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**THE SKILLS THEY WANT:
ASPIRATIONS OF STUDENTS IN EMERGING INDIA**

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Abstract

This report investigates student awareness, interests and aspirations around general and vocational education. Using a survey administered to class 12 students in one district each in Rajasthan, Chattisgarh, and Karnataka, we attempt to gain a better understanding of student aspirations, awareness levels, sources of information, key stakeholders and factors that influence their education and career choices. We then map student interests against sectors that are slated to experience the highest growth in terms of job creation. Our results indicate aspirations of students are largely misaligned with the needs of the Indian economy. It is important to create opportunities, generate awareness about various career options and the respective pathways available to realise career goals. Our findings have implications for policies aiming to improve participation in vocational education and training.

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Introduction ¹

With limited natural resources and a burgeoning population, India's principal resource is its people. In the two decades after the onset of economic liberalization India added 364 million people to its population – more than the stock at the time of independence, a stock accumulated over many millennia. India's democratic success coupled with economic growth and the demographic dividend mean that tens of millions of young people will be joining India's work force with aspirations that their parents couldn't even dream about. India is expected to have over 550 million people under the age of 25 and a projected median age of 29 in 2020.² With one out of four workers joining the global work force this decade expected to be Indian – a group that will be increasingly urban, interconnected and informed – managing their expectations will be no mean task.

India is racing against time. It is of utmost urgency that it adequately skills the huge numbers of young people entering the work force over the next two decades – a number historically unprecedented in human history – in order to translate its possible demographic dividend into higher growth.

According to the Second Annual Employment and Unemployment Survey (2011-12), conducted by the Ministry of Labour and Employment the labour force participation rate (LFPR) is estimated at 52.9 percent, with the female LFPR significantly lower (25.4 percent) than for males (77.4 percent). The largest faction of the labour force is self-employed (48.6 percent) with 31.7 percent working as casual labour and just 19.7 percent wage/salary earners. Slightly more than half i.e. 52.9 percent are engaged in the primary sector (agriculture, forestry and fishing) followed by 27.8 percent in tertiary or services sector and 19.3 percent in manufacturing and construction i.e. the secondary sector. While the unemployment rate is estimated around 3.8 percent, the rate is much higher for graduates (9.4 per cent) than for illiterate persons (1.2 percent). More people are spending more years in education – and remaining unemployed. This points to the need to enhance employability in students.

This challenge has been well recognized in policy circles in India and to this end the Indian government approved the National Policy on Skill Development (NPSD) in February 2009, setting a target to skill 500 million persons by the year 2022 in all sectors. This policy priority has been further reinforced in the Approach Paper to the Twelfth Plan which emphasizes the need to create adequate livelihood opportunities and add to decent employment opportunities if economic growth is to be inclusive – an acknowledgement that this has not been happening.

The Eleventh Five year Plan aimed at creating 58 million additional job opportunities for skilled and unskilled labour force (on current daily status basis) at an average annual growth rate of growth of 2.7 percent. According to the two most recent quinquennial NSS rounds on employment and unemployment (in 2004-05 and 2009-10), estimated employment in the country (on usual status basis) was 459 million in 2004-05 and 465 million in 2009-10.

¹ We would like to thank Azim Premji Foundation for making this survey happen. A special word of thanks to Dileep Ranjekar for his continuous support and encouragement; and Devaki Lakshminarayan for her invaluable guidance. We would also like to thank Devaki and her field and research teams for administering the survey and the excellent work done in collecting and collating the data. We would also like to thank Arjun Raychaudhuri for his constant support and help.

²US Census Bureau, International Database

About 20 million additional job opportunities were created during this period at an annual average growth rate of around 1 per cent even while GDP grew at a compound growth rate of 8.6 percent during the same period. This clearly shows that efforts need to be made to create incremental job opportunities to absorb the increasing numbers entering the Indian labour force.

Ever since the NPSD was announced there has been a flurry of initiatives related to vocational education and skill development. At least 23 central government ministries, departments and organizations have committed to skilling half a billion people through the period 2022, a staggering number by any yardstick. Training for about half of this total will be provided by the National Skill Development Corporation (150 million) and the Ministry of Labour and Employment (100 million).

In September 2012 the Ministry of Labour and Employment claimed that it had “operationalized 413 modules”, “empanelled 46 assessing bodies for conducting assessment”, “registered 2511 Vocational Training Providers (VTPs)” and trained/tested “14.21 lakh persons” since the inception of this scheme. The Ministry plans to implement its mandate to train more than 100 million people, 29.4 million through the Craftsmen Training Scheme, 57.2 million through Skill Development Centers, 5.4 million under the Apprenticeship Training Scheme and 11 million under the Skill Development Initiative (SDI).

As of mid-2012, there were 10009 Government and Private Industrial Training Institutes (ITIs) functioning in the country out of which 2269 are under Government and 7740 under the Private Sector. The government is upgrading 1396 government ITIs and 5000 Skill Development Centres (SDCs) under “Kaushal Vikas Yojana” through Public Private Partnerships (PPP) as well as upgrading 100 ITIs from domestic resources and 400 ITIs through World Bank assistance. In addition the Indian government has also been implementing various employment generation programs, such as, Swarana Jayanti Shahari Rozgar Yojana (SJSRY); Prime Minister’s Employment Generation Program (PMEGP); Swarnajayanti Gram Swarozgar Yojana (SGSY) and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

The new found enthusiasm for skilling programs of the Indian government share many of the characteristics of the numerous social programs of the GOI. The initiatives by the various ministries have laudable objectives (and rhetoric), with a flurry of inputs on the various programs and expenditures. There are new “strategic frameworks” for skill development for a wide swath of the population ranging from early school drop outs and existing workers, with programs offering (at least in principle) both multiple entry as well exit options, flexible delivery schedule and lifelong learning.

Yet these initiatives rest on two fundamental assumptions which form the basis for “the build and they will come” philosophy i.e. there is sufficient demand for these programs both from the burgeoning young population and potential employers once they are trained. While a lot of work has been done by NSDC as well other ministries and industry bodies to identify employer requirements, there is little empirical understanding of the aspirations and influences that shape student choices for skill training. It is this lacuna that this study addresses.

Vocational education in India is characterised by a paradox. There is limited capacity in vocational courses relative to the number of expected work opportunities in areas that

require students to have received some form of vocational training³. However paradoxically, existing programs suffer from unutilised capacity⁴.

There are several factors that may explain this paradox. First, vocational education is equated with blue-collar “low status” jobs and in an extremely status conscious society, status lock-in might matter more than income prospects. Second, the structure of vocational education gives students few exit rampways to other higher education possibilities at a future date. This lack of future “option value” lowers the likelihood or “price” students are willing for vocational education. Third, vocational education suffers from two types of informational lacunae: students lack information on job opportunities that may be available as a result of specific types of training;⁵ and students, parents and employers all lack information on the quality of the education provider. Fourth, weak labour market links between vocational education providers (who are local) and employers (who are dispersed widely) undermine the willingness of students to incur the resources for vocational education. Finally, the largest fraction of Indians is self-employed or employed in the informal economy, and vocational educational institutions in India have been particularly weak in addressing their training needs.

However, we have little empirical basis on the relative importance of these factors and in particular how prospective young people perceive them. In the absence of specific evidence and information, it is hard to gauge the extent of this problem and how best to address this challenge via awareness and mobilisation campaigns. Learning more about the preferences and attitudes of young people, principally high school students but also those who may already be in the informal work force, (who are effectively the “consumers” for skill development), their awareness levels and combining this knowledge with knowledge of labour markets and employer expectations, will allow policy makers to create a system that will best meet the skills needs of the Indian economy -- and the expectations of its burgeoning young population.

To preview our findings, our research confirms that low uptake of vocational training is an issue not only of awareness, but also that vocational education in India is perceived to be a low quality “option of last resort” by both students and parents. **Understanding student aspirations and creating a system that allows them to realise these ambitions is critical if India has to succeed in its skill development efforts.**

This survey was designed to address these important questions around student aspirations and awareness with a focus on vocational education, and covers the following issues:

- **General aspirations**
 - Aspirations of students post completion of school
 - Professions and sectors students aspire to work in
 - Factors that influence these choices

³ In India, about 12 million people join the workforce each and the current skill capacity of the country is about four million according to a report titled “Learner first” by the Federation of Indian Chambers of Commerce and Industry (FICCI) in September 2012.

⁴ FICCI conducted a survey covering 69 of these 100 ITIs chosen to be upgraded into “centers of excellence”. Results showed that 51% of the institutes covered reported having an underutilized capacity.

⁵ See for example Robert Jensen (2012). “Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India,” *Quarterly Journal of Economics*, 127(2), p. 753-792.

- **Vocational education**

- Student interest in vocational education
- Student awareness
- Perception issues associated with vocational education
- Factors that influence these opinions
- Skills that students aspire to develop

The authors worked closely with Azim Premji Foundation to design and administer this survey to 2855 students in Class 12 and 3110 students in Class 10 in three districts in India⁶.

The remainder of the paper is structured as follows: Section 2 details the sampling methodology and the student profile selected for the survey; sections 3-4 discuss the key findings of the survey while section 5 focuses on perception issues around vocational education. We conclude and present some tentative policy recommendations in section 6.

⁶ It was assumed that students already in Class 11 would most likely continue to class 12 before considering options for further education or work

Section 2: Survey Background and Sample Profile

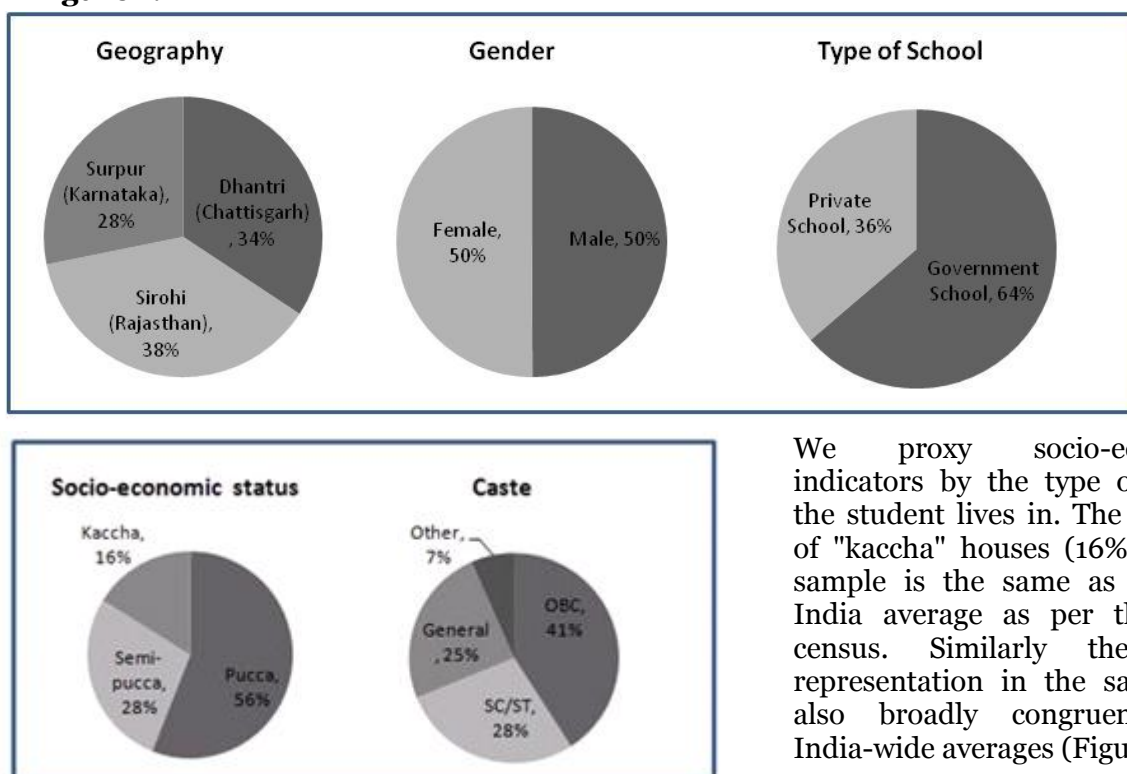
This survey was designed to address gaps in our understanding of student aspirations with respect to future opportunities and more specifically, their awareness and interest with respect to vocational education. The survey was administered to students in Class 10 and Class 12. This paper focuses on the data collected from Class 12 respondents under the assumption that class 12 students, being at a decisive stage in their educational and/or employment trajectories, are likely to have better developed notions of aspirations and interests.

The survey was administered to 2,855 students who were currently in Class 12 from three districts, each from a different part of India:⁷

- Dhantri district, Chattisgarh
- Sirohi district, Rajasthan
- Surpur, Karnataka

The sample was also designed to represent both genders, and Government and private schools. The survey sample was designed to represent students of both genders studying in both government and private schools. The distribution of respondents across geography, gender and type of school is given in Figure 1. The average age of the sample was 17 years and nearly 65% attended government schools.

Figure 1.



We proxy socio-economic indicators by the type of house the student lives in. The fraction of "kaccha" houses (16%) in the sample is the same as the all-India average as per the 2011 census. Similarly the caste representation in the sample is also broadly congruent with India-wide averages (Figure 2).

⁷ The survey will soon be administered in Yamuna Nagar district in Haryana. Eastern India remains unrepresented in this survey.

Section 3: Key survey findings: Student awareness, aspirations and influences on decision making

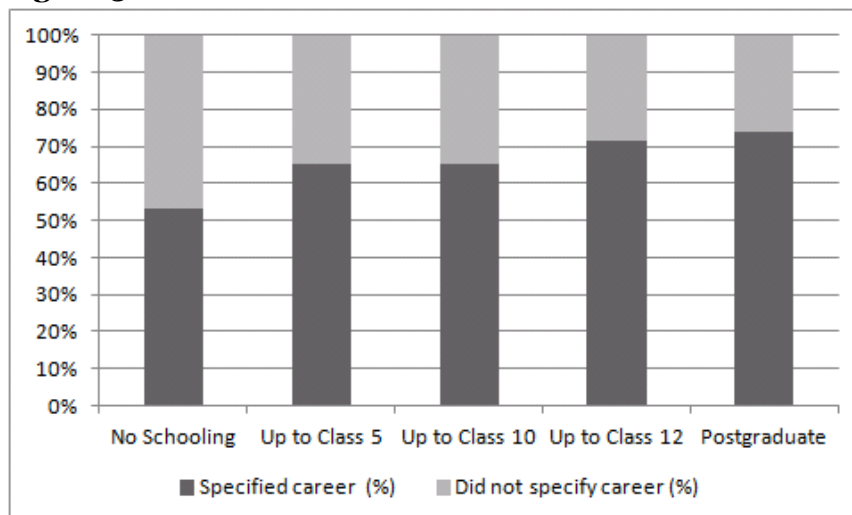
A key goal of the survey was to try and understand student aspirations and the information available to students regarding vocational education programs and the factors that influence them.

1. Do students have a specific career in mind?

The starting point was to ask if students had a particular job or career in mind for when they finished their education. 82% of all respondents said that they had a particular job in mind. However, when asked to be more specific, only 73% of these respondents provided clear answers to what this job would be. This corresponds to 56% of the total sample.

There is a direct relationship between awareness levels of students and parent's education. Figure 3 highlights this relationship between awareness and father's level of education. This figure shows the proportion of students who specified a career choice for varying levels of father's education.

Figure 3.



Only 53% of students whose fathers had never been to school specified a career choice. This is significantly different for those students whose fathers have even a minimal amount of schooling. 65% of students whose fathers had completed only primary school education specified their career choice and this number changes to 71% when fathers have completed high school. This trend continues, albeit less strongly, with increasing levels of father's education. 74% of students whose fathers had completed postgraduate education specified a career choice.

This ties in closely with results discussed later in this paper (page 10) which show that most students rely on their parents and family members for information while making their career choices.

2. Do students want to follow in their parents' footsteps?

92% of all Indian employment is generated in the unorganised sector in India⁸. However, a majority of government and private skill training programs focus on the organised sector with much less attention on the vast informal economy.

It is therefore important to recognise that traditional apprenticeships are an important and effective form of skill development⁹ and it is largely on this basis that workers in the Indian informal economy today have acquired the skills they need in order to find gainful employment. Historically this occurred through an intra-household inter-generational transfer of tacit knowledge with occupations like farming and weaving being classic examples. Social institutions, especially caste, played a key role in inter-generational occupational rigidity. Hence, for the informal apprentice model to continue to work effectively students would want to be in the same profession as one of their parents. However, the survey revealed that 77% i.e. a majority of respondents, do not want to do the same jobs as either one of their parents. Only 17% said that they would like to do the same job as their parents and the remaining 6% said they "do not know".

These findings reflect the changing aspirations of students in India, the fraying of caste based occupations and the increasing technological intensity of occupations which limits the utility of inter-generational knowledge transfer. The results are largely consistent across gender and all three states surveyed. The responses do not vary substantially across different socio-economic backgrounds or between government and private schools. There is interestingly also only limited variation in the results with respect to the education level of parents. The responses are almost invariant with increasing levels of education for the father for both male and female respondents.

3. How many students aspire to study full time after school?

The respondents were asked if they plan to study full time after completing their school education¹⁰. 68% of students aspire to study full time after school. This number doesn't vary across gender or with respect to their socio-economic status. However, the numbers do show variation across geography. Only 55% of the students from Dhantri district in Chattisgarh wanted to study full time after school as opposed to those from Surpur district in Karnataka where 80% of students aspire to study full time. Sirohi district in Rajasthan represents the mean with 67% students aspiring to study full time. These differences probably reflect the relative economic dynamism of the three states and underline the importance of broader economic opportunities to student aspirations.

⁸ (Manipal City and Guilds, 2011)

⁹ (Largentaye, 2009)

¹⁰ This includes all full time options including both general higher education as well as vocational education options

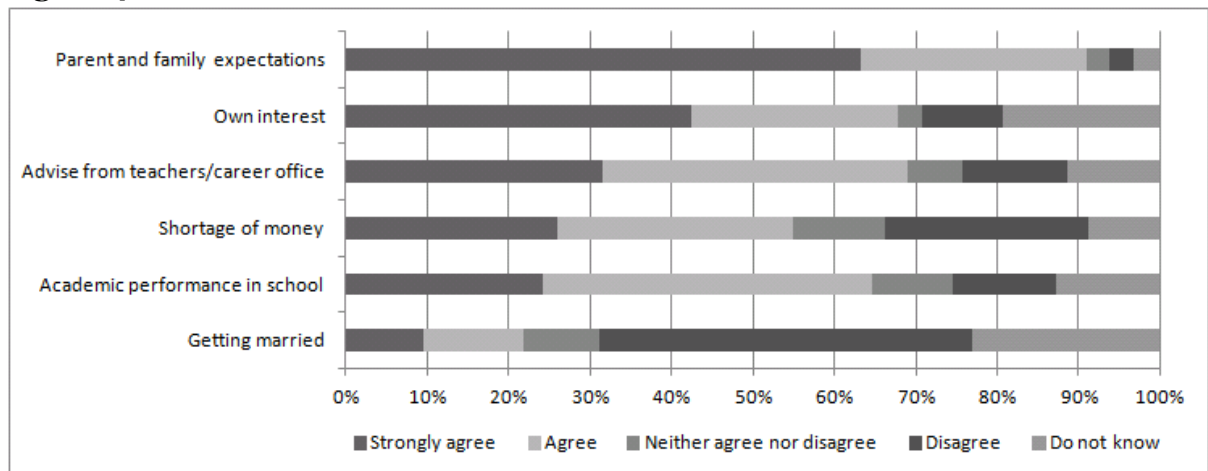
These numbers are significantly different from the existing reality in each of these states. The number of students in the age group 18-23 currently enrolled in any form of full time higher education in India is significantly lower at around 18% ¹¹.

One might expect that students aspiration to continue with full time education after school might depend on their academic performance. Our survey results show quite the contrary: there is an inverse relationship between academic performance and the desire to study full time. Only 50% of surveyed students who were at the top of their class i.e. scoring on an average between 80-100% in the last two academic years expressed an interest to study further full time while 75% of students who scored between 40-50% on average did so. One possible explanation could be that students who have performed well academically have greater confidence regarding their job prospects post school as opposed to those who have performed poorly academically. Higher education in such cases might be a “time pass” activity rather than a means to enhance skills and job prospects.¹²

4. What are the main reasons for their interest?

The survey asked students what the main reasons for their post school education and/or career choices. Figure 4 summarises the results (for those 68% of respondents who said they would like to pursue further full time education, including general and vocational options) :

Figure 4:



Unsurprisingly, parent and family expectations are the most important factor in determining post-school career choices. 63% of respondents "strongly agreed" and another 28% "agreed" that parent and family expectations are the reason for their choices. The next most important reason affecting student choice is their own interest. 42% respondents "strongly agreed" that their own interests determined their plans post completion of high school. Advice from teachers and career offices also are an important determinant of student aspirations while 32% of respondents "strongly agreed" that

¹¹ http://articles.timesofindia.indiatimes.com/2012-09-29/news/34163129_1_ger-sc-students-total-student-enrollment

¹² Craig Jeffrey (2010) *Time Pass; Youth, Class and the Politics of Waiting in India* Stanford University Press.

advice from their teachers and career offices influenced their post-school career interests.

In order to further understand the various sources of information that affect students' career choices survey respondents were asked who guided them in making decisions regarding further education and career opportunities (Table 1).

Table 1.

Source of information	Percentage
Parents/Guardians/Family elders	84%
Teachers	49%
Older Siblings	47%
Friends	34%
Media	30%
School career advisor	23%
Other	5%

Clearly family elders continue to be the dominant influence in students' decision making process, with 84% of all respondents saying that their parents or guardians guide them on further education and career opportunities. Teachers and older siblings are also important sources of information for nearly half the respondents. While peers (friends) and the media matter, their relative importance is less. The media's relatively modest influence is invariant across male and female students or government and private schools. The greatest influence on usage of media by students appears to be socio-economic background and parental education. While only 22% of students who live in "kaccha" houses use media as a source for information, this number increases to 35% when they live in "pucca" houses. Showcasing a similar trend, while only 26% of students where the father's education levels is lower than Grade 10 use media as a source for information, this increases to 41% when the father's has some post secondary education.

There is also some variation in these results across the geographies surveyed. Only 20% of students surveyed in Karnataka said they used media as a source of information as compared to 46% in Rajasthan and 27% in Chattisgarh.

Section 4: Key survey findings - Student aspirations are significantly mismatched with requirements of Indian economy

In order to create skills programs that will successfully empower students, it is important to understand which careers students aspire to. This information is useful both in deciding which courses to offer as well as in designing well informed awareness campaigns to help students gain awareness about the different career options available to them.

1. Sectors in which students displayed interest

Students who said they have a particular career in mind were further asked to specify their interests¹³. The question was left open ended with no pre-determined list of options provided to students. The responses thus elicited, represented a wide range of industries and occupations. For meaningful reporting, student responses were categorized into one of the following commonly used industry classifications (Table 2).

Table 2.

Sector	Percentage of total respondents
Services: Other (including engineering, government jobs etc) ¹⁴	17.3
Services: Education	12.8
Services: Health	6.2
Banking/Financial	5.4
National Security	4.4
Entrepreneurship	3.7
Services: ITES	3.5
Automobiles/Transportation	1.1
Agriculture	0.6
Services: Hospitality	0.4
Manufacturing	0.3
Construction/Plumbing	0.3
Services: Retail	0.0

Going beyond industry and into specific careers the survey results show that teaching, engineering and medicine are the top three careers that students aspire to. 23% of respondents who specified a career choice i.e. 56% of total respondents (page 8) - said they aspire to teach, 10% said they would like to become engineers and another 8% aspire to become doctors.

¹³ Refer to page 8. This addresses those 56% of respondents who specified a career choice.

¹⁴ Services: Other : Engineering comprises 31% and government jobs 14% of this category. Several other careers that form small percentages of the total.

Table 2 shows that in addition to engineering, medicine and teaching, other sectors that are popular with students include banking and finance, and national security including the Indian Armed Forces as well as the Indian Police Service. Only a negligible percentage of students expressed an interest in sectors like construction, plumbing and more surprisingly, in hospitality and retail.

Gender differences are more apparent in career choices with some sectors like healthcare and education being more popular with females while others like entrepreneurship and national security being preferred by male students. Sectors like banking and finance and ITES were popular irrespective of gender. Similarly, sectors like manufacturing, construction, plumbing and retail were unpopular with both male and female students.

Student aspirations also vary by geography. Some sectors are more popular in some parts of the country than in others. For instance, 40% of those who responded to this question in Karnataka aspired to work as teachers while only 12% of those in Chattisgarh and 17% of those in Rajasthan said they would like to teach. Similarly, 16% of respondents in Chattisgarh said they would like to work in the healthcare sector as compared to 8% and 7% in Karnataka and Rajasthan respectively. Some sectors like national security, banking and finance and IT related services seem to be popular irrespective of geography. Others like manufacturing, construction and plumbing and retail don't seem to have many aspirants independent of geography.

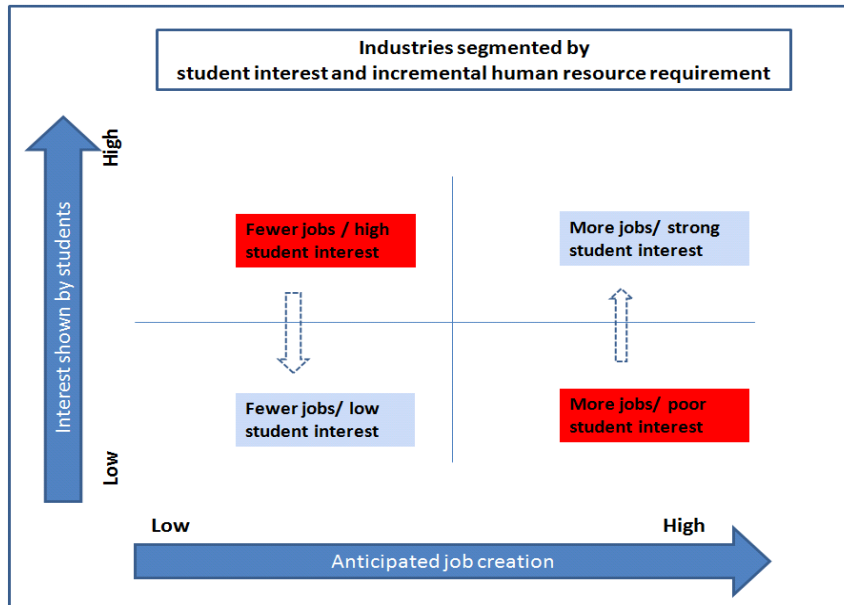
2. Sectors that students displayed an interest in when they had to choose from a list of options

While the previous question allowed students to make a choice, and enabled the researchers to ascertain the interests and awareness levels of students, in another question, students were given a predetermined list of sectors and asked which of them they would be interested in working in.

This list comprised sectors that have been identified by the NSDC as "high growth" and have a high projected employment growth in the next decade. By ensuring that students make a 'forced choice' amongst the high growth sectors, this analysis delves deeper into the aspirations issue and identifies those among these high growth sectors where the magnitude of the absolute gap between where the jobs are likely to be and student interest is the greatest. Figure 5 illustrates the framework used in this analysis to classify this list of sectors.

- The horizontal axis represents the relative requirement of skilled workers required until 2022.
- The vertical axis represents the relative proportion of students who expressed an interest in pursuing a career in these sectors
- Both axes have been rescaled using a rank of 0 to 100 to ensure consistency

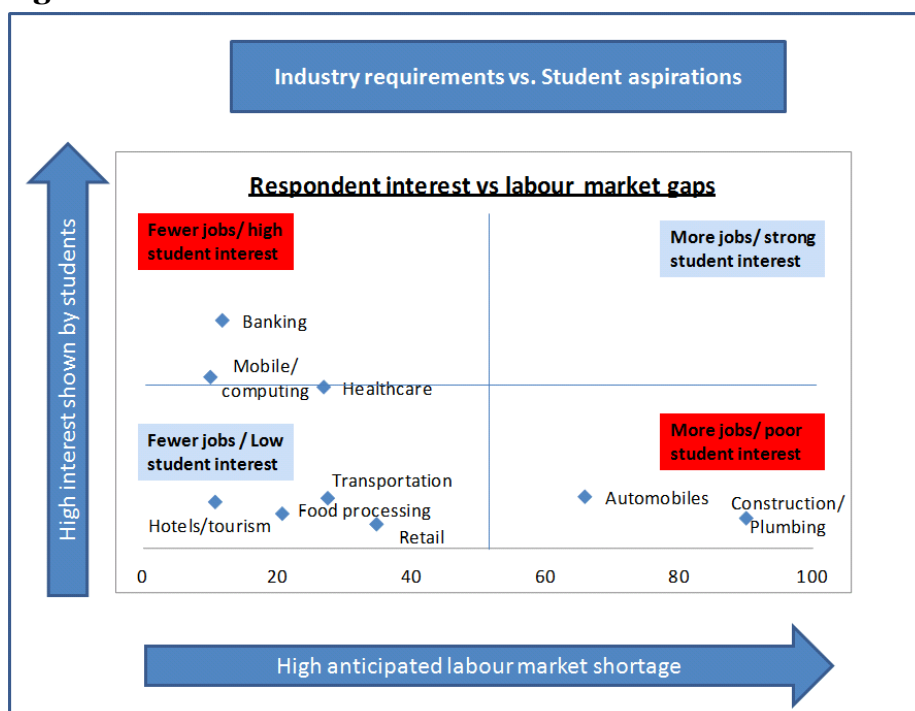
Figure 5.



Public policy should aim at steering outcomes towards the top right or bottom left quadrant (ideally on a 45 degree line), where students interests align with job creation opportunities. Outcomes in the bottom right quadrant represent a situation where student interest is low in a high growth sector, indicating a clear need for increased awareness and guiding student choices towards meeting the needs of these sectors. Conversely, the top left quadrant runs the long term risk of having more students training for professions with low job growth prospects, risking either low incomes or unemployment and thereby disillusionment.

Figure 6 below uses the above framework to map out the sectoral gaps between student preferences and projected employment growth.

Figure 6.



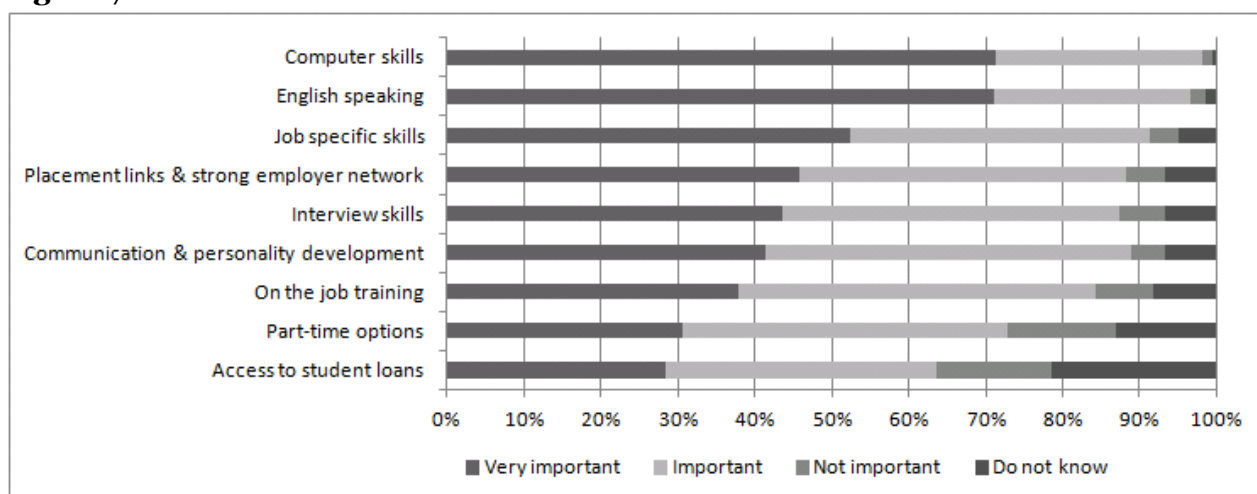
The figure illustrates the sectors where employment demand will be high but will clearly face considerable challenges in finding motivated skilled workers. While the construction and automotive sectors are expected to have the maximum absolute requirement for skilled workers in the next decade, only a very small proportion of students are interested in pursuing a career in either of these sectors. On the other hand, though sectors like banking, finance and insurance are projected to create a smaller absolute number of jobs in the next decade, these are the sectors of choice for a large proportion of students.

The results again, vary by geography reiterating the need for conducting state and district-specific surveys to identify high growth sectors by region and those that are attractive to students locally. The nature of industry and subsequently employment opportunities vary across different parts of India. Also, sectors that are prestigious in one state can be perceived as a low quality option in another depending on several factors. Results for the hotels/tourism sector illustrate these points well. 19% of all respondents in Rajasthan expressed an interest in this sector as compared to only 6% and 5% of all respondents in Chattisgarh and Karnataka respectively. Tourism is an important sector in Rajasthan as compared to the other two states and this could explain the relatively high student interest for it. In another example, healthcare, though relatively popular in all three geographies, witnessed varying levels of interest. 33% of respondents in Chattisgarh said they would be interested in working in the healthcare sector whereas a significantly lower proportion of 19% and 24% of respondents were interested in Karnataka and Rajasthan respectively. Sectors like mobile and computer repair are popular in all three states with limited variation. On the other hand sectors like construction and plumbing saw limited interest irrespective of geography.

3. What skills do students aspire to possess?

In order to make vocational education aspirational for students, it is important to understand which skills students value the most when making postsecondary enrollment decisions. Figure 7 summarises the responses from students for some distinct attributes of a skill development program.

Figure 7.



Computer and English speaking skills are clearly the most valued skills for students. 71% of all respondents said that it is "very important" and almost all the respondents said that it is at least "important" that each of these be included in a skill development course. Students also recognise job specific skills and a strong placement program are integral aspects of a skills program with a large proportion of respondents saying that both are at least "important". However, a relatively smaller proportion of respondents feel that they are "very important" as compared to computer and language skills. Interview preparation, communication and personality development are also high on students' list of priorities. Lower down the list is on the job training.

The results also show that a substantially smaller percentage of students attribute a high level of importance to part time options and access to student loans. Only 31% of students thought that a course having the option to study part time is "very important" while still fewer (28%) said that it is "very important" for them to have access to affordable student loans. It is however, important to note here that this might be in part because of the absence of knowledge and awareness of students around these options. 13% and 21% respectively of students responded with "do not know" for part-time options and accessibility of student loans. This number is in sharp contrast with only 1% students saying "do not know" when asked about computers and english language skills, 5% when asked about job specific skills and 7% with regard to interview skills.

Section 5: Perception issues around vocational education

1. How do students feel about vocational education as an option for further education?

The survey addressed this question in two ways – in the first question vocational education was included as an option among others available to students after finishing class 12, and in the second question students were specifically asked about their interest in pursuing vocational education after finishing class 12. The results are starkly different across these two cases.

In the first case, respondents were given a range of options they could pursue after completion of school and asked to pick one or more that interested them. Full time and part time vocational education or diploma courses were included as choices among others. Our survey results show that in this case, a large majority (79%) were not interested in pursuing any form of vocational education. This number is largely invariant between male and female students, government and private schools, different socio-economic backgrounds or different levels of parental education. Moreover, the results are also largely invariant to academic performance of students. However, some regions in India appear to have a stronger negative bias towards vocational education than others. 91% of students in Karnataka said they were not interested in vocational education as compared to a substantially lower proportion in Rajasthan (62%).

In another question, students were asked directly whether they were interested in entering vocational education after school without giving them any additional options. Interestingly in this case, the results were significantly different from the first case - 69% students responded in the affirmative and a further 13% said they didn't know.

The significantly different responses to these questions could perhaps imply that students consider vocational education as an inferior option compared to continuing to college for undergraduate studies, professional degrees or taking up full time job options. However, when students were asked about vocational education to aid them get a job as a stand alone option, they responded much more positively. This trend is most apparent in Karnataka - only 9% of students had said they would be interested in vocational education when it was one of the several options available to them. This contrasts with 79% who said they would be interested in vocational education when presented as a stand alone option.

Further, there appears to be an inverse relationship between interest in vocational education and parental education. Among male students whose fathers' education level was below class 10, 69% responded with interest in vocational education. Among male students whose fathers are educated up to the postsecondary level, this changes to 55%. Female students show a similar trend with relation to their mother's education. Among female respondents whose mothers have not completed lower secondary school, 73% were interested in vocational education while only 54% of those whose mothers have some postsecondary education are interested in vocational education. As we note below, this is probably due to a perception of vocational education as a low aspirational activity.

2. What reasons do students have for not wanting to pursue vocational education?

A big challenge currently facing both government and private training providers is that they do not have enough student demand and need help in mobilising them. In order to make vocational education a more attractive option for students it is important to understand why students do not consider vocational education to be a good option. 19% of respondents said they would not be interested in entering vocational education after school. These students were asked why they were not interested in vocational education. Table 3 provides a summary of student responses to this question.¹⁵

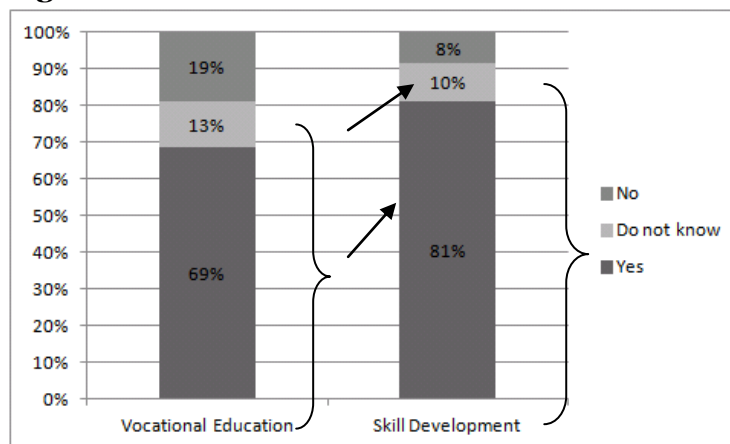
Table 3.

Reasons for not wanting to do vocational education	Percentage
Want to continue further education	76%
Don't know about a good vocational education course	27%
Family discourages vocational education	26%
Do not know anyone attending vocational education	21%
Affordability issues	8%
Vocational education is not prestigious	12%
Other	3%

3. Does this change when we change the term to skill development?

This survey attempts to understand better why vocational education suffers from a negative perception and whether this can be addressed by a change in nomenclature or "re-branding" in the system. The survey asked students whether they would be interested in pursuing a vocational course at two different points in the survey. The term "vocational education" was used in the first question while the second question replaced the term "vocational education" with "skill development" and asked if students were interested in pursuing skill development programs. Figure 8 shows how student responses change with a change in nomenclature:

Figure 8.



¹⁵ The numbers here represent the proportion of students who opted for each of these as a reason for them not being interested in vocational education. Students were allowed to check more than one response for the question addressing why they were not interested in vocational education, which explains why the percentages do not add to a 100%.

These results show that the terms "vocational education" and "skill development" are perceived differently by students. As pointed out earlier, when students were asked if they would be interested in entering 'vocational education' after school, 69% of them said "yes" and another 13% said they "do not know". When we changed the term to 'skill development', the numbers shifted significantly. 81% of all respondents now said yes and 10% said they didn't know. Clearly the term "vocational" suffers from an image problem.

14% of all respondents said "no" to vocational education and "yes" to skill development as an option they would consider post completion of Class 12. This is the group we call our "discrepant group."¹⁶

We use the survey results to better understand the factors that influence the perceptions students have of vocational education by examining which demographic groups show maximum "discrepancy" in responses when the term is changed to skill development i.e. the groups who care most about perception issues associated with vocational education.

- a. **Type of school** - students in private schools are more likely to attribute a negative value to the term vocational education than students in government schools. 10% of government school respondents provided a discrepant response as compared to 18% of respondents from private schools.
- b. **Levels of parental education** - students whose parents have higher educational qualifications are more likely to say "no" to vocational education and "yes" to skill development. 24% of students whose father had a masters degree provided discrepant responses to the questions as compared to only 8% for those whose fathers had no schooling. This trend is even more dramatic in relation to mothers' education. 35% of students whose mothers had a masters degree gave a discrepant response as compared to only 10% of those whose mothers had no schooling. This ties in closely with results detailed above which show that parents and guardians are the primary source of information for students when they are making decisions regarding career and further education.
- c. **Academic performance in school** - students at the top of their classes i.e. those with the strongest academic records are more likely to think of "skill development" as a superior option to "vocational education." Only 7% of students who scored on an average of below 40% in high school said "no" to vocational education and "yes" to skill development as compared to 11% of those who scored between 50-60% and 19% of those who scored between 70-80% .
- d. **Gender:** Survey results also show that male students are slightly more likely to care about perception issues than female students. 10% of female students said "no" to vocational education and "yes" to skill development as compared to 16% of male students.

Different socio-economic and caste groups do not seem to vary substantially when it comes to this issue of perception.

¹⁶ An incremental 8% who said they "do not know" whether they would consider vocational education as an option said "yes" to skill development.

Section 6: Concluding Remarks and Policy Implications

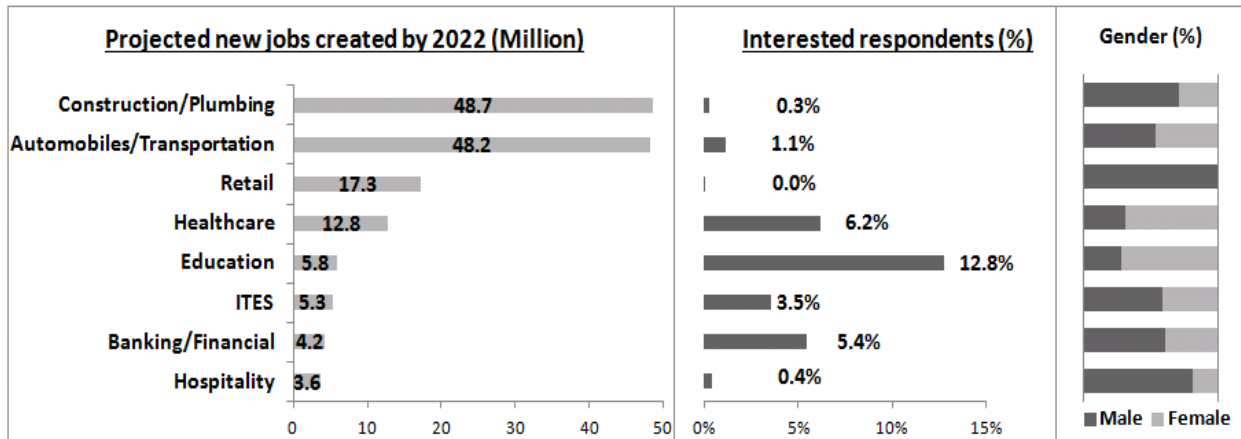
Understanding student aspirations and creating a system that both shapes these aspirations as well as allows students to realise them is critical if India has to succeed in its skill development efforts. The skill development eco-system is currently being redesigned completely. It is in the face of this reform that it becomes critical that student aspirations, awareness levels as well as the factors that influence their decision patterns are analysed and understood. This is important both to ensure that economic growth in India becomes more inclusive as well as to provide the human capital to underpin more rapid growth.

This section provides some policy implications based on the empirical evidence gathered in the student survey. It attempts to provide policy makers and the vocational education sector with insights into student aspirations, their level of awareness and the different factors that influence their decisions – all of which matter if India is to create a successful skill development eco-system.

1. **Students aspire to study full time and work in careers which have traditionally been viewed as "high status".** This trend can be partially explained by a lack of high quality vocational options as well as low levels of awareness of students about the various vocational courses and career opportunities in different sectors available to them. **That students consider vocational education to be a low quality option as compared to general education could also be influencing this trend.** The majority of Class 12 students in our sample aspire to study full time after completing school. Currently the gross enrollment ratio in any form of higher education in India is about 18% ¹⁷. This highlights the significant discrepancy between student aspirations and status quo in India.
 - a. The fact that only 56% of students who are at the cusp of completing their schooling have a particular career in mind emphasises the importance of awareness building which, above all, informs students, teachers and parents about the long term career opportunities in India and within their region.
 - b. Given the considerable variation of student responses across regions, its is also important to understand the spatially contingent differences in student aspirations including the quality of vocational education options available locally, status associated with certain careers or on awareness levels of parents, teachers and students in each area.
2. **There is currently a significant mismatch between student aspirations and the skill requirements of Indian industry.**
 - a. Almost 50% of those respondents who specified a career said they would like to work in sectors other than those identified as high growth sectors by the NSDC. This implies that a “build and they will come” approach might yield meagre results unless complimented by major informational campaigns by the skill-development community to enable students to make more informed choices.
 - b. When we examine the students who have displayed an interest in high growth sectors (Figure 9) we continue to see a discrepancy between what the students want, and employment opportunities that are expected in India in the medium term.

¹⁷ Includes all students enrolled in Ph.D, post graduate, undergraduate and diploma programs.

Figure 9.



- c. *The chart on the left* shows the incremental human resource requirement (in millions) in some of these high growth sectors. The construction and automotive sectors are projected to require the maximum incremental number of skilled workers and correspondingly to create the maximum number of job opportunities.
- d. *The chart in the middle* shows the proportion of total survey respondents who expressed an interest in these sectors when asked an open ended question on which career they were interested in pursuing. Among the identified "high growth" sectors, a significant proportion of students expressed an interest in healthcare and education.
- e. *The chart on the right* shows student interest in each of these sectors by gender. Some sectors like education and healthcare are more popular amongst female respondents, while others like retail and hospitality were dominated by male respondents.
- f. **These results show an alarming discrepancy between the incremental human resource requirements in these sectors and the proportion of total survey respondents who expressed an interest in developing a career in them (Figures 6 and 9).** This gap is most apparent in sectors that have been projected to have the maximum human resource requirement in the next decade with construction, automotive and retail being the most notable examples. The construction sector has been projected to create almost 50 million jobs by 2022 – yet only 0.3% of respondents said they aspire to work in this sector.
- g. **This is largely because students do not associate working in these sectors with a career path they aspire to follow.** Students may not recognise that these sectors generate employment opportunities that require skilled workers with specific competencies. They may have limited awareness of the various career progression opportunities in these sectors and may associate them with unskilled roles or jobs with low prestige. As a next step, innovative ways to market "high growth" sectors need to be undertaken in order to generate awareness and to make them more attractive and interesting for students. Policy makers will need to work together with Sector Skill Councils and employers to address this issue if sectors identified as "high growth" are to be able to find a high quality skilled work force in sufficient numbers.

3. **It is important for policy makers and skill development providers to understand the various factors that influence a student's career decisions while designing policy, specific programs and awareness campaigns for skill development.**
 - a. Survey results show that parents and guardians are the most important source of information for students. It is important for policy makers as well as skill development providers to create targeted awareness and mobilisation campaigns keeping parents in mind. Our survey focused on students – clearly there needs to be a better understanding of what factors are shaping parents choices for their children.
 - b. Results show that currently only a small proportion of students use media to inform their career decisions. High levels of media penetration in India potentially makes it a good platform to generate awareness and disseminate information. There is therefore ample opportunity for policy makers and schools to make students aware that media can be better leveraged as a source of information to inform their career choices.

4. **Vocational education is perceived to be a low quality option.** When presented with a choice between vocational education and general further education, a vast majority of the students choose general education. Further, there is a negative perception associated with the term "vocational education"
 - a. Policy makers can address this by ensuring that high quality vocational education options are available to students and working with industry to institutionalise a premium in wages for skilled workers who have gone through formal vocational education courses. Indeed vocational education needs to be recast as a profession, with skills that need periodic upgrading and that command the respect as any professional.
 - b. The results show that a majority of students aspire to general higher education. This reiterates the urgent need to create pathways between vocational education and general higher education. This is being addressed by the National Vocational Education Qualifications Framework (NVEQF) which is currently being piloted in some states in India. This initiative, if successfully implemented, would be able to ease the pathways to greater mobility.
 - c. It is important to understand the demographic that is most likely to have perception issues associated with the term "vocational education." Students who are likely to be affected by this are those who go to private schools, have performed well academically and whose parents are relatively well educated. Policy makers can customise awareness campaigns targeting these "status conscious" students. Targetted mobilisation efforts directed at this group of students will be an important step towards improving the negative perception associated with vocational education in India. *This issue can also be addressed (at least in part) via a universal shift in nomenclature to "skill development."*

5. **The results from this survey offer interesting insights to policy makers as well as government and private vocational education providers, in creating specific skills programs as well as student outreach.**
 - a. It is evident from these results that students value skills like computers and English highly. In order to make skill development aspirational and to ensure that

these courses can actually empower students, it is important for all vocational courses to offer a combination of job specific skills and soft skills like language, computers, communication and personality development and interview skills.

- b. The results also show that students have limited awareness around options to study part time and accessibility to student loans. It will be important for to create awareness around these important enabling factors.

References

Federation of Indian Chambers of Commerce and Industry. (September, 2012). *Learner First*. Delhi.

Federation of Indian Chambers of Commerce and Industry. (2006). *Survey on "The State of Industrial Training Institutes in India"*. New Delhi.

Jeffrey, C. (2010). *Time Pass; Youth, Class and the Politics of Waiting in India*. Stanford University Press.

Jensen, R. (2012). Do Labor Market Opportunities Affect Young Women's Work and Family Decisions? Experimental Evidence from India. *Quarterly Journal of Economics*, 127(2), 753-792.

Largentaye, A. R. (2009). "Vocational Training and the Informal Economy," *Promoting Pro-Poor Growth: Employment*. OECD.

Manipal City and Guilds. (2011). *A Global Study To Get India World-Ready*.