

Understanding Vocational Education as an Economic Service in India

Apoorva Gupta*

**Research Scholar, Delhi School of Economics
Delhi**

Abstract

Skill development in India has gained importance, especially after India has realised that its major problem is not unemployment but high unemployment of graduates and postgraduates. To deal with this problem, we highlight the benefits of vocational education training in imparting required employable skills and work ethics to the youth of the country. In this process, we model in vocational education training as an economic service, and present how the three central economic problems – what to produce, how to produce, and for whom to produce, can be tackled in respect to vocational education in India.

Keywords: vocational education training, technical education, economic service, skill development, mind-set.

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SECTION 1: - INTRODUCTION

“Education and degrees without skills mean nothing. ... We have so many educated youth but they are unskilled and hence, jobless. That's why skill development is of utmost importance.” –
India's Prime Minister Shri Narendra Modi

A country can develop by utilizing its resources efficiently, be it natural resources, financial resources, or human resources. More than efficient use, what is required is the continuous upgradation in the productivity of these resources. While natural and financial resources are limited, human resource is abundant in India. With a population of more than 120 crores, nearly 50% of its population is below the age of 24 years, and nearly 60% of its population is in the working age group of 15-59 years, giving India an advantage of demographic dividend¹. However, it seems that the policymakers have failed to either exploit, or understand the advantage of demographic dividend for the development of the country. In achieving the aim of universalization of primary education, and hence increasing the general level of education, the quality of education has been neglected. Teaching is geared towards clearing national examinations, and secondary school education has become a kind of preparation for college admissions (Singh, 1999). Non-cognitive skills, like ability to work in teams, good communication skills, problem solving ability, readiness to accept challenges, and flexibility are not developed in the current system of general education of India (Aggarwal, 2011). Jayaram and Engmann (2014) find that according to Manpower Groups (2012) Talent Shortage Survey, one-third of the employers do not fill the vacant position as the applicants lack skills. World Bank Statistics, as reported in the Economist Intelligence Unit Report for the British Council, Jan 2014, estimated that the graduate unemployment in the country is 33% while on the other hand; the country's total unemployment rate in 2012 is only 8.5%. National Sample Survey Organization (NSSO) 61st Round on Employment-Unemployment indicates that about 80% of the workforce in rural and urban areas do not possess any identifiable marketable skills (11th Five Year Plan (FYP) Report: 89). Thus, there is a need to improve the productivity of the vast human resource available to the country, by improving the quality of education, and by providing work ethics to the workforce of the country. One of the ways to do so is skill development through vocational and technical education. International experience has shown that vocationalization of education (either at secondary education or at higher education, or at

¹Census of India Statistics, 2011, available at http://www.censusindia.gov.in/2011census/population_enumeration.aspx (accessed on September 3, 2014)

both levels), prepares the students for the labour market (Singh, 1999). For instance, CODESSER Model² of providing vocational knowledge in farming in Chile has helped more than 70% of graduates from agricultural schools to hold mid level management positions in agriculture³. Thus, providing technical knowledge and vocational skills to the students have become imperative for increasing the productivity of the labour force of the country, and hence experience continuous increase in the growth rate (as suggested by standard AK Model of growth theory).

In this paper, we review the recent literature on vocational education and bring out its benefits to India. We also present the challenges India faces in the development of vocational education and propose the possible solutions. In this attempt, we explain how, providing vocational education to the citizens of a country is analogous to providing any other economic good or service to its consumer. We highlight the three central problems of “what to produce,” “how to produce,” and “for whom to produce” in respect to vocational education. We suggest routes to solve these problems, and provide a direction to meet the target of 500 million skilled workers of government of India by the year 2022 (Aim of National Policy on Skill Development, mentioned in National Skill Development Policy Report, 2009). In the Appendix A, we review the history of vocational education in India and its contemporary outlook.

The plan of the paper is as follows: in the next section, we define vocational education and discuss its objectives and prospective benefits. Section 3 analyses the concept of vocational education as an economic service. We provide examples from India to make the concept clearer. Section-4 concludes.

SECTION 2: - AIMS AND BENEFITS OF VOCATIONAL EDUCATION

2.1 Defining Vocational Education

Different people define vocational education differently. Some say that it is same as technical education, while some say that there is a difference between the two. According to Oxford Dictionary, Vocational training means training directed towards getting skills related to an

²Corporacion de Desarrollo Social del Sector Rural (CODESSER)

³South Asia and Human Development Sector, Report 22, “Skill Development in India: The Vocational Education and Training System”, January 2008, Box 2.4, pp-18.

occupation or employment⁴. According to Britannica Encyclopedia, technical education is defined as “the academic and vocational preparation of students for jobs involving applied science and modern technology.”⁵

UNESCO does not make any distinction between technical and vocational education, and defined it as “those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupation in various sectors of economic life.”⁶

Foks (1990) distinguishes between technical and vocational education and defines technical education as “development of skills and knowledge to be applied in practical situations”, while he defines vocational education as “demonstrated and acknowledged development of knowledge, skills and attitudes necessary for a place in the workforce, at levels ranging from pre-trade to para-professional”.

After studying these various definitions, it is clear that both vocational and technical education give training in specific skills related to a specific occupation. The only difference between the two, which is minor, and often neglected, is the field in which the training is given. In technical education, training is given related to fields of work that involves technology, like electronics, mechanics, etc. Vocational education is a much wider term, incorporating not only technological training, but also training in other fields of work, like cooking, tailoring, singing, etc. Thus, one can say that vocational education is a superset of technical education. Throughout this paper we will refer to vocational education training (VET for hereafter), which is a wider term than just technical education.

⁴ Source: Oxford Dictionary, accessed on August 8, 2014-08-14:

<http://www.oxforddictionaries.com/definition/english/vocational>

⁵ Source: Encyclopaedia Britannica, accessed on August 8, 2014

<http://www.britannica.com/EBchecked/topic/585375/technical-education>

⁶ Source: UNESCO, accessed on August 8, 2014-08-14

<http://www.unesco.org/new/en/newdelhi/areas-of-action/education/technical-vocational-education-and-training-tvet/>

2.2 Aims of Vocational Education

The aim of VET is not only to provide sector specific skills to the students, but also to inculcate the non-cognitive and employable skills in the students, like problem-solving ability, tendency to take initiative, communication skills, and ability to work in teams under diverse situations, and adapt / adopt him /her to the changing circumstances. These skills help students in getting a respectable and a decent employment opportunity. Thus, the main aim of VET is twofold: one, to provide industry-specific training to get an entry in the labour market, and two, to provide functional skills to remain and progress at the workplace, and to reduce employee turnover and absenteeism.

2.3 Objectives and Benefits of Vocational Education

Various official documents and research papers provide many objectives and benefits of VET⁷. In this sub-section, we have categorized these objectives, and hence the benefits achieved by meeting these objectives, into three groups, based on the time scale within which these objectives can be met and the benefits can be reaped out. These are short-term objectives of VET and their benefits, medium term objectives of VET and their benefits, and long-term objectives of VET and their benefits. While short-term benefits are enjoyed at micro level, long-term benefits of VET are macro level benefits enjoyed by an entire nation. Medium-term benefits are enjoyed both at individual level and at societal level.

2.3.1 Short-Term Objectives and Benefits of VET

Providing right skills through practical training is what we call the short-term objectives of VET. Skills can be provided in any field, from tailoring and knitting to cooking, from plumbing to physical education, from technical training of an electrician to motor mechanic training, from agricultural training to training in sales and management, from photography to printing, and many others. Thus, providing theoretical background through classroom teaching and integrating it to the practical knowledge of different fields are the short-term benefits of VET.

2.3.2 Medium-Term Objectives and Benefits of VET

⁷ See for instance, Ogundele et al (2014), The Economist: Intelligence Unit Report (2014), Khare (2014), Thakore (2010), Draft of 11th Five Year Plan, Government of India

Acquisition of skills is not enough until they are applied to real life situations, with the right approach. Thus, medium-term objectives of providing VET are the development of the right functional and non-cognitive skills among the students for entrance into and progress in an occupational field. VET can help students in the formation of new ideas, and motivate them for prompt application of these ideas for their own progress and for the betterment of the society at large (Ogundele et al 2014). It helps in intellectual training of the students so that they develop the habit of self-learning and hence become self-reliant (Bengeri, 2014). Even if a student does not get any wage or salaried job, he/ she can become self-employed with the training he/ she has acquired in the specific skill. Thus, VET helps in the development of employable skills and work attitude among the students, and hence benefits them in reducing the gap between their education and employability (Bengeri, 2014).

2.3.3 Long-Term Objectives and Benefits of VET

The long-term objective of VET is to provide macro level benefits to the country, the benefits that the nation as a whole can enjoy. With the acquisition of right skills and attitude, an individual's productivity and his/ her prospects for getting an employment opportunity increase, providing an insurance against poverty and unemployment. This increases the employment rate of an economy, and hence reduces the gap between the demand for skilled workforce and its supply. There is an improvement in per capita income, and hence standard of living of the people in the country (Ogundele et al, 2014). Thus, the entire vicious circle of poverty and unemployment can be transformed into the virtuous cycle of economic growth⁸.

Not only this, there are socio-psychological benefits of providing VET to the society. Students have an obsession of getting an extra degree in general streams. Without adequate skills, these students add to the pool of graduate unemployed of the country. They are unable to translate their education advantage into a commodity in the job market (Bénéï, 2014). These students

⁸Note that, these macro level benefits of providing VET are similar to the arguments which are often given in favor of providing education (mostly in general streams). However, the school and college education have merely become a source to get degrees (to attain upward educational mobility), but not the skills, that can help a person to earn his/ her livelihood. In other words, students are becoming literates, but not educated. Thus, these benefits have now to be seen in a different perspective, away from general education and in favor of vocational education. However, it is important to note that vocational education has to be imparted in an orderly manner, otherwise it will lead to a situation where India will have a large pool of unemployed skilled labour (either technicians or other craft persons), which might be an even more critical problem than facing the problem of high graduate unemployment. (Source: - "Essay on Vocational Education in India, by Jasvir, available at: <http://www.preservearticles.com/201103264736/vocational-education-in-india.html>, accessed on September 4, 2014).

have to wait for months and sometimes even for years to get a permanent employment opportunity⁹. With prolonged waiting, these students get dejected with their lives. Some of them accept it as their fate, some other end their lives, while some become a burden to their families and society. These depressed and frustrated educated, unemployed get involved in crime and atrocities (Thakore, 2010), which are later politicised in the name of caste, class, or religion, and create unrest in the society¹⁰. With the help of VET, as mentioned earlier, there will be an increase in employment rate in the country, which might help to overcome some of these social problems to the society in the future.

Thus, there is a need to start vocational education training in the country, especially among the youths to not only achieve the target of 500 million skilled personal by 2022 in the country but also to reduce high graduate unemployment in the country. However, providing VET is not free from challenges, which we discuss next.

SECTION 3: - CHALLENGES & SUGGESTIVE SOLUTIONS: UNDERSTANDING VET AS AN ECONOMIC SERVICE

In the previous section, we highlight the importance of vocational education and emphasize the development of VET in India, to have an army of skilled labour force. Thus, government of India, being a benevolent leader, has to enhance VET in the country. However, vocational education, like any other economic service, has to be supplied by its suppliers. Thus, the questions which are raised for supplying VET are similar to the three central problems of an economy, i.e., what to produce, how to produce and for whom to produce. The parallel questions pertaining to VET are: (1) What kind of training will be provided?, (2) How this training will be provided and who will provide this training?, and (3) Who will get this training?¹¹ Like any other economic good or service, VET face challenges from both demand and supply sides, and these challenges can be solved by answering these three questions. We explain them one-by-one in the following paragraphs.

3.1 What kind of courses will be taught under VET?

⁹ Similar argument is given by Prof. Krishna Kumar in his article in *The Hindu* on September 15, 2014, "The impact of institutional decay", available at <http://www.thehindu.com/todays-paper/tp-opinion/the-impact-of-institutional-decay/article6410815.ece>, accessed on September 17, 2014

¹⁰ Crimes in India Report, 2011 shows that highest number of victims is in the age group of 18-30 years

¹¹ These three central problems highlight the problem of scarcity and guide us towards taking correct decisions for the economy.

The first economic problem relates to the efficient allocation of resources. There is scarcity of skilled personnel in the country. Moreover, many skilled people are underutilized because the training is not taken in the sector, which are high on employability. Khare (2014) reports that among the graduate job seekers, majority are from general streams like Arts (or Humanities), whereas growth in demand for professionals is high from manufacturing, insurance and chemical segments, engineering and technical fields, and IT sector. In addition, National Skills Development Council (NSDC) has projected close to 100million new jobs, by 2022, in construction and automotive industries alone¹². Thus, imparting skills in the field of study that can enhance the employment prospects of a person is a solution towards this problem. Hence, resources have to be allocated in such a way that along with general education, students enrol for vocational education as well. As the name suggest, vocational means related to occupation. So any kind of training which enhances the skills and hence, allows an individual to get direct employment opportunity (either as self-employed or as wage or salaried job) can be provided. For example, consider training in construction activities related to buildings. Construction is not just left to laying bricks and cement, and is no more a work of construction workers. People take professional training in various activities related to it like building designing, exterior and interior designing, floor and ceiling designing, wall decoration, etc. With training in these kinds of courses, an individual either can get a job in big construction houses, or can become a consultant, as a self-employed individual¹³. Thus, training can be provided in any course, which is considered high on demand. Some of the examples are plumbing, driving and other transportation related activities, health care courses, and many others.

3.2 How the provision of vocational education training be made?

The second economic problem relates to utilization of resources efficiently. We need resources (such as trained teachers, monetary funding, land for building VET centres, and managerial support) to develop VET in India. Providing VET is comparatively more challenging task than providing education in general stream. Necessary infrastructure is one big problem.

¹² Source: - The Economist: Intelligence Unit (Jan 2014), “High University Enrolment, Low Graduate Employment: Analyzing the paradox in Afghanistan, Bangladesh, India, Nepal, Pakistan and Sri Lanka”, An Economist Intelligence Unit Report for the British Council

¹³ Consider another example of training in cooking. Cooking is no more a work of housewives. People get professional training in cooking and other hotel management courses. With this training, either they can get jobs in hotels or they can open their own restaurants, or canteens as self-employed individuals. Moreover, cooking is not just left to providing food twice a day. It includes a whole range of items – Indian, Chinese, Thai, Continental, Italian, and many others. Moreover, baking, making cocktails and shakes, and food decoration are other interesting courses that are part of cooking.

Infrastructure created for providing training in one particular vocational course may not be suitable for providing training of another vocational course. For instance, training in computers requires a different infrastructural setup, in terms of equipments and space, compared to training in gardening. Moreover, the facilities and infrastructure provided in most of the VET centres, especially, Industrial Training Institutes (ITIs) are inadequate. Students work with obsolete equipment in laboratories and workshops. The maintenance of ITIs is also poor (World Bank Report, 2007)¹⁴.

Second, there is lack of availability of qualified teachers who are trained to impart vocational education. Shortage of dedicated teachers, high teacher absenteeism, and inertia on part of teachers to change with the changing requirements, often lead to low quality of VET.

Third, non-standardized syllabus across different vocational education training centres is yet another major problem that students of these courses face. For instance, a student getting training in computers from VET centre at region A, may not have the appropriate skills needed for the job in region B. Moreover, the curriculum is outdated, so that a student hits a ceiling after a few years of employment and again become a part of unskilled labour (Joshi, 2013).

Fourth, there is an issue of financing VET. It is difficult to obtain data on public financing of VET, as most of the times, the expenditure on VET and general education are reported together. Moreover, the unit cost of providing vocational education is much higher than that of general education¹⁵. Thus, there is a need to face these challenges and find out potential solutions to these problems.

Standardization of syllabus and national certification across all centres of VET, which are recognized across the nation, can be a potential starting solution. For example, government of India and several representatives from the association of industries promoted the National Skills Development Council (NSDC) with the aim of developing standard VET programmes across the country. Reducing inertia on part of the teachers to adopt/ adapt to the new curriculum can be seen as a step towards introducing the standardized and dynamic syllabus. By dynamic

¹⁴Box 3.3, page- 30, in World Bank Report, 2007 on “Skill Development in India: The vocational education system and training system”, Human Development Unit, South- Asia Unit

¹⁵According to the last available data, i.e., for 1995-96, the unit cost of vocational education was 60% higher than the unit cost (per student enrolled) of general secondary education. Source: - World Bank Report, 2007 on “Skill Development in India: The vocational education system and training system”, Human Development Unit, South-Asia Unit

syllabus, we mean a syllabus that is subject to continuous upgradation to meet the industry specific demands for the skills. To upgrade the syllabus, it is imperative to have collaboration between academia and corporate world. In addition, this collaboration can provide continuous evaluation and monitoring of teachers, which can reduce teachers' inertia to adapt to new syllabus, and hence, can improve teacher quality as well.

With corporate world providing onsite apprenticeship as a part of their corporate social responsibilities (CSR) to the students of vocational education courses, can help students in getting practical knowledge along with theory. If not a full time course, short-term courses, along with school education can help the students to learn skills. Moreover, corporate world can provide government and academia with monetary funding and managerial support through which vocational education will get a boost in the country¹⁶.

In addition to general education, students in schools are given training in Socially Useful and Productive Work Experience (SUPW) at the secondary level, like training in computer hardware, photography, fine arts, library science, and electronics. These training programmes can be extended to higher secondary level as well. It can be beneficial, especially for those students who leave studies after secondary or higher secondary level. They can directly enter into the world of work after school, and hence can become a productive resource to the country, rather than an unproductive burden.

Moreover, part-time courses for already employed individuals, in collaboration with their employers, can be introduced to upgrade their skills with the changing technology and skill demands. Furthermore, as each state has Directorate of Education to look into the progress of general education, there could be a similar kind of Directorate for Vocational Education to enhance vocational education in each state. Thus, collaborative efforts between governments (both centre and states), academia, and corporate world are necessary for the development of vocational education in India.

To cite a few examples wherein corporates and NGOs have come up to help the students learn skills are as follows. A joint venture – IndiaCanEducationPvt. Ltd. —betweenEduComp Solutions Ltd (India's ICT-in-education) and the Pearson Group (UK based publishing house) provides education programmes linked to industry demands in English, retail, insurance, and

¹⁶This can again be done as a part of CSR.

banking (Thakore, 2010). The Intel Learn Programme in India provides students with the opportunity to participate in technology-driven after-school projects focused on community improvement. They simultaneously build ICT, teamwork, and problem-solving skills in addition to developing a strong sense of community ethics. Similarly, Agastya Mobile Science Labs deliver complex science experiments to schools around India in minivans, where it is possible to make use of common and locally available materials, so that their experiments can be replicated after the van has left. In some cases, they also use more elaborated tools, such as working models of the solar system that would otherwise be unavailable to the schools and their students. A non-profit organization, Lend-A-Hand, in rural Maharashtra, has introduced a supplementary vocational and business skills course alongside traditional academic studies in public secondary schools. The supplementary curriculum exposes students to skills that are directly related to the local community's economy and invites local entrepreneurs from the community to act as trainers. Students are also trained in practical business skills such as being on time, calculating costs, marketing and selling their products locally, and calculating profit margins. The course is taught in government schools and is officially accredited, allowing it to be scaled up within the state (Jayaram and Engmann, 2014)

Thus, the problem of who will provide vocational education training and how will it be provided can be solved with joint efforts of academics, governments (both centre and states), corporates, and NGOs, i.e., by partnership among key stakeholders.

3.3 To whom Vocational Education Training be imparted?

The third economic problem relates to providing right kind of skills and training to the right kind of people. It is advisable to give training in the field of study according to the interests and talent of a person. Skills or vocational education cannot be learnt under peer pressure. For instance, if a student is not interested in taking up training in electronics, but interested in dancing, then he/ she should be given an opportunity to enhance his/ her skill of dancing. Moreover, regional specific vocational education courses can be encouraged. This provides an opportunity to the people of that region to get employment within their hometown (without migrating to other places). This not only improves their own standard of living, but also allows them to develop their region (rather than migrating to other places, and helping other regions to develop, on the cost of the development of their own town). For instance, consider a village where the main livelihood is agriculture. Training in agricultural skills in terms of new and

modern methods of organic farming, irrigation, knowledge about chemical and organic fertilizers, High-Yield Variety (HYV) seeds, and skills related to marketing of agricultural products, can help the people in not only improving their agricultural produce, but also in improving the economic standards of the entire village. To cite an example, there is a village called Kasai Dehariya in Shajapur district of Madhya Pradesh. Agriculture and animal husbandry are the main income sources for the households in this village. However, the village faced several problems, including sparse vegetation, low-gross irrigated area, and scarcity of drinking and ground water. In collaboration with Reliance Foundation, Kasai Dehariya communities learn on de-silting old ponds, substituting chemical fertilizers with organic fertilizers, and storing rainwater in the ponds. The community thus, converted 58.71 hectares of land, which was earlier barren or single cropped, to double cropped land and farm productivity per hectare improved more than 100%¹⁷.

Taking another example, a village where jute is grown in abundance. If the people of this village are trained in how to make jute buckets, bags, furniture, and other jute products, either by hand or by machines, the people will not only learn a skill, but also earn their livelihood. To cite an example, in the villages of Bihar and Jharkhand, an NGO, SuviSewa, started a program called, “Swavalamb”, under which rural women are trained in weaving and stitching jute products, which are delivered to handicrafts business houses in Delhi and other metropolitan cities. This not only provides employability to the entire village, by the use the locally produced jute, but also helps in women empowerment¹⁸. Thus, region specific vocational education training will help the region to prosper.

3.4 Case Study: - TATA Nano plant in Gujarat¹⁹

Let us understand how training in vocational education is an economic service, through an example, and how the three central problems pertaining to it are solved. TATA started manufacturing of its Nano car in Gujarat. When the manufacturing plant was under

¹⁷Source: - Reliance Foundation Website, accessed on September 29, 2014
http://www.reliancefoundation.org/stories_of_transformation.html#vajaben

¹⁸Source: - Kumar, Vineet and Kumari, Jyoti, “Handicrafts Business of NGO “SUVI SEWA”, report compiled by SUVI SEWA, available at
http://www.biharinnovationforum.in/_submitted_doc/application_no001230.pdf,
accessed on September 29, 2014

¹⁹This section is Author’s own interpretation of understanding the concept of vocational education as an economic service. There is no involvement of either directly or indirectly of the company or of the government. This example is taken from Prime Minister’s speech on September 5, 2014.

construction, the then Chief Minister of the state asked the company to start with a course on automobile engineering in surrounding industrial training institutes (ITIs) and train the youth. Thus, the problem of what kind of VET is to be imparted is solved. Since, an automobile industry is coming up so it is rational to expose students about automobile engineering, rather than some other course. The second problem of how to impart this training is solved as the company adopted few ITIs in the surrounding areas, and the experts in the field from the company, train the students with the vital skills. The third problem, i.e., to whom to train is solved as the youth from the nearby areas, in anticipation of getting employment in TATA manufacturing factory, join this automobile engineering course.

Thus, the three problems were solved and once the company started its operations in the factory, the youths, who were trained, were employed in the plant²⁰. Thus, VET not only enhances skills of the youth of Gujarat, but also provides an employment opportunity to these youths. Thus, mapping and coordination between policy makers, corporate world, and academic world are essential for skill development in the country.

3.5 Changing the Mind-Set

As mentioned earlier that like any other economic good or service, vocational education is an economic service, and challenges relating to it can be answered by solving the three economic problems related to it – What to produce, How to produce, and For whom to produce. However, VET is a service related to human behaviour and hence a major challenge is to change the mindset of the people in favour of VET. It has been argued that a student is assumed to have incomplete education if he/ she has not managed to get a college degree (Singh, 1999). It is believed that vocational education is for those students who have no other option left out for tertiary education in general streams. There is a perception of inferiority attached to vocational education (Alagaraja, 2014). A student who has obtained a college degree in general streams (even without getting any employable skills) is considered superior to a student who has got training in some vocational course, say hotel management. Thus, the mindset of the people has to be changed (Thakore, 2010). The thought process of every person, who can potentially affect the choice of the subject by a student, has to be altered, especially the parents. Parents have to

²⁰When the plant was inaugurated in June 2010, the company recruited 2400 individuals from 156 ITIs in Gujarat, and was expected to create about 10,000 more jobs in the plant. (Source: - TATA Motors website, <http://www.tata.com/article/inside/XFBpop5GFuM=/TLYVr3YPkMU=> accessed on September 20, 2014.

be made aware about a variety of the courses available, and have to be motivated to provide the right guidance to their younger generation²¹. Either in competition with other children, or to use degree as a signalling device (in marriage market), parents guide their children to get a college degree. Children, in a mad rush to get degrees, develop an obsession for it (Singh, 1999), without getting employable skills that can help them in earning a respectable livelihood²². Employers, on the other hand, use degrees as a signalling device and train their employees on the job, rather than hiring an already trained person (Van De Werfhorst, 2002). Thus, changing the mind set is very important task and the biggest challenge to the policymakers²³.

If the mindset towards vocational education is changed, then the three problems highlighted above can be automatically managed. When the students, parents, policymakers, teachers, and corporate world, all realize that vocational education is important for students to gain employable skills, and it's equally important to create centres for VET, then these stakeholders will come together to solve the three economic problems related to vocational education²⁴.

SECTION 4: - SUMMARY AND CONCLUDING REMARKS

The world is dynamic and the technology is ever changing. We need knowledge and skills that can cope up with the changing environment. We need to make our country a knowledge-based economy and hence develop skills in the youth to reap the benefits of our demographic dividend. We argue that providing vocational education training is a tool to enhance the productivity of the vast human resource available to the country, and to achieve the government's target of 500 million skilled people by 2022.

Throughout the analysis, we have considered vocational education training as an economic service. Using secondary data sources, we have categorized the objectives, and hence their

²¹ There are a few perceptions that some courses are culturally gender specific, like cooking, tailoring, or beauty courses, are for girls, and not for boys. These stereotypes have to be changed. ((Johanson and Van Adams, 2004), cited in World Bank Report, 2007 on "Skill Development in India: The vocational education system and training system", Human Development Unit, South- Asia Unit).

²² A related problem is the choice of vocational course. Rather than choosing a course of their own interests and talents, students often take up a course that their friends have taken up, leading to a typical herd behaviour problem.

²³ Figure 1 in the Appendix B brings forth the employer's concerns with VET in India

²⁴ It is generally seen that a common person try to understand things better through street plays, dramas, or movies. If VET is promoted through eminent personalities, through movies, or daily soaps, it might happen that people at least start thinking about training in vocational courses, and hence, understand that skill development is equally important to a college degree to get employment.

benefits of VET into three groups: - (1) Short-Term objectives and benefits (imparting training in a particular course);(2) Medium-Term objectives and benefits (developing non-cognitive skills and hence, improving the personality of the students); and (3) Long-Term objectives and benefits (macro level benefits of increasing employment rates and reducing poverty at the national level). We then put forward the major challenges that a country can face in providing vocational education. These challenges are analogous to the three central economic problems: What to produce (Training in which course should be given?), How to produce (How to provide the training in vocational education?), and For whom to produce (Who should get the training in vocational education?). Finding solutions to these problems can help in reducing demand-supply mismatch of skilled labour in the country.

We suggest here to organize regular statistical surveys at two levels, to know the changing demand and supply patterns of skilled labour in the country: - (1) Survey among the corporate world to know the demand for skills; and (2) Survey among the VET centres and public at large to know the supply of skills. Having reliable data on both demand and supply of skills is a crucial step in understanding the extent of the problem.

Furthermore, we suggest exposing students to the industry and service sector training, for one to four months, either in the form of apprenticeships or internships, from the secondary school level only. This exposure of VET can help students in recognizing their field of interest and talent, to pursue at the tertiary level.

However, the prime challenge to the development of vocational education in the country is changing the mindset of the stakeholders, especially of students themselves, and of their parents. Collaborative efforts of corporates, academic world, NGOs, and policy makers, are required in facing this challenge and hence in achieving the target of the developing skilled labour force in the country within the stipulated time.

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APPENDIX A

REVIEWING VOCATIONAL EDUCATION IN INDIA

The concept of VET in India is not new. The history can be traced back to Epic Period (1000 BC) and Vedic Period (prior to 500 BC), when numerous technical skills such as carpentry, smithy, foundry, and weaving were part of education. However, during the British rule, vocational education in India formally started with the establishment of “Survey School” at Madras (Now Chennai) by the English traders in 1794. The instructors in these schools were mainly Britishers who gave training to Indians on assisting the British surveyors in modern land survey, like training in construction of roads, bridges, buildings, railways, canals, and docks, etc²⁵. Simultaneously, lower grade technicians were also trained in the use of measuring and survey equipments needed for army, navy and other technical establishment for maintenance of a colony of the British crown. Later on, technical education spread to other parts of the country and was transferred from generation to generation²⁶. Since 1794, many steps were taken by the British government, during the pre-independence period, and by the government of India, in the post independence period, to promote technical education in India (Singh, 2013).

However, it was in the year 1976, when the National Council for Educational Research and Training (NCERT) documented its report on “Higher Secondary Education and its Vocationalization”, the need for vocationalization of education was felt in the country (Bengeri, 2014). It was aimed at diversifying the educational opportunities, enhancing individual employability, and reducing the mismatch between supply and demand of a skilled labour force. It was also aimed at diverting a substantial portion of students away from the academic stream towards vocational courses. At the primary standards, the aim of vocationalized education was to make students aware of the concept of work, and at the secondary level, it aimed at increasing students’ familiarity with the world of work (Maclean and Pavlova, 2011). In addition, as per Kothari Commission of 1964, appointed under the chairmanship of Prof. D.S. Kothari, for the students who have passed secondary classes, it was recommended to establish Polytechnic Institutions and Industrial Training Institutions (ITIs) to provide part-time or correspondence courses in technical education (Singh, 2013).

²⁵ Sen, Biman. (1989). Technical education in India 1921-80 In *Studies in educational reforms in India* P.R. Panchamukhi Ed. vol. 3 part 2. Bombay, Himalaya. p.189, as cited in Singh (2013)

²⁶Awale, S.D. (1996) *Engineering teachers in the development of technical education system in Indi*, ISTE, New Delhi.p.3, as cited in Singh (2013)

Today, there are about 5114 Industrial Training Institutes (ITIs) imparting training in 57 engineering and 50 non-engineering trades. Of these, 1896 are State Government-run ITIs while 3218 are private. The total seating capacity in these ITIs is 7.42 lakh (4 lakh seats in government ITIs and the remaining 3.42 lakh in private ITIs) (Planning Commission 11th FYP report).

However, the major breakthrough in the development of vocational education in India came in the year 2009, when the Government of India and several representative associations of industry, including Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce and Industry (FICCI), and The Association of Chambers of Commerce and Industry of India (ASSOCHAM), promoted the National Skill Development Corporation (NSDC). NSDC is India's first public-private partnership (PPP), non-for-profit organization aimed to facilitate skill development education in the country. NSDC's goal is to contribute at least 30% to the overall skilling and upskilling target of 500 million citizens by the year 2022 set by the Union Government's National Skill Development Policy, 2009. It will do so by funding competent educational entrepreneurs and NGOs to promote VET centres across India (Thakore, 2010). The aim of NSDC is to promote skill development by providing funding and catalyzing the creation of large, quality, for-profit vocational institutions. "Its mandate is also to enable support systems such as quality assurance, information systems and train the trainer academies either directly or through partnerships"²⁷.

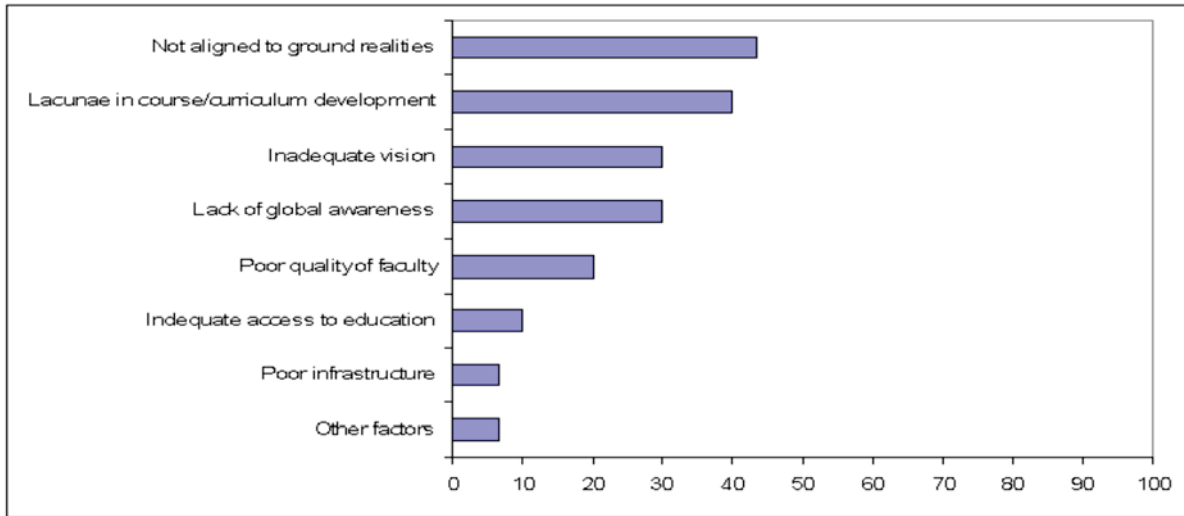
APPENDIX B²⁸

FICCI conducted a survey of 55 enterprises in late 2001 to assess the quality and relevance of vocational/technical training from an industry perspective. The figure below shows the result. Close to 60% of the respondents felt that institutions were not geared up to meet the challenges of the global economy and over 43% felt that academic institutions were not aligned to the needs of industry. 87% felt that institutions should have greater exposure to industrial practices. They stressed the importance of a collaborative approach between academia and industry, as a means of ensuring a better match between what industries wants and what the institutions

²⁷For more details about NSDC, please refer to <http://www.nsdcindia.org/> (accessed on September 9, 2014)

²⁸This appendix is taken from World Bank Report, 2007 on "Skill Development in India: The vocational education system and training system", Human Development Unit, South- Asia Unit

produce.



Source: FICCI (2002)