Standards set by NSDC through its Sector Skill Councils. The scheme also mandates the SSCs to conduct assessments and certification jointly with the State Board.
- **b)** Higher Education: In order to bridge the industry academia gap NSDC has developed a unique model to integrate skill based trainings into the academic cycle of the Universities.

III. HIGHER EDUCATION INSTITUTES UNDER THE UMBRELLA OF NSDC, UGC & MAKE IN INDIA INITIATIVE

The National Skill Development Corporation (NSDC): It is one of its kinds, Public Private Partnership (PPP) in India, under the Ministry of Skill Development & Entrepreneurship. It aims to promote skill development by catalyzing creation of large, quality, for-profit vocational institutions. Its mandate is also to enable support systems such as quality assurance, information systems and train the trainer academies either directly or through partnerships. NSDC is a not-for-profit company set up by the Ministry of Finance, under Section 25 of the Companies Act. It has an equity base of Rs. 10 crore, of which the Government of India holds for 49%, while the private sector has the balance 51%. Key role of NSDC:

- Funding and incentivising
- Enabling support services
- Shaping/creating

It has established 249 training partners, which include for-profit and not-for-profit entities, represent the core philosophy of NSDC. It is bridging the gap between what the industry wants and what the skilling curriculum ought to be. In this reference, NSDC is working with 21 Universities, UGC and AICTE catering to more than 1200 colleges and 400 community colleges across the country. Some of the organization includes:

- Savitribai Phule University of Pune: 663 colleges and 57 autonomous institutions
- University of Delhi: 67 colleges including NCWEB and SOL
- University Grants Commission: 150 community colleges and 127 colleges for B.Voc and Degree programmes
- Tamil Nadu Open University (TNOU): 155 learning resource centres and 204 community colleges



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- Centurion University: 4 colleges
- AICTE: 100 Community Colleges
- Dibrugarh University, Assam has signed MoU with NSDC.
- Haryana and Punjab Universities.

Below are some examples of NSDC's PPP based approaches:

HERAUD: It offers various courses under *Pradhan Mantri Kaushal Vikas Yogna (PMKVY)* and is run through NSDC partners among others scheme where the Government reimburses the cost of training direct to the candidate upon successful completion. Heraud's approach to training is the result of trans-national collaboration between Australia and India. It is their unique way of bridging the skill gaps by borrowing from the qualification frameworks of these two countries.

APTECH: It has had an agreement since 2013 with NSDC to provide training for a multiplicity of disciplines. According to this arrangement, Aptech would form a separate SBU and attempt to train more than 2.33 million people nationwide over a period of 10 years in sectors such as banking, financial services, insurance, entertainment, organised retail, etc.

University Grants Commission (UGC):

The UGC was formally established only in November 1956 as a statutory body of the Government of India for the coordination, determination and maintenance of standards of university education in India. To meet the Government of India's target of imparting necessary skills to about 500 million people by 2022, UGC is implementing three schemes:

- 1. Community Colleges
- 2. B.Voc Degree Programme
- 3. Deen Dayal Upadhyay Centres for Knowledge Acquisition and Up-gradation of Skilled Human Abilities and Livelihood (KAUSHAL).

The University Grants Commission (UGC) has approved 98 skill-based community colleges from all over the country in year 2014. Sixteen of these colleges are from Maharashtra, thirteen are from Tamil Nadu, fourteen from Assam and eleven from Kerala. There are courses of duration ranging between six months to two years and include certificate, diploma and advanced diploma courses. Some of the course that are being offered are hospitality and tourism, power plant, chemistry, information technology, Automobile management, food processing, horticulture, healthcare, cast iron foundry. This scheme of community colleges has been introduced by the UGC community college scheme announced in the XII 5-year plan. Till date 150 community colleges and 127 colleges for B.Voc and Degree programmes have been recognised. The Commission hopes to curb the rising unemployment problem in India by providing nationally standardised and acceptable skill-based programmes. To give a push to skill-based vocations, the UGC has also revised its guidelines in accordance with the National Skills Qualification Framework for integrating skill and vocational development with mainstream general education in universities and colleges.

Make in India- A Change Indicator: The newly formed government in India has also realised the urgent need to develop more and more skilled manpower in the country. Therefore, recently, Prime Minister Mr. Narendra Modi has launched 'Make in India' program (A major new national program designed to transform India into a global manufacturing hub.) Stressing that labour reforms and skill development is essential for the success of the 'Make in India' campaign; Prime Minister has launched six new labour schemes including:

- A unified web portal where employers can submit a single compliance report for 16 labour laws,
- A new labour inspection scheme (Shramev Jayate Karyakram),
- Unique account number facility for EPFO members,
- A new skill development and apprenticeship scheme and
- A revamped Rashtriya Swasthya Bima Yojana.

"Skill development is a big opportunity for India," he said, adding that the revamped apprenticeship scheme and industrial training Institutes have a total of 34 lakh seats. Skill-based training is going to be the backbone of the Make-in-India initiative. The government must strive hard to increase the number of skilled workers in order to successfully compete with other nations. Our demographic dividend is a huge asset; we should now take all possible steps to ensure better facilities for skill formation. With the launch of the Make-in-India initiative, vocational education has been pushed to the forefront. However, Make in India is acting as a motivational force and initiating reforms in various segments that were in deep sleep till now. Therefore, overall impact and gain from this vision is yet to be realised in practical.



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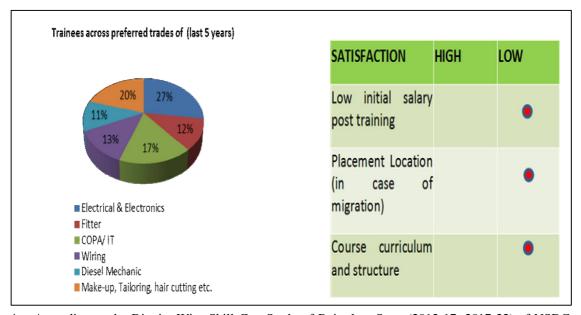
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Skill Development in Rajasthan: Established by the Government of Rajasthan in September 2004, the Rajasthan Mission on Skill and Livelihoods (RMoL) promotes appropriate livelihood opportunities for the state's economically weak working population. RmoL has introduced various innovative programs:

- Mobile Skill Training Facilities- to impart skill trainings to poor people living in inaccessible areas.
- **Eklavya Industrial Training Programme** Implemented in partnership with the Department of Employment through its district offices, the programme facilitates training of young people from poor Scheduled Caste and Scheduled Tribe families
- Akshat Kaushal Yojana- Government provides redeemable coupons to be used at training centres across the India

There are a Number of Departments such as Rural Development, Industries, Information Technology, Department of Women and Child Development (DWCD); Rural Nonfarm Development Agency (RUDA); Rajasthan Knowledge Corporation Limited (RKCL); etc. in the State Government are conducting short term training programmes of varying duration. Number of people trained through such trainings may be few thousands.

IV. REFORM, CONCLUSIONS RECOMMENDATIONS



4. According to the District Wise Skill Gap Study of Rajasthan State (2012-17, 2017-22) of NSDC, there are different preferences of trade for a skill program and satisfaction level. Above data is representing preferred trades within Rajasthan State only. At all India level also, such variations are seen. Fig-1. Preferred trades and the satisfaction levels post trainings among youths (Source-NSDC District Wise Skill Gap Study of Rajasthan State. (2012-17, 2017-22)

The figure showed that trainees preferred different trades. It clearly states the low satisfaction level in all the cases. This dissatisfaction is arising mainly due to lesser focussed skill based courses and curriculum made for youth. Most of the government initiatives are running with or for private ventures. Thus, the training which unemployed youth are getting is industrial demand based, not exactly choice based. Despite of so many programs running by private, govt and collaboration of both, a report from Swaniti Initiative on 'Skill Development In India' shows that formally skilled labour in India is still very low as compared to other nations.

Fig-2. Percentage of Formally Skilled workforce in different Countries

India's formally skilled workforce is approximately 2% - which is dismally low compared to **China** (47%), **Japan** (80%) or **South Korea** (96%). To leverage our demographic dividend more substantially and meaningfully, the Government launched the "Skill India" campaign along with "Make in India".

Following are the key reform areas for a developing country like India:



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Governance/ Monitoring and Evaluation reforms: Within government, ministries of education, labor, youth and sports, agriculture, health, defence, industry, and others operate schools and training centres with their own budgets and systems of accountability. These bodies have ranged from advisory to executive in nature. It is crucial to evaluate the progress and the quality of training provided in order to check discrepancies, whether it is between the needs of the trainees and the nature of training provided, or between the kind of skill being imparted and the demand from the local industry.

Finance reforms: While mobilizing more financing for skills development is a concern of all governments, how money is spent can be even more important. Spending in many cases focuses on inputs, starting with the number of classrooms built or refurbished, equipment bought, instructors hired and trained, and classes offered.

Market reforms: In a market for skills development, employers often play a dual role as a producer of skills and as a consumer. Labour also plays a dual role in producing skills with other inputs provided by employers, schools, and training centres, and as an intermediate consumer of the product. As a consumer, labour is making decisions about what skills they want to acquire and how they will go about producing the skills. These decisions require information about the jobs available with different skills and their earnings. Where there are information failures and the absence of competition markets tend to work inefficiently.



School reforms: Schools and training centres providing technical and vocational education in developing countries are the subject of frequent criticism. Critics cite the disconnect of skills produced in these institutions with what employers are seeking, curricula and instructional materials that are outdated, instructors that lack industry experience and knowledge of modern methods of production and instruction, managers who fail to focus on results, and facilities and equipment that are outdated and fail to reflect the modern workplace.

The **Apprentices Act, 1961** was enacted to regulate and control the programme of training of apprentices and for matters connected therewith. The term 'apprentice' means "a person who is undergoing apprenticeship training in pursuance of a contract of apprenticeship". The Act makes it obligatory on part of the employers both in public and private sector establishments having requisite training infrastructure as laid down in the Act, to engage apprentices in 254 groups of industries covered under the Act.



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V. CONCLUSION

Private sector plays a major role is overcoming the gaps in Government policies. However, their motive is to expand and scale up their very own enterprises. Thus, their process of skill development may vary. There is a lack of innovation in Skill development programmes. Almost all courses and curriculums are catering to industrial needs. It is the time when at one side employment opportunities are being created in industries, on the other hand Climate and environment is severely getting affected by fast industrialisation, besides other factors. Therefore, skill development programs must be framed innovatively such that there is environment protection, optimal utilisation of bio-waste and earning of livelihood can happen, all at same time. There appears a lack of trained trainers to impart necessary formal skill. Going by the different figures mentioned in article, target to create skilled workforce of 500 million by 2022 is large and no. Of certified trainers is very low. There is a strong need of trained trainers at different levels who can serve full time in a institute to provide full attention to the registered candidates. There are plenty of Government Schemes but most of them are in collaboration with private sources, or indirectly benefitting enterprises. More than 20 Ministries/Departments run 70 plus schemes for skill development in the country. However, there are gaps in the capacity and quality of training infrastructure as well as outputs, insufficient focus on workforce aspirations, lack of certification and common standards and a pointed lack of focus on the unorganized sector. Government intervention in skills development can make its impact on these grounds-

- External benefits to skills that are not captured in market practices.
- Market imperfections that distort the benefits and costs of skills development.
- Weak private training capacity.
- Inequitable access to good quality skills training.

VI. RECOMMENDATIONS

In India, both the government sector and the private sector have realized the critical role education plays in building skilled manpower and in turn boosting economic growth. Some of the recommended steps that the government can take to make skill training fully inclusive and achieve the training targets:

- 1. Unconventional formal skill training should be imparted to extract opportunities from least explored sectors.
- 2. More Focus should be given on rural, uneducated and unemployed youth managing livelihood in remote areas. Skills development courses should be framed keeping in view their necessities also, without getting shadowed by private/ enterprise needs. For instance, specialised training to convert bio waste into meaningful products to earn livelihood at the same time protecting environment.
- 3. Creating a work force of certified trainers to take skill development to new heights and train youth with some direction and motive, to generate a sense of entrepreneurship and earning on own.
- 4. These certified trainers should be motivated to reach to the most remote areas of country and impart skills. There should be a provision of rewards by Government when they manage to meet target.
- 5. Financial inadequacy should not be a reason for the majority of our population to be left skill-less and redundant.
- 6. A Career and Counselling Window may be developed at a district level with a pool of professionals from the field of psychology and skill planning to support the initiative.
- 7. Women participation in vocational education and training is especially low as compared to men. In order to increase enrolments, the combined efforts with local NGOs and panchayats on informing women and their families on the advantages of vocational education, which may lead to employability, is very important.
- 8. Government financing, for example, could be used to encourage private provision in rural markets underserved by private provision, but also for reaching the disadvantaged for whom there is limited private incentive to invest
- 9. The government can provide innovative packages of financing vocational training along with formal education to attract underprivileged youth.

It is therefore clear, that there is a urgent need for a paradigm shift in the skill development sector, in favour of innovations, improvements and high quality training



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