The transition of India's labour force from small, unregistered firms in the informal sector to a small, medium and large formal firm has been slow. Rigid labour laws and poor infrastructure impede the pace of transition from informal to formal jobs. Conceptually the answer is clear: skill existing informal workers (many of them female) and new workers. By providing the full range of skills for becoming employed.

Matching and adjusting skills how best can job seekers with low or high skills find productive work and how can firms find workers with general and specialized skills. Anticipating and adapting skills the continuously evolving landscape of jobs and shorter technology cycles require development of core skills that are transferable across roles. India can successfully create the self-reinforcing virtuous circle of creating, driving India's burgeoning labour force further into the formal sector. Efficiency is higher in the formal sector, costs are lower and profit margins are bigger, all translating into greater job-creating potential. Formalization increases firms' incentives to invest in up skilling their workers. It also increases the workers' own incentives to remain skilled, besides providing them with better working conditions and health and social security benefits.

India has been trapped in a vicious circle in which education, vocational and technical education and on-the-job training. Acquiring, imparting and assessing skills require change in K-12 education, vocational and technical education and on-the-job training. General education should impart social and behavioral skills— that can help break the cycle of poor skilling and low job creation. There is no time to lose.

Cognitive skills are basic skills of literacy and numeracy, applied knowledge and problem-solving aptitudes and higher cognitive skills such as experimentation, reasoning and creativity. Technical and vocational skills are the physical and mental ability to perform specific tasks using tools and methods in any occupation. Social and behavioral skills include working well with others, communicating well with others, listening well to others and generally being agreeable and outgoing. Everyone has these skills to varying degrees. Combining these types of skills give foundational skills, employability skills and entrepreneurial skills.

Foundational skills Technical Basic and higher vocational cognitive Social and behavioral Employability skills Basic and Technical higher and cognitive vocational acquiring, matching, anticipating skills. Acquiring, imparting and assessing skills require change in K-12 education, vocational and technical education and on-the-job training. Matching and adjusting skills how best can job seekers with low or high skills find productive work and how can firms find workers with general and specialized skills. Anticipating and adapting skills the continuously evolving landscape of jobs and shorter technology cycles require development of core skills that are transferable across roles. India can successfully create the self-reinforcing virtuous circle of acquiring matching anticipating skills as suggested in this Report, and in parallel create the economic and social conditions for rapid, sustained economic growth. If it can do this in the next five years, there is no reason why its aspirations to provide opportunity and well-being to millions of its citizens across the country cannot be realized. Otherwise, with every passing year and each new generation that is not adequately skilled, the backlog of wasted opportunity and unmet skill needs can only become larger, making catch-up increasingly difficult.

Acquiring skills how best to impart those Matching skills how best to adjust them: Required on the supply side of workers pro-viding skills are essential changes in India's schooling and skilling system the world's largest in vocational education and in on-the-job training. This also requires recognizing and certifying the skills and prior learning of those in the informal workforce. Not only does the overall quality of schooling and training have to rise, but the content has to address the work-places of today and tomorrow. General education should impart social and behavioral skills as well as basic and higher cognitive skills, problem solving and systems thinking. Vocational education should develop and revise programmes nimbly to keep up with workplace demands. On-the-job training has to extend beyond large firms and be offered to workers in smaller firms and to informal workers. Indian workers need to shift from lifetime employment to lifetime employability.

How best to turn India's many disadvantages into advantages? By making sure that all children are literate and numerate. By having the demands for skills from employers drive the supply of skills by workers. By providing the full range of skills for being employed. By ensuring that skills are transferable to other jobs and sectors. And way for thinking about the types of skills required, this report offers a frame-work for skilling India—acquiring, matching and anticipating skills—that can help break the cycle of poor skilling and low job creation. There is no time to lose.
by ramping up assessments to know whether and what skills are being successfully imparted. Required on the demand side of employers looking for skills is having job seekers know how they can find productive work with the skills they have or should obtain, and having firms know how they can find workers with the right skills. Educational attainment may be increasing, but high unemployment rates among the educated signal significant problems for their employability. Even if workers read market signals better and understand the skills needed of them, the problem is that education and vocational systems are imparting knowledge through oral and rote learning, but not the broad range of foundational, employability and entrepreneurial skills needed for jobs. Along with job-specific knowledge and skills, firms seek innovation, complex social and emotional, and psychomotor skills that the education system does not easily supply. Educational and skilling institutions need to work more closely with industry, through apprenticeships, training on the job and recognizing prior learning.

India has economic growth without jobs?

India's unusual pattern of "jobless" economic growth, remarkable in a country destined to be the world's most populous, is the result of both supply and demand factors. On the supply side there is an inadequate supply of skilled workers. On the demand side three key factors India's inflexible and archaic labour laws, the low relative cost of capital compared to labour and the overwhelming level of informality in manufacturing and services constrain the rapid creation of jobs, particularly of formal India's employment protection legislation is among the world's most rigid. An example is the prohibition of layoffs under the Industrial Disputes Act, 1947, which requires a company with more than 100 employees to get approval from the appropriate government authority for laying off even a single employee. Small wonder that manufacturing industries in India use more capital-intensive technologies than industries in other countries at comparable levels of development. Highly capital-intensive production methods may be one response to India's rigid labour market regulations that make labour expensive (when adjusted for its productivity) and prompt firms to substitute machinery for labour. Another response may be the growing incidence of contracting in the Indian labour market and the consequent decline in labour intensity in organized manufacturing, since contract labour does not show up in the formal册 for listing machinery, low cost of capital relative to labour For organized Indian firms have been substituting machinery for labour due to the lower relative cost of capital must be high and modest mister roll meant for a company's permanent employees. In manufacturing both capital intensive production methods and contracting can be blamed for slow employment growth in large-scale, labour-intensive manufacturing industries. Illustrating the prevalence of contracting, the concentration of regularly employed workers is high at (27%) small firms with 50 or fewer workers, and the concentration of con-tract workers is highest (21%) in large firms with 1,000 or more workers and in firms with 201 to 500 workers. For small and medium firms with 200 or fewer workers, the concentration of regularly employed workers is 55%, but for medium and large firms with more than 200 workers, the concentration of contract workers is 55%. Contracting is thus more prevalent in larger firms reflecting the employers' response wanting to circumvent rigid labour laws.

Low cost of capital relative to labour For organized Indian manufacturing the ratio of the real wage to the real rental price of capital been steadily increasing over the past few decades, more steeply since the late 1990s (figure 1.8). This increase can explain the declining labour intensity in organized manufacturing in India: firms have been substituting machinery for labour due to the lower relative price of capital. The drop in the relative effective cost of capital can be attributed to an increase in real wages and a decline in the rental price of capital (due to the fall in the relative price of capital goods), rather than a fall in the real interest rate. The low relative price of capital is exacerbated by improvements in technology and automation, which are displacing labour as firms try to stay competitive. Mostly informal jobs even outside agriculture, poor working conditions for women, and a slow shift from informal to formal jobs. The informal employment share in nonagricultural activities is as high as 84%, and the share of female informal employment close to 85%. Among individual nonagricultural activities is as high as 99%, and in trade 98%. Similarly in manufacturing 87% of employment is informal, with the female informal employment share at 94%. Most new jobs in the economy's informal sectors have extremely low productivity and the transition of India's labour force from small, unregistered firms in the informal sector to small, medium and large formal firms.

India's skilling challenge in numbers:

Given the time it takes to skill both existing and new workers, all stakeholders in the skill-ing space must work together to acquire, match and anticipate skills that India will need in the next two or three decades to generate good jobs for its rapidly expanding workforce. This imperative calls for distinct roles and responsibilities for employers, for governments, for training providers and for workers. And calls for mutually reinforcing policies, incentives and understanding among and between these four key stakeholders to successfully impart, match and anticipate skills for India in the 21st century. India needs a 15-year, 2020-35 perspective plan focused on transferable skills that can meet demand from industries now and in the future. To prepare the plan the government should establish a Commission for 21st Century Skills. This NCAER Report could provide a framework for the terms of reference for such a Commission.

• Nearly 1.25 million new workers aged 15–29 are projected to join the workforce every month through 2022.
• By 2022, India will have about 47 million more people between the working ages of 19 to 59 than younger or older people. This demographic out of the more than 500 thousand final year bachelor's students aged 18–29 who were surveyed, 54% were found to be unemployable.
• 2 million Indian institutions are imparting skills.
• 300 million Indians are currently in educational institutions or acquiring vocational skills and will be eventually looking for work.
• The roughly 70 million workers entering the workforce between 2018 and 2022 will need to be skilled for a 21st century economy if India is to keep pace with technological change.
• Many of the roughly 466 million now in the workforce could be up skilled and reskilled not easy because 92% are in the informal sector.
• Slightly more than half of India's workers have school attainment below secondary school with no vocational training.
• Women's labour force participation was 21% in urban areas and 36% in rural.
• Of rural and urban women aged 15–29, 49% are neither part of the labour force nor pursuing education, general or vocational.
• Between 2005 and 2012, 15 million women dropped out of India's labour force.
• The share of female managers was 6% in computer manufacturing and 12% in computer programming.
• Of India's current workforce, 31% are illiterate, 13% have a primary education, and 6% are college graduates.
• About 2% of the workforce has formal vocational training, and 9% have non-formal, vocational training.
• There were approximately 48 million workers in construction and 16 million in textiles and apparel with no and 12% in computer programming.
• The rural-urban male migration rates in India have been low at around 4% in recent decades.
• 68% of Indian SME businesses are online, and another 15% are digitally connected but not using digital services. Only 2% marketed products or services online.
• Technology cycles are shorter than there's no time to lose vocational training.
• The unemployment rate for graduates aged 20–24 was 29%, for those 25–29, 12%, and for those 30–34, 4%. Ever, and digital disruption could hit Indian workers hard: globally 75% of businesses expect that automation will require workers to develop new skills.

ACQUIRING SKILLS:

The 21st century workplace demands a wide range of cognitive, technical and behavioral skills. But for India's children, adolescents and adults, the education and training systems have for too long failed to deliver, not even recognizing the need for many skills. The too-frequent result: school dropouts and unemployable graduates. Vocational and technical education has been below international standards, and imparting vocational skills in secondary schools,
though promising, is still in its beginning stages. For adults already in India’s workforce, on-the-job training, including apprenticeships, contributes little. It is evaluated as little or not very aspirational. The programme is underutilized. The NAPS and National Employability through Apprenticeship Programme are too recent to be evaluated. The India Skills Report 2018 finds that only 54% of students were aware of the NAPS, while 93% were interested in an apprenticeship opportunity.

Deen Dayal Upadhyaya Gramin Kaushalya Yojana (MoRD). This is a well-structured programme to match rural youth to employment by skilling them. However, NCAER interviews with MoRD officials had suggested that turnover rates are high. The programme is evolving to focus on one-year training instead of short-term ones. This is too new to assess impact. In 2013, it was mandated that 25% of the NRLM funds would be allocated to the DDU-GKY. The programme is one of the oldest programmes for vocational education and training in India. While the ITIs have suffered from extensive quality issues, the programme has undergone changes in design and implementation to improve quality. The India Skills Report 2018 shows that the employability of ITI graduates, already quite low, worsened between 2017 and 2018. The day-to-day operations of the ITIs are done by the state governments. But central funds are distributed to ITIs through other central schemes, including the World Bank assisted Vocational Training Improvement Programme (VТИP). “Up gradation of 1.396 Government ITIs through PPPs.” “Up gradation of Existing Government ITIs into Model ITIs.” “Enhancing Skill Development Infrastructure in NE States and Sikkim,” and “Skill Development in 47 Districts Affected by Left Wing Extremism.”

Bachelors of Vocational Education in colleges and universities (MHRD). The intent of this scheme, which started in 2014, was to acquire and match skills better and provide increased flexibility. The programme has been underutilized, with only 5% of enrollees matching in secondary education because of implementation challenges. With vocational education gained in schools, students are more likely to find a match in the job market. The National Sample Survey Office (NSSO) 2011–12 data show that workers with secondary or higher secondary education and formal vocational education receive higher average wages than workers without such qualifications. This programme is underutilized. The NAPS and National Employability through Apprenticeship Programme are too recent to be evaluated. The India Skills Report 2018 finds that only 54% of students were aware of the NAPS, while 93% were interested in an apprenticeship opportunity.

National Urban Livelihoods Mission (MoHUA). Underachievement of targets and implementation are tough to analyse, but there might be design flaws where skills informal Pradhan Mantri Kaushal Vikas Yojana Short-term Training and Recognition of Prior Learning (MSDE). The intent is to acquire and match skills or recognize prior skills, Mid-Day Meal Scheme (MHRD). There is evidence that the scheme does have a positive impact on overall cognitive ability of primary school children. Further, foundational cognitive ability also affects future learning outcomes. Even with implementation challenges, the scheme is having an impact. Rashtriya Madhyamik Shiksha Abhiyan (MHRD). The evidence is limited but this scheme has the same challenges as Sarva Shiksha Abhiyan with focus on general knowledge and acquiring of a limited set of skills, if any. The recent ASER 2017 Beyond Basics report points to a significant gap in skills in youth aged 14–18 years. Rashtriya Uchcharat Shiksa Abhiyan (MHRD). The India Skills Reports indicate improvement in employability over the years for people with higher education including general and technical. Employability has touched a new high of 45.6% in 2018.53 Saakshar Bharat (MHRD). While programme outcomes show improvement, the scheme is only resulting in the acquisition of foundational literacy and numeracy skills. Sarva Shiksha Abhiyana (MHRD). Of the 16 foundational cognitive and no cognitive skills, the scheme impacts six reading, writing, numeracy, language, ICT literacy, science and general knowledge. And even though there has been improvement in 2016, the quality remains poor, with employability outcomes showing a significant gap in skills. Large firms will not hire middle school graduates, and demand from small firms and small firms only partly matches supply.

Submission on Polytechnics (MSDE). Employability of polytechnics graduates is also low but quality has improved between 2017 and 2018 as per the India Skills Report 2018. However, employability remains below 50%. The quality of education in 25% of government-run institutions is regarded by students as a stepping stone to engineering colleges as there is a quota for them. Apprenticeship training (MSDE). There is ongoing assessment of the National Apprentice ship Training Scheme. A National Institute of Labour Economics Research and Development (MSDE). There is a quota for them. Apprentices gain from the training, but due to low pay have little incentive to take it up. It is viewed as a last resort and

Simplifying skill definitions makes it easier to see what’s needed: Workplace skills for the 21st century range from the cognitive to the technical and to the social and behavioral. It’s tempting to try to Cognitive skills start with literacy and numeracy, continue through applying knowledge and solving problems, and advance to higher cognitive skills such as experimentation, reasoning and creativity. Children have cognitive skills. Secondary leavers have them. Academics with PhDs have them. Technical and vocational skills include the physical and mental ability to perform specific tasks using tools and methods in any occupation. Farmers have them. Architects have them. Computer scientists have them. Social and behavioral skills include effective working well with others and listening well to others and generally being agreeable and outgoing. Everyone has these skills to varying degree: children in families and communities, teachers in classrooms, job seekers in interviews and supervisors on factory shop floors. By sticking to these three broad categories, the chapter clarifies that foundational skills are the basic cognitive, technical and social and behavioral skills that children acquire to augment and amplify their full skill sets through-out their lives. It clarifies that employability skills are the cognitive, technical and vocational, and social and behavioral skills that make people attractive to employers and get them hired.

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Skill training for women should prepare them for working in male-dominated industries, rather than focus only on such industries as beauty and wellness, food and beverages, and textiles and apparel. The United Nations Development Programme's (UNDP) Disha initiative provides women with such training, entrepreneurial skill development and employ-ment. After young women in Haryana were given short vocational courses in plastic engineering, and they started work in industrial hubs across the state. Another group was offered for-mail training in both technical and non-cognitive skills to work in the steel industry, largely dominated by men.

Skill training for women should prepare them for working in male-academia connections can nurture both higher-order cognitive skills such as creativity, critical thinking and lifelong learning and bridge or remedial learning for cognitive and non-cognitive skills. Workers with higher education find it easier to adapt to changing labour markets than those with less education.16 one way to avoid the skill obsolescence brought by a major technological shock17 is to provide core competency skills that foster in higher-order cognitive skills such as self-learning, lifelong learning, and learning to learn, thereby increasing adaptability. A leading German training provider, Unternehmen für Bildung, offered a blended learning module for training nurses in Dubai beyond the core courses were class-room seminars, extensive periods of self-learning and practical internships at an industrial unit. Education and training systems with stronger industry–academia connections can nurture higher-order cognitive skills such as creativity, critical thinking and lifelong learning and foster socio-emotional interactive skills. Translate to higher workforce participation, and a higher proportion of females with a graduate degree and above were unemployed than their male counterparts in 2011–12. One reason for this is a perceived competence gap. Another is the occupational segregation of men and women. While quality education (beyond secondary level) is vital for improving job outcomes and labour market participation, access to quality employment remains a critical impediment.23 The proportion of women is low in secure high-productivity and high-income jobs. Most haring, they started work in industrial hubs across the state. Another group was offered for-mail training in both technical and non-cognitive skills to work in the steel industry, largely dominated by men. Policymakers should develop ways to offer life skills to women working in the informal sector and women who have dropped out of the labour force. Self-help groups have had an impact on rural women. One programme linked to the National Bank for Agriculture and Rural Development empowered families socially and economically. Participants learned dominated industries and socio-emotional skills such as teamwork.

Education and employment of Indian youth:

<table>
<thead>
<tr>
<th></th>
<th>% OF MALE POPULATION AGES 15–29</th>
<th>% OF FEMALE POPULATION AGES 15–29</th>
<th>% OF TOTAL POPULATION AGES 15–29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force</td>
<td>63.6</td>
<td>24.4</td>
<td>44.6</td>
</tr>
<tr>
<td>Workforce (principal + subsidiary workers)</td>
<td>59.8</td>
<td>22.8</td>
<td>41.9</td>
</tr>
<tr>
<td>Only employed</td>
<td>57.5</td>
<td>22.0</td>
<td>40.3</td>
</tr>
<tr>
<td>Employed plus currently pursuing either general or vocational education</td>
<td>2.3</td>
<td>0.8</td>
<td>1.5</td>
</tr>
<tr>
<td>Only currently pursuing either general or vocational education</td>
<td>33.7</td>
<td>25.6</td>
<td>29.8</td>
</tr>
<tr>
<td>Unemployed and currently pursuing neither general nor technical education</td>
<td>3.6</td>
<td>1.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Unemployed and currently pursuing general or technical education</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Neither pursuing general or technical education nor in labour force</td>
<td>2.9</td>
<td>50.1</td>
<td>25.8</td>
</tr>
</tbody>
</table>

CONCLUSION: Understanding how structural and technological changes in the 21st century are radically altering today's work-place and the nature of work is imperative. While India must deal with its large and persistent backlog of un-skilled informal workers, it must also provide for its future to sustain rapid progress. Firms of different sizes are already demanding different skills large firms need formal business and high technological skills, smaller firms need multitasking and adaptability to business practices. The 21st century Indian worker has to move from lifetime employment to lifetime employability. Above all, India needs to create an agile workforce that can anticipate and adapt to changes in technology, automation and digitization. After suggesting a simple way for thinking about the types of skills required, this NCAER Report offers a Frame work for skilling India acquiring, matching and anticipating skills that can help break the vicious cycle of poor skilling and few good jobs. Working together, government, industry, skill providers and workers can move India from its low skilling trap to a virtuous cycle of higher skilling and more good jobs. As the nation grapples with the legacy problems of its existing skills-jobs mismatch, it must also pay attention to anticipating the skills of tomorrow. India needs a 15-year, 2020–35 perspective plan focused on transferable skills that can meet the demand from industries, now and in the future. To prepare such a plan, the Central Government should establish a Com-mission for 21st Century Skills. This Report can pro-vide a framework for the terms of reference for such a Commission.

REFERENCES:


