State Inputs in Human Skill Development: A Critique
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ABSTRACT:
This document will help to set the context of the skill development landscape in India, the current initiatives underway, challenges faced in skilling at a macro level as well as during implementation, and the way ahead.

We hope that this document will help raise more questions and thoughts that will channelize deliberations during the times to come.

SKILLS THE NEED OF THE DAY

A noted statesman had once said that while it may not always be possible for us to build the future for our youth, we can always build our youth for future.

Any nation requires skill and knowledge to be driving forces for its economic growth and development of the society. The challenges and opportunities of world of work can be better adjusted by nations equipped with better levels of skills. India is progressing towards becoming a knowledge based economy. In such circumstances, it becomes of extreme importance that the nation focuses on betterment of skills. It needs to be given proper consideration that these skills are relevant to the emerging economic environment. Under the current scenario, India is looking two major targets which are economic growth and inclusive development. In order to achieve these, our Gross Domestic Product (GDP) as a nation should increase on a consistent basis at 8% to 9% annually. Significant progress in areas such as infrastructure development, agricultural growth along with improvements in productivity, a healthy business environment supported by a skilled workforce, financial sector growth would consequently lead to the desired growth in GDP.

If we break it down, the agricultural sector accounts for one-fifth or 20% of the Indian economy. The secondary sector contributes to about 25% and tertiary to about 55% of the economy. In order to achieve the desired 8% to 9% annual growth, it becomes imperative that the secondary and tertiary sectors grow consistently at 10% to 11%, all this while assuming that the agricultural sector is growing at about 4% per annum. The numbers make an obvious conclusion that a large portion of the workforce would migrate from the primary sector i.e. agriculture to secondary and tertiary sectors. However, the manufacturing and the
service sectors differ highly from the agriculture sector in terms of the skill sets required. The implication that can be made is that there is and will be a large gap in skills when migration occurs. This can be evidenced by a shrinking employment in the agricultural sector. Skill development of the workforce becomes necessary in such a scenario.

Only about 40 million are engaged in the formal sector out of the current workforce of 450 million. As compared to other countries, where about 50% to 60% of the workforces have marketable skills, India only has a low 5%. The fact that about 12 million people are expected to join the Indian workforce every single year makes the challenge even more daunting.

This emerging socio-economic scenario is poised to drive the demand for skilling India.

**Structural Framework and Skill Development in India**

**Current Structure**

The following is the structure of the Education and Skill Development system in India.

*Figure 1: Current Structural Framework of the Education and Skill Development*

![Structural Framework Diagram](image)

Education, including all aspects higher education and college education falls under the Ministry of Human Resource Development. The University and Higher Education arm is responsible for all college education (Arts, Science, Commerce, etc.), while
engineering education, polytechnics, etc., fall under the category of Technical Education. The University Grants Commission (UGC) provides funds in the form of grants and also coordinates as well as sets standards for teaching, examination and research in universities. The All India Council for Technical Education (AICTE) is the regulatory body for Technical Education in India. Its objectives are: promotion of quality in technical education, planning and coordinated development of technical education system, regulation and maintenance of norms and standards.

A large part of the current vocational training infrastructure, the Government ITIs and Private ITCs, falls under the Ministry of Labour and Employment’s Directorate General of Employment and Training (DGET). The National Council on Vocation Training (NCVT) plays a key role in the formation of training curriculum, policies, standards, as well as in certification by means of the ‘trade test’. The National Skill Development Corporation (NSDC) has been set up under Public-Private- Partnership (PPP) mode as a Section-25 Company under the Ministry of Finance to provide viability gap funding and coordinate private sector initiatives. The Prime Minister’s National Council on Skill Development has been formulated to coordinate action on skill development.

Current Supply

The current education and skill development capacity in India is as revealed by the following table:

**Table 1: Current Education and Skill Development Capacity in India**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>No. of institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Education</td>
<td>Pre-Primary Schools</td>
<td>67,157</td>
</tr>
<tr>
<td></td>
<td>Primary Schools</td>
<td>7,72,568</td>
</tr>
<tr>
<td></td>
<td>Middle Schools</td>
<td>2,88,493</td>
</tr>
<tr>
<td></td>
<td>High and Higher Secondary</td>
<td>1,59,708</td>
</tr>
<tr>
<td>Vocational Training</td>
<td>Government ITI</td>
<td>2,076</td>
</tr>
<tr>
<td></td>
<td>Private ITC</td>
<td>5,529</td>
</tr>
<tr>
<td>College Education</td>
<td>Central University</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>State University</td>
<td>216</td>
</tr>
<tr>
<td>Category</td>
<td>Sub-Category</td>
<td>Enrolment</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Deemed University</td>
<td></td>
<td>101</td>
</tr>
<tr>
<td>Institutions of National Importance</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Research Institutions</td>
<td></td>
<td>140</td>
</tr>
<tr>
<td>Arts, Science &amp; Commerce Colleges</td>
<td></td>
<td>11,698</td>
</tr>
<tr>
<td>Technical and Professional</td>
<td>Engg., Tech., &amp; Arch., Colleges</td>
<td>1,562</td>
</tr>
<tr>
<td>Education</td>
<td>Medical Colleges (Allo/ Ayur/ Homeo/ Unani/ Nurs./ Pharm., etc.)</td>
<td>2,053</td>
</tr>
<tr>
<td></td>
<td>Teacher Training Colleges</td>
<td>1,669</td>
</tr>
<tr>
<td></td>
<td>Polytechnics</td>
<td>1,274</td>
</tr>
<tr>
<td></td>
<td>Others (Includes Law, Management, MCA/IT, Agriculture etc.)</td>
<td>2,513</td>
</tr>
</tbody>
</table>


The capacity of the education and skill development systems is as shown below:

**Table 2: Enrolment in the Education and Skill Development Systems**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>Enrolment</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Education</td>
<td>Pre-Primary Students</td>
<td>5,264,053</td>
</tr>
<tr>
<td></td>
<td>Primary (Class I - V)</td>
<td>132,048,727</td>
</tr>
<tr>
<td></td>
<td>Secondary (Class VI - VIII)</td>
<td>52,195,171</td>
</tr>
<tr>
<td></td>
<td>High School (Class IX - X)</td>
<td>24,971,520</td>
</tr>
<tr>
<td></td>
<td>Higher Secondary (Class XI - XII)</td>
<td>13,414,499</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-Total</strong></td>
<td><strong>227,893,970</strong></td>
</tr>
<tr>
<td>Vocational Training</td>
<td>Vocational Training - ITI/ITC</td>
<td>1,062,524</td>
</tr>
<tr>
<td>Higher Education</td>
<td>Ph. D / D. Sc/ D. Phil</td>
<td>36,019</td>
</tr>
<tr>
<td></td>
<td>MA</td>
<td>481,521</td>
</tr>
<tr>
<td></td>
<td>MSc</td>
<td>230,247</td>
</tr>
<tr>
<td></td>
<td>MCom</td>
<td>156,714</td>
</tr>
<tr>
<td></td>
<td>BA/BA (Hons).</td>
<td>3,727,727</td>
</tr>
<tr>
<td></td>
<td>B.Sc.</td>
<td>1,579,355</td>
</tr>
<tr>
<td></td>
<td>B.Com</td>
<td>1,455,457</td>
</tr>
<tr>
<td></td>
<td>BE/ B Arch</td>
<td>1,668,228</td>
</tr>
<tr>
<td></td>
<td>Medicine, Dentistry, Nursing, etc.</td>
<td>305,629</td>
</tr>
</tbody>
</table>
While the school education sector is about 227 million in enrolment, the combined enrolment in higher education and vocational training is about 15.3 million.

By limiting to this to the technically and vocationally qualified and skilled workforce, primarily comprising of ITI/ITC (1 million), BE (1.7 million), Polytechnics (0.7 million), we can observe that the current pool of skilled talent is around 3.4 million.

The Need for Skilled People: Demand and Supply Gap

Projected Demand
On a long-term basis, up to 2022, it is expected that India’s GDP will grow at a CAGR of about 8%.

With these growth rates, we expect that the employment in the economy will be about 500 million by 2022. For an economy to sustain this growth rate it is essential that the workforce be exposed to some form of skilling or the other (could be through higher/technical education or vocation skills or a combination of both). Thus it is expected that India will have to be home to a skilled workforce of 500 million persons by 2022.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP rate</th>
<th>growth</th>
<th>Projected Employment (in million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Agriculture</td>
</tr>
<tr>
<td>2011-12</td>
<td>9%</td>
<td>229.2</td>
<td>105.0</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>225.4</td>
<td>102.0</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>221.5</td>
<td>99.1</td>
</tr>
<tr>
<td>2016-17</td>
<td>9%</td>
<td>240.2</td>
<td>126.2</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>232.0</td>
<td>116.8</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>224.0</td>
<td>108.1</td>
</tr>
</tbody>
</table>

Source: ‘The Challenge of Employment in India – An Informal Economy Perspective’ (April, 2009)

The following table presents the share of employment in various sectors for various
growth scenarios till 2022. We do not see the proportion of employment to change significantly between 2017 and 2022.

Table 4: Share of Employment of different sectors till 2022

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP growth</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>Actual</td>
<td>51%</td>
<td>20%</td>
<td>29%</td>
<td>100%</td>
</tr>
<tr>
<td>2011-12</td>
<td>9%</td>
<td>47%</td>
<td>22%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>47%</td>
<td>21%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>48%</td>
<td>21%</td>
<td>31%</td>
<td>100%</td>
</tr>
<tr>
<td>2016-17</td>
<td>9%</td>
<td>43%</td>
<td>23%</td>
<td>34%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>44%</td>
<td>22%</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>45%</td>
<td>22%</td>
<td>33%</td>
<td>100%</td>
</tr>
<tr>
<td>2021-22</td>
<td>7% to 9%</td>
<td>41%</td>
<td>23%</td>
<td>36%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: ‘The Challenge of Employment in India – An Informal Economy Perspective’ (April, 2009) and IMaCS analysis

The challenge pertaining to the need for skilling would be further compounded by the fact that 95% of the employment would be generated in the informal sector (as per the National Commission for Enterprises in the Unorganized Sector - NCEUS).

Table 5: Projected share of informal employment (in million, and %)

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP growth</th>
<th>Employment (in million)</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Formal</td>
<td>Informal</td>
</tr>
<tr>
<td>2011-12</td>
<td>9%</td>
<td>34.5</td>
<td>453.1</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>34.1</td>
<td>442.2</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>33.8</td>
<td>431.4</td>
</tr>
<tr>
<td>2016-17</td>
<td>9%</td>
<td>33.9</td>
<td>522.0</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>33.0</td>
<td>490.5</td>
</tr>
<tr>
<td></td>
<td>5%</td>
<td>32.3</td>
<td>461.0</td>
</tr>
<tr>
<td>2021-22</td>
<td>7% to 9%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: ‘The Challenge of Employment in India – An Informal Economy Perspective’ (April, 2009) and IMaCS analysis

The following sectors are expected to drive the growth of the economy as well as play a significant role in employment

1. Auto and Auto Components
2. Building and Construction Materials
3. Building and Construction
4. Real Estate Services
5. Electronics and IT Hardware
6. Education and Skill Development Services
7. Food Processing
8. Gems and Jewellery
9. Healthcare
10. Textiles
11. Leather and Leather Goods
12. Organised Retail
13. Tourism and Hospitality
14. Transportation and Logistics
15. Media and Entertainment
16. BFSI
17. Chemicals and Pharmaceuticals
18. Furniture and Furnishings
19. IT
20. ITES.

From the above tables we also observe that the employment in the manufacturing and services sector would be in excess of 250 million persons. Illustratively, the sectors that would drive a significant portion of the employment are mentioned in the following figure.

**Figure 2: Illustrative human resource requirements across select sectors till 2022**

![Graph showing human resource requirements across select sectors till 2022]

- Textiles and Clothing
- Building and Construction Industry
- Auto and Auto Components
- Real Estate Services
- Organised Retail
- BFSI
- Gems and Jewellery
- IT and ITES
- Leather and Leather Goods
- Furniture and Furnishings
- Electronics and IT Hardware

Employment by 2022 (in Mn) vs Current Employment (in Mn) in 2008

- Textiles and Clothing: 61.6 vs 0.3
- Building and Construction Industry: 58.0 vs 13.0
- Auto and Auto Components: 48.0 vs 11.0
- Real Estate Services: 25.0 vs 17.6
- Organised Retail: 25.0 vs 11.0
- BFSI: 25.0 vs 4.3
- Gems and Jewellery: 20.0 vs 3.3
- IT and ITES: 17.5 vs 2.5
- Leather and Leather Goods: 14.8 vs 2.5
- Furniture and Furnishings: 14.2 vs 2.5
- Electronics and IT Hardware: 14.2 vs 4.3

Employment by 2022 (in Mn)

- Textiles and Clothing: 26.2
- Building and Construction Industry: 33.0
- Auto and Auto Components: 35.0
- Real Estate Services: 14.0
- Organised Retail: 17.3
- BFSI: 4.3
- Gems and Jewellery: 4.7
- IT and ITES: 5.3
- Leather and Leather Goods: 4.5
- Furniture and Furnishings: 3.4
- Electronics and IT Hardware: 3.3
Source: National Skill Development Corporation (NSDC)

As is obvious, the above sectors would, amongst themselves, have a demand of about 150 million of the 250 million that is required in the manufacturing and services sectors.

While observing the demographic patterns that are expected to emerge, about 860 million persons would be in the age group of 15 to 59 by 2022 (as compared to about 725 million currently).

![Figure 3: Projected Population till 2026](image)

Source: Census Projection Report and IMaCS analysis

Note: Age in years and population in ‘000s

Thus, about 12 million persons are expected to join the workforce every year.

Demand-Supply Gap

As per the above sections, with about 12 million persons expected to join the workforce every year, and an existing skill development capacity of about 3.4 million, it is thus required to enhance the skilling and technical education capacity to about 15 million (considering that even sections of the existing workforce would have to be trained). It is expected that this 15 million would be the required skill development capacity in vocational training in itself as a large portion of the employment (as well as workforce input) would occur in the lower portions of the skill pyramid. This is also the required skill development capacity as specified in the National Skill Development Policy.

The key skill sets which would be on demand given the demand-supply gap are presented in
the following table.

*Table 6: Key Skills in Demand in select sectors (illustrative)*

<table>
<thead>
<tr>
<th>Sector</th>
<th>Key Skills in Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles and Clothing</td>
<td>Power loom operators, Apparel Manufacturing, Fashion Design, QA, Knitwear Manufacturing, Sewing Machine Operators</td>
</tr>
<tr>
<td>Building and Construction Industry</td>
<td>Crane Operators, Electricians, Welders, Masons, Plumbers, Carpenters, Painters, etc.</td>
</tr>
<tr>
<td>Auto and Auto Components</td>
<td>Auto OEMs, Auto Component Manufacturers, Drivers, Sales, Servicing, Repair, Financial</td>
</tr>
<tr>
<td>Organised Retail</td>
<td>Shop floor executives, back-store operations, merchandising</td>
</tr>
<tr>
<td>Banking, Financial Services, and Insurance</td>
<td>Financial Intermediaries (including Direct Selling Agents), Banking and Insurance (including agents), NBFC, Mutual Funds</td>
</tr>
<tr>
<td>Gems and Jewellery</td>
<td>Jewellery Fabrication, Grading, Faceting, Polishing, Cutting</td>
</tr>
<tr>
<td>IT and ITES</td>
<td>IT – Software Engineering, Maintenance and, Application Development, End-to-End Solutions, Infrastructure Management, Testing, etc.</td>
</tr>
<tr>
<td>Leather and Leather Goods</td>
<td>Tanning, Cutting, Clicking, Stitching, Lasting, Finishing</td>
</tr>
<tr>
<td>Furniture and Furnishings</td>
<td>Carpenters, Operators engaged in Stitching, Sewing, Stuffing</td>
</tr>
<tr>
<td>Electronics and IT Hardware</td>
<td>Computers, Telecom, and Consumer Electronics Manufacturing, Sales, Servicing/ After Sales Support of electronics goods, High-Tech</td>
</tr>
</tbody>
</table>
Tourism and Hospitality Services

Front office staff, F&B Services and Kitchen and
Housekeeping staff, Ticketing and Sales, Tour

Source: National Skill Development Corporation (NSDC)

The Government and the industry have taken several steps to address the above-mentioned issues. Some of the key initiatives to address skill gaps are illustrated in the following pages.

Initiatives under the National Skill Development Policy

The National Skill Development Policy is aimed at empowering all individuals through improved skills, knowledge and internationally recognised qualifications to enable them to access decent employment, to promote inclusive national growth and to ensure India’s competitiveness in the global market.

The key elements of the Policy are as illustrated in the figure below.

Figure 4: Key elements of the National Skill Development Policy

Mission: National Skill Development Initiative will empower all individuals through improved skills, knowledge, nationally and internationally recognized qualifications to gain access to decent employment and ensure India’s competitiveness in the global market.

Aims

1. Enhancing individuals’ employability (wage/ self employment) and ability to adapt to changing technologies and labour market demands.
2. Improving productivity and living standards of the people.
3. Strengthening competitiveness of the country.
4. Attracting investment in skill development

Objectives

1. Create opportunities for all to acquire skills throughout life, and especially for youth, women and disadvantaged groups.
2. Promote commitment by all stakeholders
3. Develop a high-quality skilled workforce/entrepreneur
4. Enable the establishment of flexible delivery mechanisms
5. Enable effective coordination between different ministries, the Centre and the States and public and private providers.

Source: National Skill Development Policy

The coverage of the National Skill Development Policy is as follows:

1. Institution-based skill development including ITIs/ITCs/vocational schools/technical
schools/ polytechnics/ professional colleges, etc.
2. Learning initiatives of sectoral skill development organised by different ministries/departments.
3. Formal and informal apprenticeships and other types of training by enterprises
4. Training for self-employment/entrepreneurial development
5. Adult learning, retraining of retired or retiring employees and lifelong learning
6. Non-formal training including training by civil society organisations

**Modular Employable Skills (MES) Scheme**

The Modular Employable Skills (MES) scheme is being offered under the Skill Development Initiative Scheme (SDIS). The Ministry of Labour and Employment undertook the development of a new strategic framework, namely the MES, for skill development for early school leavers and existing workers, especially in the unorganised sector in close consultation with industry, micro enterprises in the unorganised sector, State Governments, experts and academia.

The main objective of the scheme is to provide employable skills to school leavers, existing workers, ITI/ITC graduates, etc. Skill levels of persons already employed can also be tested and certified under this scheme, i.e., certification of prior/experiential learning. Public Private Partnership (PPP) envisaged in the form of active participation of the industry/private sector in every stage of design and implementation of the scheme.

The MES concept has the potential to go a long way in furthering skill development as it has provided a pathway for multiple entry and exits as well as transforming skill development from long term skill acquisition periods (1 to 2 years) to short term (about 3 months).

There are 1,122 courses which are a part of the approved list of MES courses. The courses span the following sectors:

- Automotive repair
- Garment making
Banking and accounting

Beauty culture and hair dressing

Carpet

Chemical

Electrical

Electronics

Fabrication

Plastic processing

Printing

Process instrumentation

Production and manufacturing

Refrigeration and air conditioning

Retail

Toy making

Indian sweets, snacks, and food

Paint

Construction

Security

Wood work

Media

Food processing and preservation

Leather and sports goods

Agriculture

Travel and tourism

Soft skills

Courier and logistics

Insurance

Jute sector

Jute diversified products sector

Fashion design

Gems and jewellery

Hospitality

Information and communication technology

Khadi

Medical and nursing

Textiles-quality control

Textiles-knitting

Textiles-non woven

Textiles-wool

Textiles-silk

Sericulture

Poultry

Animal husbandry

Glassware.
Fisheries and allied sector
Fire and safety engineering
Business and commerce
Material management
Paper products
Industrial electrical
Textile-cotton ginning
Textile-cotton spinning
Textiles-winding
Textiles-reeling
Textiles-weaving preparation
Textiles-weaving
Textiles-chemical processing

The real challenge now lies in increasing the scale of the MES and its adoption in delivery through the private and public sectors. To promote private sector participation, the DGET has provided for the identification and registration of ‘Vocational Training Providers’ from the private sector, as well as assessing bodies (including industry associations).

Research and Development (R&D)

India’s skill development initiatives of skilling approximately 500 million people will not only benefit India but also make India the ‘global manpower hub’. Among the developing countries of the world, India has the highest potential to meet the skill gap with its large, young, English speaking population. The world shortage of skilled manpower will stand at approximately 56.5 million by 2020. With a target of skilling 500mn by 2020, India can not only fulfil its own requirements but can also cater to the labour shortages in other countries such as the U.S., France and Germany. Presently 80% of the workforce in India (both rural and urban) does not possess any identifiable or marketable skills. Therefore, bridging this gap (through the various skill development initiatives) could make India the global hub for skilled manpower, and also result in a surplus of skilled manpower of approximately 47 million 2020.

A successful R-EDP (Rural Entrepreneurial Development) Model has been implemented by the Grameen Bank in Bangladesh across various rural pockets. This has been customized and
implemented by the Indian Government as well.
Innovative E-learning Platforms have been gaining more popularity in recent times. They offer a greater mobile and flexible learning environment. Students can learn and attend classes and participate in discussion forums online, at their convenience, from their offices, homes and so on.

The Ministry of Human Resource Development (MHRD) has introduced multiple schemes that integrate skills training into the school curriculum in an innovative manner. 6800 schools have been covered under the vocationalization of Secondary Education programme, for students passing out of class 10. The National Program on Technology Enhanced Learning (NPTEL) gives support for distance education and web based learning. These are prepared at the seven Indian Institutes of Technology (IITs). The National Institute of Open Schooling (NIOS) has distance vocational education programmes for students dropping out after the 5th, 7th, 8th and 10th standards. The Apprenticeship Act has vocational courses for students graduating from a 10+2 vocational stream.

Issues

India’s workforce, the second largest in the world after China, needs to be trained across four levels, from the ‘White Collar’ workers to the ‘Rust Collar’ workers, linking them to job opportunities and market realities.

The skills challenge becomes acute for India considering that the country has a large portion of its population below 25 years of age. This young population can be transformed into a productive workforce giving the Indian Economy a ‘Demographic Dividend’. Currently a major proportion of this population is not productively engaged in economic activities due to a ‘skills v/s jobs requirement’ mismatch.

The skills v/s jobs mismatch often leads to economically inactive working age group people. This not only impacts the economy, it also has serious consequences for the society at large. Social unrest such as insurgency, red belt has been witnessed in several areas of India should be heeded with a measure of urgency.

Therefore to address the above challenges and reap the benefits of the demographic opportunity, skills initiatives in India need to focus on

1. **Quantity:** Over 65% of India’s large population is below 35 years of age; a robust
skills training and certification system for these large numbers is a mammoth task.

a. As per the 11th Five year plan Vocational education will be expanded to cover 20000 schools with intake capacity of 25 lakh by 2011–12. The programme will ensure mobility between vocational, general, and technical education and multiple entry and exit options.
c. The current skill development capacity is 3.1 million persons per annum which have to be upgraded substantially to 12 million persons per annum.

2. Quality: The diplomas and certificates with which students graduate are usually out of sync with the needs of the industry. As a result, industry finds it difficult to recruit adequately skilled labour and is forced to undertake large training programs. The shortage of skilled workforce results in loss of productivity, while training programs imply high labour costs.

a. The National Vocational Qualification Framework (NVQF) and National Vocational Education Qualification Framework (NVEQF) are Standards developed by the Sector Skills Councils (SSC's) can ensure clarity of career choices, options and acceptability of the qualifications.
b. The FICCI Skill Development forum has made recommendations for the 12th Five year Plan. In order to ensure the quality of skills delivered it has highlighted:
   i. Building skills training as a mainstream and inclusive program to be promoted by creating a formal arrangement among the three key stakeholders in the delivery pyramid: Government, Industry and Skills providers.
   ii. Industry led ‘Train the Trainer’ (TTT): One of the key components of Skills Training is the trainer. It is the pedagogical expertise of the trainer which ensures that the learner gets a wholesome experience, understands the standards and is fully equipped to apply the concepts learnt during his employment. The Training of Trainer hence becomes a major challenge.
   iii. As per the NSDC report on Education sector there is an incremental requirement of 8,664,000 teachers and trainers between 2008 – 2022.
   iv. The central government should provide funding support to state government institutions to make skills trainer a lucrative career option. This fund support shall not only allow the state governments to retain the trainers for the schools and other institutions but also invite participation of many more people into the training industry.
   v. Greater focus should be given to International Collaborations so that
      1. There is better Understanding of the fast changing skills demands
      2. Increased FDI in Skills
      3. Promoting $B2B$ partnerships between Indian and
International companies

4. Engaging Multi National Corporations to provide skills solutions that transpose the models and practices
5. Reverse transfer the best practices from India to world

3. Access: India’s large geographical territory, difficult terrain and varying social economic conditions make the implementation of standardised, skill-based instruction a huge challenge

   a. A very large geographical expanse comprising of 6,38,365 villages, 4378 towns over 35 cities and 640 districts, with difficult terrain and varying social economic conditions make it difficult for all learners to have access to training.
   
   b. States like Bihar, (with a population greater than that of Germany), Jharkhand, etc have little access to skills training and the population comprises of a large unskilled workforce. There is wide disparity in industrial development, and have little industrial activity, which makes it difficult for workers to find jobs.
   
   c. Nearly 37 percent of the Indian population lives below the poverty line and lives on less than 1 Dollar a day. They cannot afford even basic amenities leave aside education and training.
   
   d. About 89% of the 15-59 year olds have had no vocational training. Of the 11% who received vocational training, only 1.3% received formal vocational training. The current training capacity is a fraction of the 12.8 million new entrants into the workforce every year. Therefore access to skills programs becomes a major challenge.
   
   e. In the recommendations made by The FICCI Skill Development forum for the 12th Five year Plan it has highlighted the following points to address the quantity issues.

   i. A need for policy convergence by building skills training as a mainstream and inclusive program, to be promoted by creating a formal arrangement among the three key stakeholders in the delivery pyramid: Government, Industry and Skills providers
   
   ii. Greater interaction should be encouraged among industry, academia and skills providers to narrow the gap between the demand and supply of skilled manpower
   
   iii. Focus on Informal sector by finding a model that reaches out to the people and livelihood promotion institution and NGOs are engaged effectively.
   
   iv. Large corporate houses could engage in training programs for youth from rural, urban villages, towns and cities, as an Industry skills training would offer immediate return to the society by improving lives of people.
f. Since India has set a huge target for itself of 500 million people it requires programs that are scalable, replicable and accessible, this has created a unique opportunity in terms of economies of scale for the new providers entering the market. While this has resulted in a number of new organisations to venture into the bottom of pyramid skills space, there is still a huge need for more companies to enter the market and offer good quality service if they are adequately incentivized.

The Road Ahead

The world (both developed and developing economies) is experiencing an ever widening gap between the demand and supply of skilled labour. The world’s population is growing old. By 2050, the world population of people above 60 years will hit the 1.3 billion mark. This trend will lead to the widening of the demand-supply gap, especially in the developed nations like America, Germany and France. On the other hand, India is emerging with one of the youngest populations in the world comprising of a highly mobile, English speaking population. India will have a 2 billion sized English speaking work force by the end of 2020. Training such a workforce will imply that India can become the major exporter in the services sector as well as an exporter of manpower itself. It is estimated that by 2022, India will face a demand of 500 million skilled workers.

India could look at preparing the workforce for global opportunities so that it can utilise its premium position as the human resource reservoir. Given the dynamic labour markets it also important the workforce learns and readies itself as quickly as possible.

To reap the benefits of “demographic dividend”, the Eleventh Five Year Plan had favored the creation of a comprehensive National Skill Development Mission. As a result, a “Coordinated Action on Skill Development” with three-tier institutional structure consisting of (i) PM’s National Council (ii) National Skill Development Coordination Board (NSDCB), (iii) National Skill Development Corporation (NSDC) was created in early 2008. Whereas, Prime Minister’s National Council on Skill Development has spelt out policy advice, and direction in the form of “Core Principles” and has given a Vision to create 500 million skilled people by 2022 through skill systems (which must have high degree of inclusivity), NSDCB has taken upon itself the task of coordinating the skill development efforts of a large number of Central Ministries/Departments and States. The NSDC has geared itself for preparing comprehensive action plans and activities which would promote PPP models of financing skill development.

As per the approach paper to the 12th five year plan the quality of employment in organized sector is generally high though the scope of additional employment generation in this sector is rather limited. Significant employment generation is taking place in tertiary sector, particularly, in services industries. Self-employment and small business continue to play a vital role in this regard. It is, therefore, necessary to promote main
employment generation activities like (a) agriculture, (b) labor intensive manufacturing sector such as food processing, leather products, textiles (c) services sectors: trade, restaurants and hotels, tourism, construction and information technology and (d) small and medium enterprises.

Private sector could work in greater coordination and come together to address this issue. And it is important that both sectors compliment each other’s efforts. The corporate houses could participate actively in industry led skill development programmes and by channelizing funds allocated for corporate social responsibility into funding and supporting the skills development initiatives by the government. They could be instrumental in moulding and evolving the existing skills development infrastructure in India as per the changing market dynamics, which only the industry has the best knowledge about.

International collaborations could help capture the learning’s of the sector and also creating PPP models that are around the implementation of skills programs. The knowledge transfer focus on sharing the experiences of success as well as failures which has helped in the evolution of the skills systems in different countries.

India Inc needs to reach out to the teeming millions. The economic implications in terms of the opportunity cost of not timely training the swelling workforce will be very high. Lack of skilled workforce may slow down productivity, research and development and ultimately lead to reduced international market share, which may be very difficult to regain if we fall behind in the race. We may permanently lose momentum and the demographic dividend may end up becoming a demographic liability. However tapping this opportunity may not only have the potential of positioning us ahead in the race but can also position as game changers.

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