



## EMPLOYABILITY IN HIGHER EDUCATION: THE PRESENT SCENARIO

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**Introduction:** Employers generally see a graduate's achievements related to the subject discipline as necessary but not sufficient for them to be recruited. In some employment contexts the actual subject discipline may be relatively unimportant. Achievements outside the boundaries of the discipline (such as the possession of so-called 'soft skills') are generally considered to be important in the recruitment of graduates. 'Employability' refers to a graduate's achievements and his/her potential to obtain a 'graduate job', and should not be confused with the actual acquisition of a 'graduate job' (which is subject to influences in the environment, a major influence being the state of the economy)<sup>1</sup>. If individuals want to remain employable... they too, have to think about what skills they should be working to develop. Is it important to think about what's going to be in demand in the 2020 workplace? And how people are going to remain productive and attractive to employers through an increasingly longer working life?<sup>2</sup>

Higher education (HE) has come into focus within the debate of the 'demographic dividend' that India is expected to reap. India is the only country in the world which will see an absolute increase in its youth population till 2025. As India grows into a knowledge economy increasing use of technology in manufacturing and service industry, the emerging gaps at the level of tertiary education are seen as a major constraint. The Prime Minister's Council for Skill Development has set up a manpower target of 500 million skilled workers by 2022. This target has been divided among 20 odd ministries/departments including the NSDC (Sanghi, 2012)<sup>3</sup>.

There is some evidence to suggest that references to employability make the implicit assumption that graduates are young people. The risk is of not considering employability in respect of older graduates, who have the potential to bring a more



extensive life experience to bear. Employability is not merely an attribute of the new graduate. It needs to be continuously refreshed throughout a person's working life. Hence the present article reviews the higher education in relation to employability.

#### **OBJECTIVES OF THE PAPER:**

This paper makes an attempt :

1. To understand the employability scenario of Higher education sector.
2. To find out the skills required for employment.

**The Education of the Workforce:** We begin by noting that 146 million (or 30%) of the workforce of 485 million in 2012 are illiterate. An additional 15 million have tertiary level technical education, about half of whom have diploma or certificate level and the other half of this group has graduate level technical education. In other words, barely 3% of the workforce has technical education at tertiary level, and another 7.2% has general academic education at tertiary level<sup>4</sup>.

NSS data allows an analysis of the workforce by three types of employment: self employed, casual labour, or regular salaried work. It is not surprising that hardly any illiterates have regular salaried jobs. Most illiterate are either casual workers or in self employment usually engaged in low productivity work.

Just over half the workforce has education up to secondary level. Well over half of those who have education upto secondary level are self employed. However what is more worrying is that as many as 75 million of those with secondary education actually are in casual work. Given that nearly half of all those in the work force have secondary education the fact that nearly a third of all those with secondary education are in casual work (without any social insurance) should be worrying to policy makers<sup>5</sup>.

The total number of those with higher secondary education (34.4 million) and those who have graduate level education and above (35.6 million) is roughly similar in the work force. What is notable, however, is that half of those with only higher secondary education are self employed. Under a third of those with higher secondary education are in regular salaried employment (while only 15% of those with secondary education have regular salaried jobs). However half of those with graduate level education or above are in regular salaried employment. What is worrying is that



nearly four million of those with higher secondary level of education are engaged in casual work<sup>5</sup>.

What is notable from table1 is that technical education below graduate level as well as at the graduate level and above significantly raises the probability of your getting a regular salary job than if you were a graduate with only general academic education. The good news is that the share in the workforce of those with any tertiary level education has risen from 7.3 per cent in 2004-5 to 10.3 % in 2011-12<sup>3</sup>.

Both the labour market as well as tertiary education outcomes for men and women are rather different. It is well known that the labour force participation rate of women in India is well below that for men and in fact is one of the lowest in the world. Even more worrying is the fact that it has been declining. While there were 351 million males in the total workforce of 485 million in 2012, there were only 134 million women in the workforce. Nearly half of the women in the workforce are illiterate but less than one-third of men in the workforce are illiterate<sup>3</sup>.

If women acquire education upto graduate level, whether it is general or academic or technical education, there is a high likelihood they will get regular employment. In fact the probability of their getting regular employment is slightly greater with graduate education if they are women rather than if they were men.

Two-thirds of those who have graduate level of education enter services employment. This is more than seven times as many as those who enter manufacturing sector employment. It is well known that services account for 25 percent of total employment in the Indian economy, while manufacturing accounts for only 11% of it. In fact services account for the majority of those who have technical education as well. Half of those with below graduate technical education are employed in the services sector. That share rises to 80 percent for those with technical education of graduate level. In other words, the services sector accounts for the majority of those with some tertiary level education, including those with technical education. On the ground one example of this is reflected in the following fact: that IIT graduate engineers more often than not end up in finance and other services.



Manufacturing and non manufacturing employment accounts for less than a third of all technical education graduates who have employment (table 1)<sup>6</sup>.

**Table 2: Industry-wise distribution of Workforce (million) by Sex, Level of Education, Types of Employment in India, 2011-12**

Level of Education	Male				Female				Male+ Female			
	SE	RE	CL	Total	SE	RE	CL	Total	SE	RE	CL	Total
<b>General education (Illiterate)</b>												
Agriculture & Allied	27.2	0.4	20.1	47.6	30.5	0.2	19.0	49.6	57.7	0.6	39.0	97.3
Manufacturing	3.1	1.7	2.1	7.0	4.9	0.4	0.9	6.1	8.0	2.1	3.0	13.1
Non- Manufacturing	1.1	0.4	11.9	13.5	0.1	0.2	5.2	5.5	1.2	0.6	17.1	19.0
Services	6.9	2.3	1.7	10.9	2.6	2.1	0.7	5.3	9.5	4.4	2.3	16.2
<b>Total</b>	<b>38.4</b>	<b>4.8</b>	<b>35.8</b>	<b>79.0</b>	<b>38.0</b>	<b>2.8</b>	<b>25.7</b>	<b>66.6</b>	<b>76.4</b>	<b>7.7</b>	<b>61.5</b>	<b>145.6</b>
<b>General education (Up to Secondary)</b>												
Agriculture & Allied	58.9	0.8	27.9	87.6	20.3	0.3	9.8	30.4	79.1	1.1	37.8	118.0
Manufacturing	10.7	10.5	5.0	26.2	7.2	1.4	1.4	10.0	17.9	11.9	6.4	36.2
Non- Manufacturing	3.4	2.7	22.6	28.6	0.1	0.1	2.8	2.9	3.4	2.7	25.4	31.6
Services	31.7	18.4	5.1	55.2	3.3	4.0	0.7	8.0	35.0	22.4	5.8	63.1
<b>Total</b>	<b>104.6</b>	<b>32.3</b>	<b>60.6</b>	<b>197.5</b>	<b>30.9</b>	<b>5.8</b>	<b>14.6</b>	<b>51.3</b>	<b>135.5</b>	<b>38.1</b>	<b>75.3</b>	<b>248.9</b>
<b>General education (Higher Secondary)</b>												
Agriculture & Allied	7.64	0.13	1.49	9.26	1.41	0.00	0.18	1.59	9.04	0.14	1.67	10.85
Manufacturing	1.31	1.93	0.30	3.53	0.57	0.22	0.05	0.84	1.89	2.15	0.34	4.37
Non- Manufacturing	0.44	0.48	1.17	2.09	0.00	0.02	0.07	0.09	0.44	0.50	1.23	2.18
Services	6.33	6.42	0.37	13.12	0.66	1.62	0.05	2.33	6.99	8.04	0.42	15.45
<b>Total</b>	<b>15.7</b>	<b>9.0</b>	<b>3.3</b>	<b>28.0</b>	<b>2.6</b>	<b>1.9</b>	<b>0.3</b>	<b>4.8</b>	<b>18.4</b>	<b>10.8</b>	<b>3.7</b>	<b>32.8</b>
<b>General education (Graduate &amp; above)</b>												
Agriculture & Allied	4.06	0.09	0.24	4.39	0.40	0.01	0.03	0.44	4.47	0.10	0.26	4.83
Manufacturing	1.01	1.75	0.06	2.81	0.23	0.18	0.01	0.42	1.24	1.92	0.07	3.23
Non- Manufacturing	0.35	0.56	0.32	1.23	0.02	0.06	0.03	0.10	0.37	0.61	0.35	1.34
Services	6.97	11.8	0.13	18.87	0.78	3.97	0.04	4.79	7.75	15.7	0.17	23.67
<b>Total</b>	<b>12.4</b>	<b>14.2</b>	<b>0.7</b>	<b>27.3</b>	<b>1.4</b>	<b>4.2</b>	<b>0.1</b>	<b>5.8</b>	<b>13.8</b>	<b>18.4</b>	<b>0.9</b>	<b>33.1</b>
<b>Technical education (Below Graduate)</b>												
Agriculture & Allied	0.50	0.01	0.09	0.60	0.07	0.00	0.02	0.09	0.57	0.01	0.11	0.69
Manufacturing	0.14	1.61	0.11	1.86	0.05	0.06	0.01	0.12	0.19	1.67	0.12	1.98
Non- Manufacturing	0.16	0.49	0.13	0.78	0.00	0.03	0.01	0.04	0.16	0.52	0.14	0.82
Services	1.01	2.23	0.13	3.36	0.22	0.73	0.01	0.96	1.22	2.96	0.14	4.32
<b>Total</b>	<b>1.8</b>	<b>4.3</b>	<b>0.5</b>	<b>6.6</b>	<b>0.3</b>	<b>0.8</b>	<b>0.1</b>	<b>1.2</b>	<b>2.1</b>	<b>5.2</b>	<b>0.5</b>	<b>7.8</b>
<b>Technical education (Graduate &amp; above)</b>												
Agriculture & Allied	0.14	0.02	0.03	0.19	0.01	0.00	0.00	0.01	0.16	0.02	0.03	0.21
Manufacturing	0.10	0.75	0.02	0.86	0.01	0.03	0.00	0.04	0.11	0.78	0.02	0.90
Non- Manufacturing	0.08	0.24	0.02	0.34	0.00	0.03	0.00	0.03	0.08	0.27	0.02	0.37
Services	0.92	2.36	0.01	3.29	0.16	1.0	0.00	1.17	1.08	3.36	0.01	4.46
<b>Total</b>	<b>1.2</b>	<b>3.4</b>	<b>0.1</b>	<b>4.7</b>	<b>0.2</b>	<b>1.1</b>	<b>0.0</b>	<b>1.3</b>	<b>1.4</b>	<b>4.4</b>	<b>0.1</b>	<b>5.9</b>

Source: Authors estimates based on NSS unit level data

**The very rapid growth of the tertiary education system:** It has long been known that the rate of open unemployment of university graduates is greater than that of those with lower levels of education (see Table 2). This in itself is not surprising since



those with lower levels of education cannot afford to be openly unemployed; they are often too poor to not work at all, and cannot rely upon the goodwill of the family/parents to keep body and soul together. Open unemployment rates are much lower for those with lower levels of education, even though they may be severely underemployed, working less than the full year<sup>7</sup>. This rate of open unemployment of those with higher education does seem to be declining, according to the NSS (Employment-Unemployment Rounds of surveys), even though marginally<sup>8</sup>.

**Table 2: Incidence of Open Unemployment for 15 years and above age group, by level of education, 2004-5 and 2009-10 (UPSS)<sup>8</sup>**

<i>Level of Education</i>	<b>2004-05</b>	<b>2009-10</b>
Not Literate	0.3	0.3
Literate Without Formal Schooling	1.2	0.3
Below Primary	1.2	0.7
Primary	1.4	1.2
Middle	2.7	2.1
Secondary	4.8	2.7
Higher Secondary	6.4	5.2
Diploma / Certificate	10.4	9.6
Graduate	8.8	6.9
Post Graduate & Above	8.1	6.7
All Level of Education	2.3	2.0

Source: National Sample Survey 2004-5 and 2009-10

Yet, GER in higher education has continued to rise. The number of government educational institutions grew from 6.4 million (2006-7) to 8.9 million (2011-12), an increase of 26%. As much as 94% of the government institutions are managed by the State governments (a serious challenge for the management capacity of State governments)<sup>9</sup>.

However, it is the private institutions which are growing faster than the government ones. Private ones accounted for 54% of all institutions offering higher education in 2006-7, the remaining being government ones. The share of private ones



had risen to 59% by 2011-12 from 54% in 2006-7, merely within five years. Their numbers grew from 7.5 to 12.8 million over the same period<sup>7</sup>. But we also know that the capacity of both State and Central governments to actually regulate private educational institutions is very limited, and there remain major issues with the quality of private higher education in the country (except in a miniscule minority of institutions). This is a foundational reason for employability being compromised.

Yet another reason for the concern over employability arises from the fields of study that students in higher education are enrolled in. Of the 13.8 million enrolled in 2006-7, 40% were enrolled in Arts courses – raising a question about their employability in the first place. These are precisely the workers that we noted in section 1 that are likely to end up in the unorganized segment employment in the services sector. An additional 18% were studying the Sciences, 16% were in Commerce and Management, and another 13% were studying Engineering; these could be regarded as more potentially more employable than at least the Arts graduates. The remainder (about 12% or so) were spread, in descending order of their share, between Education, Medicine/Nursing/Pharmacy, Law, with Agriculture/Veterinary bringing up the rear (with less than one percent of enrolment) in a country where half the workforce is still employed in agriculture. Even education and medicine/nursing/pharmacy are areas that are facing shortage of workers in the economy, but they account for a limited share of all students. It is difficult to assess whether this is more a problem of demand for studying such disciplines being low among students, or the seats available is well below demand. In any case, this is an aspect of the mismatch of skills that our employers are complaining about in respect of the education sector<sup>7</sup>.

A related fact that impacts the employability of higher education graduates is that the vast majority are studying in affiliated colleges, where the quality of education is a problem. The importance of such colleges is notable at all levels: while they enroll 87% of all students in higher education, they enrol over 90% of undergraduate students, over 70% of the postgraduates, and even 17% of doctoral students are enrolled in colleges. In other words, if there are issues around the employability of higher education graduates, it is because the quality of the majority of affiliated colleges is abysmal. This fact must be read along with the fact noted



earlier that private institutions have seen a phenomenal growth in numbers between 2006-7 and 2011-2 from 7.5 to 12.8 million, increasing their share to nearly 60% of all students enrolled in higher education. In other words, a very high share of the increase in enrolment in higher education in recent years is in colleges that are run by private bodies. This increase in enrolment is obviously an indication of the rising demand for higher education, driven in turn by the sharp growth in school education. However, the 'diploma disease' is also probably behind the rise in higher education enrolment, in the sense that there are not enough vocational courses for those nearing completion of school education so that they continue in general academic courses at tertiary level for want of an alternative. White collar jobs in any case are not available to any student with less than a university education. Nor are government jobs available for less than a university education, and even though government jobs are not growing, the diploma disease is partly driven by the desire to get a government job<sup>7</sup>.

**Underlying causes of the problem of employability:** We should begin by noting that the fast enrolment growth alone is not responsible for the problems of quality and employability of Indian graduates of higher education. There were pre-existing problems in the system that has only become bigger in magnitude with the sharp increase in enrolment since the middle of the last decade.

The first pre-existing problem was the 'diploma disease' that already existed. Students continued into first secondary, then senior secondary, and then in turn to higher education for no reason other than that there were few alternatives. In a slowly growing economy until the 1980s, with two-thirds of employment still accounted for by agriculture, and with few institutions of higher education in rural areas, the 'urban bias' in terms of the locational concentration of higher education institutions in urban areas was quite prominent. With non-agricultural employment not growing very much outside of the public sector, the focus of those who acquired higher education in an earlier era was to obtain a government job. However, government jobs have grown very slowly in the 1990s and then actually declined in absolute terms in the 2000s (Mehrotra et al, 2012)<sup>9</sup>.



**Pressure of numbers grew upon the higher education system:** Until the end of the 1980s the school education system was narrowly based, and so was the higher education system. The Central government increased allocations significantly to school education from the early 1990s (the District Primary Education Programme began), supported with large bilateral and multilateral assistance. External assistance began for the first time in India's education sector's history only in the early 1990s (Mehrotra et al, 2005)<sup>10</sup>. With net primary enrolment rates increasing to 96% by 2007, the pressure on higher levels of the school system, and hence on higher education only increased. As we will discuss below, the system was not prepared for such massive pressure on the higher education infrastructure and human resources, especially at a time when the focus of government spending had shifted to expand access to schooling to universalize elementary education (witness the Sarva Shiksha Abhiyaan, SSA, in the 10th Five Year Plan), and accordingly the secondary system (the Rashtriya Madhyamik Shiksha Abhiyan followed in the 11th Plan). It was only during the 11th Five Year Plan (2007-12) that there was an attempt to increase public allocations to higher education (from about Rs 18 000 cr during the 10th Plan period to Rs 90 000 cr during the 11th Plan period, not all of which could actually materialize due to the fiscal constraints imposed by the sudden onset of the global economic crisis and its aftermath on India from late 2008)<sup>11</sup>.

Thus the first reason why the upward pressure from larger and larger numbers finishing school emerged from the government efforts to universalize at least elementary education, reflected also in the final passing of the Right to Education Act in 2009. The second reason for the upward pressure arose from the deliberate effort to increase female enrolment, though that effort was concentrated at increasing transition rates of girls from elementary to secondary education. Almost all states provided bicycles/cash transfers to enable households to purchase cycles to encourage girls to continue into secondary schooling, after completing 8 years of elementary school. Although in 2007-8 the Gross Attendance Ratio at higher secondary level for girls and boys was the same in urban areas (30.5 for females and 29.6 for males), this share may well increase significantly as the incentives for girls' continuation into secondary school (that started only in late 2000s) affects the cohorts that would now be entering higher education<sup>12</sup>.





A third source of increase in demand for higher education arose from the labour market. Economic growth between 2003-4 and 2011-12 averaged an unprecedented 8.4% per annum, driven by manufacturing, infrastructure and services.. Concomitantly, there has been a Lewisian shift in the labour market since 2004-5 onwards. There has always been a decline in the share of workers in agriculture, but the total workforce in absolute terms was always growing in agriculture until 2004-5. After that, for the first time in the history of the Indian economy, there has been an absolute decline in the number of workers in agriculture, with workers moving to construction, manufacturing and services. Even though the employment elasticity of manufacturing has not been high, non-agricultural employment has grown significantly with faster GDP growth (Mehrotra et al, 2014)<sup>13</sup>. The economy created on average 7.5 million non-agricultural jobs between 2004-5 and 2011-12, though much more in construction (which benefitted unskilled and mostly ill-educated workers leaving agriculture) and services, than in manufacturing. Naturally, the demand for skilled workers has grown in all three sectors, though the demand for unskilled and semiskilled workers has grown faster, as the fastest growth in non-agricultural employment has been in construction.

**Reasons for the quality problems – that led to issues of employability:**

- (a) Teacher and instructor shortages: One of the most serious problems that arose with rapid expansion of the higher education system – in fact its ‘massification’ – is the shortage of teachers. The Planning Commission estimates (2013) that a doubling of faculty from the current 800000 to 1.6 million is required during the period 2012-17. A study of higher education salaries across 28 countries shows that Indian university faculty salaries are among the highest in the world (on a purchasing power parity basis). Hence, the demand for teachers may not be a problem, but it is finding teachers for general academic education with the requisite skills that is going to remain a problem, especially at senior levels (above the Assistant Professor level).

The most serious problem is finding teachers/instructors for vocational education courses (polytechnics, Industrial Training Institutes and vocational education in secondary schools), engineering colleges that have grown



dramatically in number, and especially teachers who have some practical industry or work exposure<sup>14</sup>.

- (b) Private sector growth with little regulation affected quality: We noted in the previous section that private sector enrolment in higher education already accounted in 2006-7 for 54% of total enrolment, and it had grown to 59%, even while the public sector enrolment also increased. Private universities may cost nearly 3-4 times of public university fees, but “the rise in costs has sometimes not happened with a proportional increase in quality and graduate outcomes”. However, private expansion has happened without commensurate growth in capacity or even willingness of the state to monitor outcomes or put in regulatory frameworks<sup>14</sup>.

Typical of this situation is the growth in engineering colleges across the country, but especially in south India. The political class as well as the builder-developer entrepreneurs have contributed to a growth in engineering enrolment by 25% between 2006-7 and 2011-12, much higher than in any discipline. As noted earlier, in absolute terms it led to engineering enrolment growing from 1.8 million to 5.5 million, a tripling in five years, thus contributing a massive 60% of the total growth in higher education enrolment in India<sup>16</sup>.

(c) Accreditation system has a very narrow coverage: Although institutional accreditation through the National Assessment and Accreditation Council (an autonomous body funded by UGC, created in 1994 in Bangalore) has been growing, at present in India, accreditation is voluntary for higher education institutions. Out of 612 universities in the country, only 172 of them have been accredited by the National Assessment and Accreditation Council (NAAC). Out of the universities accredited, 67 have been placed in Grade A, 99 universities in Grade B and only 6 in Grade C, based on scores awarded during the process of accreditation. Only about one-fifth (4529 out of 22 500) eligible colleges, where the majority of tertiary education students are enrolled, have been accredited (Planning Commission 2013). A bill - National Accreditation Regulatory Authority for Higher Educational Institutions Bill, 2010 was introduced in Parliament to make it mandatory for every higher educational institution in the country (other than institutions engaged in



agricultural education) to be accredited by an independent accreditation agency; however, like so many bills of the Ministry of Higher Education, it has been hanging fire for the last several years<sup>17</sup>.

(d) Skewed funding of public institutions: First, household spending and private investment has grown more rapidly than government spending on higher education in recent years. Second, “government spending, and particularly State Government spending, has fallen far short of the funding requirement in the face of a dramatic expansion of the system and the rising expectations of the people in terms of quality, access and equity” (Planning Commission, 2013, p. 118). The Central government’s share is about 30%, while the State governments spend the remainder 70%, most of it under the non-Plan category. The latter category is mostly absorbed by salaries of teaching and non-teaching staff, leaving very little for capital investment or development work. The third source of difficulty of public higher education institutions is that half of the Central Plan funds (Rs 20,630 cr) went to Central institutions (which enroll, as we noted above, only 5% of all students of higher education), with State universities, colleges and polytechnics receiving about Rs 10, 450 cr. Moreover, Central institutions received about Rs 25 000 cr as non-Plan grants during 2007-12 (the 11th Plan), but State institutions received no non-Plan grants. In sum, the State universities, colleges and polytechnics, enrolling 95% of all tertiary education students in the country, remain severely underfunded. Quality is bound to be affected in publicly-funded higher education institutions as a result, and hence the employability of their graduates<sup>18</sup>.

(e) Quality of technical and vocational students and courses poor: There are two sets of problems that technical and vocational education (TVE) programmes at tertiary level suffer from. We will discuss the quality and employability of engineers, who are in the Degree programmes, that account for most (85%) of total tertiary technical enrolment (or 18.4 million), separately. The remaining 15% of tertiary enrolment (or 3.3 million) in technical education is in Diploma programmes. The latter can offer employability almost immediately, provided they are in the trades/disciplines that are in demand, and are of requisite quality, based on industry



requirements in respect of standards and competencies. However, their enrolment level, especially in Polytechnics is very low, partly because the number of polytechnics itself is very low relative to need<sup>18</sup>.

**Improving employability of graduates of tertiary education: what can be done:**

Tightening entry into general academic education at tertiary levels, and utilizing colleges differently. We have seen in the previous section that despite the fall in the share of Arts students in total enrolment in higher education from 40% in 2006-7 to 30% in 2011-12, their absolute numbers increased (from 5.5 to 6.6. million)<sup>19</sup>. These students are unlikely to be much in demand in the labour market in an economy that is not only growing faster than ever before, but also diversifying its product and services mix rapidly. The vast majority of these students are enrolled in the affiliated colleges (which enrol 87% of all students in higher education), mostly in the private sector. When they get jobs, they are likely to be in low-productivity service sectors, mostly in its unorganized segment, ill-equipped to obtain positions in any job-role other than sales/marketing. There is no case for any further growth in such courses or students.

The Central government would need to take a firm position that these colleges should curtail admission of more students, and they could be incentivized by being partly financially compensated for admitting in the second shift vocational course students. This can become a way of ensuring that the Community College (CC) idea that the 12th Plan is propagating is given an appropriate home. A framework for setting up CCs based on the North American model has been endorsed by the Central Advisory Board on Education. CCs already exist: 336 of them in 17 states, and receive technical support from a Jesuit organization (Indian Center for Research and Development of Community Education, Chennai). The 12th Plan speaks of the need to take technical support of this organization to build on the current initiatives to create a robust framework for skill-based education in higher education.

Community colleges can "provide career oriented education and skills to students; contracted training program for local employers; and remedial education for secondary school graduates not ready to enroll in traditional colleges, giving them a path to transfer to 3 or 4 year institution" (p.101). Such colleges could be established as affiliated colleges of universities governed, guided and managed by the newly



created Department of Skills in the Central government or autonomous institutions connected to Sector Skills Council (Planning Commission 2013).

**Improving employability of general academic students in tertiary education<sup>17</sup>:** To improve the employability of graduates of general academic higher education or technical education at least 5 kinds of actions are necessary: improving soft skills, offering internship to students, updating curriculum, better regulation of private providers, and getting industries to provide teachers and instructor.

1. First, soft skills are missing in graduates both of general academic as well as technical degrees. Aspiring Minds, a consultancy firm conducted an employability study of 40000 Indian technical graduates. It tested english communication, quantitative skills, problem solving skills, and programming skills. It was found that in high growth factors, such as business process outsourcing, employability of university graduates was only 38 %. There was also a difference in quality of graduates between the top tier and lower tier schools, making it 2 or 3 times harder in terms of cost and effort to identify an employable graduate from a normal campus compared to reputed colleges, for example, Indian Institute of Technology.
2. Second, students need to experience work environments, through internships. Indian university or technical education students lack exposure to work while studying. In mature labour markets practical experience in work through internships is common. This normally involves active collaboration between career offices in university on the one hand and public and private organisations on the other. This required proactive behaviour on the part of the university as well as industries. There are many good examples of this happening in private universities. The Hero group, for example, a motorcycle manufacturer, has made large investments to set up a new university in Gurgaon, focused on practical oriented education to improve employability. Similarly one of India's largest software company, Infosys, have set up a large university university-like campus in Mysore and also one on its campus in Bangalore and elsewhere, where they conduct training on a very scale.
3. Outdated curriculum also needs to be updated and connected to labour market needs. But labour market surveys of the National Sample Survey Organization



happen only once in 5 years. In any case, they are not of the kind that can serve as any guidance to potential students, trainees or student work counselors. The Annual Survey of Industries, although conducted every year, is very narrow in scope, confined as it is to a section of organised industry. Similarly, graduate employability studies are rarely conducted and this makes any kind of evidence based curriculum revamp very difficult. Moreover with most employment being in the informal sector it becomes difficult to collect information, which makes taking data-driven decisions even more difficult.

4. Accreditation. If more and more university and technical education is being delivered by private providers it is very important to have a stronger accreditation framework. Regulation and monitoring of universities is governed by the UGC and technical education by the AICTE. These bodies lack the capacity to implement monitoring standards. Surprisingly a very small proportion of all universities and colleges have been accredited in India.

**Conclusion:** This article stated that employability goes well beyond the simplistic notion of key skills, and is evidenced in the application of a mix of personal qualities and beliefs, understandings, skilful practices and the ability to reflect productively on experience. Notice that the commonly used terms ‘knowledge’ and ‘skills’ are not used. They have been replaced by ‘understandings’ and ‘skilful practices’ respectively, in order to signal the importance of a rich appreciation of the relevant field(s) and of the ability to operate in situations of complexity and ambiguity. There is a parallel here with Stephenson’s (1998) suggestion that the capable person can work effectively on unfamiliar problems in unfamiliar contexts as well as on familiar problems in familiar contexts (which is really a matter of routine).

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