UNVEILING THE CRISIS OF SKILL GAP: A REAL SCENARIO OR A MYTH

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Abstract

According to the report by NASSCOM and McKinsey in 2005, only 25% of the engineering education graduates are employable by multinational companies. At one hand due to the downturn of global economy jobs are drying up around the world. the ranks of the jobless are swelling rapidly on the other lots of vacancies are lying unfilled at various private & government departments. This highlights the existence of a paradox which is beyond the simple matter of quantitative availability of head counts to fill up the positions. This paper is an attempt to unfold the phenomena of Skill shortage & identify its root & causes. It summarises skill shortage from the perspective of candidate, Industry & Government. The research work focuses on the qualitative dimension of skill shortage; It analyses & suggests the possible methods of alleviating skill shortage.

Key words- Skill shortage, competency, training, recruitment, manpower

INTRODUCTION-

Skill shortage, skill gap, inadequate skills are the different terms used invariably replacing each other for the phenomenon which describes the lack of a competent resource person to place in a job position who can create exemplary performance in both long & short term. This research paper is an attempt to explore the real situation of skill gap in the global industrial scenario.

In order to understand the concept of skill shortage the researcher attempts to explore whether in general skill shortage exist in our country India or not? Is India lacking skilled manpower? A matter of concern raised about our best professional courses by the politician Jairam Ramesh, (himself an IIT pass-out) that the faculties in IIT and IIMs are not of the level as they used to be before. As quoted by Narayan Murthy that IIT pass-outs do not possess the desired skills as the JEE exam has become predictable. Large numbers of IT professionals are eager to fly to US, UK leading to brain drain in search of better growth prospects, status and money. A research says that has 20 to 30% of NASA’s employees are INDIANS, even in WHITE HOUSE the chief security officer was an INDIAN, the president of USA had a chief advisory an INDIAN.
Manpower Group surveyed nearly 40,000 employers across 39 countries and territories of which 10 countries throughout the Americas, eight countries and territories in Asia Pacific and 21 countries in Europe, the Middle East and Africa (EMEA), to gauge the impact of talent shortages on the global labor market. It reveals that employers in India, the United States, China and Germany report the most dramatic talent shortage surges compared to past year. In India, the percentage of employers indicating difficulty filling positions jumped 51 percentage points.

- Nearly one in four employers say environmental/market factors play a major role in the talent shortage—employers simply aren’t finding anyone available in their markets. Another 22% of employers say their applicants lack the technical competencies or “hard” skills needed for the job, while candidates’ lack of business knowledge or formal qualifications is the main reason identified by 15% of employers.

Figure 1

As per the 2013 survey results the highest talent shortages are reported in Japan (85%) and Brazil (68%). India ranked 3rd at 61% with more than half the employers surveyed, followed by Hong Kong (57%) and New Zealand (51%) saying that talent shortages prevent them from hiring people with needed skills. Despite the high proportion of difficulty reported by employers in Brazil, the overall percentage in the America region falls down by 2% points to 39%.
As per the American Productivity Council we are sitting on the volcano of skill shortage which is lying latent. While the impact of skill shortages on the economy is not well defined, in many sectors it means reduced output and the delay or cancellation of new projects. The maximum skill shortage is seen at the times of high economic growth and low unemployment. However, when there is a mismatch between the skills available and the skills demanded then skill shortage can even occur in regions of high unemployment.

Skill shortage can be defined in various ways, “when there are not enough people available with the skills needed to do the jobs which need to be done” (Green et al., 1998). Haskel and Martin (1993a) define a skill shortage as “a situation in which the firm must wait longer than normal, or search more actively to hire a worker,” reducing the problem to a matching game (Haskel and Martin, 1993b), and thus it becomes a question of defining what is considered to be a suitable length of time for a given vacancy.

The definition referred for this paper is from Shah and Burke (2003):

“A skill shortage exists when the demand for workers for a particular occupation is greater than the supply of workers who are qualified, available and willing to work under existing market conditions.”

In-order to understand skill shortage it is important to understand two other related concepts that often get confused with skill shortages. The first is a recruitment difficulty, where a business finds it difficult to fill a vacancy due to the characteristics of the business, the location or the skill set required for the position, though broader skill shortage may not exist. The second is known as a skill gap. Skill gaps occur when existing staff do not have the skills for the required positions.

Further exploring into the dimensions of the causality of the difficulty in recruiting it was identified through Manpower group that the major factors could be categorized in three sections-Organizational, Candidate & Market/Environment based factors. The light on the details of these three sections has been thrown through the Figure 3 below.
Skill shortage can be examined from different perspectives. There are two main ways of viewing shortages—firstly from an industry, occupational or national focus, secondly from a location focus (Canterford, S, 2006, McKenzie 2004, DSE 2005). A government department to assess skill shortage usually adopts industry focus & regional councils in their reports & skill audits uses location focus.

Globally geographic distribution of skill shortages is produced by the Department of Employment and Workplace Relations (DEWR). DEWR produces its Skills in Demand list by surveying businesses that have advertised vacancies and combining the results with labour market and economic indicators.

Considering the impact of location DEWR has defined skill shortages as-

“Skill shortages exist when employers are unable to fill or have considerable difficulty in filling vacancies for an occupation, or specialised skill needs within that occupation, at current levels of remuneration and conditions of employment, and reasonably accessible location.”

The thrust of this second point is that mainstream education offered in schools, universities and colleges remains detached from the concerns of the real world.

The urgency to improve the skills base of the country is further compounded by the recent statistics on the apparent shortage of skilled employees. For example, 20 per cent of companies reported skills gaps in their workforce and 1.5 million workers were described by
their employers as not being fully proficient, according to the national employers skills survey (LSC, 2004).

**TYPES OF SKILL SHORTAGES**

There are two major types of skill/labour shortages: cyclical and structural. Cyclical shortages may be short run, the “short-run” can prevail for a considerable time in a dynamic environment because of uncertainties and adjustment costs. As production and revenues fluctuate during the economic cycle both employers and potential workers will adopt strategies to shift the labour market towards equilibrium referred as market response. For example, employers may increase wages or initiate recruitment campaigns in order to attract more workers during a period of rapid economic growth (Skills Canada BC, 2004).

Structural shortages may occur due to changes in the nature of the economy when the labour force does not match the skills required for production. Factors that contribute to structural shortages can include significant demographic changes, technological changes and rapid growth of new industries. Market responses finds difficult to manage the Structural shortages because the available labour pool may not have the requisite skills and also that it takes longer time to develop these skills (Tony Fang, 2007).

The nature of skill shortage can be temporary or permanent In economic terms, a skill shortage is an imbalance in the labour market that should only occur for a short period while the market adjusts. This adjustment could come from a reduced demand through changing processes and capital and hence the skills required. Besides this the supply may be increased by giving more training or by adjusting the wage rate until a new equilibrium is attained (Trendle, 2005).

**MEASUREMENT OF SKILL SHORTAGES**

It is measured by two approaches, the first is a composite measure based on a number of economic indicators such as hiring rates, wage movements, vacancy rates and employment changes. This approach provides an objective view of the labour market, but may not accurately reflect regional differences in skill shortages. It also may be inadequate for studying regulated occupations such as teachers and nurses (Shah & Burke 2003).

The second approach is to survey employers to determine unfilled vacancies. While common, the problem with this approach is that it is based on the employer’s perceptions of recruitment difficulties. Some employers state that they have trouble recruiting skilled workers, yet if such a worker became available there may not be a position for them. Many employers are also looking for broader skills, such as a sheet metal worker with presentation or communication skills (Richardson 2005). In this case, the shortage is identified as sheet metal workers, yet the skill lacking is communication skills. Many other employers confuse the difference between skill gaps and skill shortages. Because of these limitations, an ideal study of shortages would combine both survey and economic indicator methods (Shah & Burke 2003).

The period of time that is considered may also have an impact on the identification of shortages (Shah & Burke 2003). Seasonal occupations may indicate a shortage at some snapshot during the year, but not if considered over the whole year. If the market is slow to respond to shocks, a year may not be sufficient to detect a growing shortage. Finally,
geographic details are required to provide a spatial analysis of skill shortages. An occupation may be in shortage in particular geographic areas, but not in others (DEWR- 2006a). Skill shortages in one region can coexist with skill surpluses in another, but such geographic imbalances are more persistent in labour markets which are relatively inflexible or where geographic mobility is restricted (Shah & Burke 2003). Without an indication of location, it is impossible to determine whether the relocation of workers is a possible cause of or solution to the shortage. In-order to explore the impact on major global economies it is inevitable to explore the U.S. economy. It is expected that the coming future will generate rising demand for highly educated workers which has to be met by rising education levels by 2018 (Neumark 2011).

However, numerous states with large and growing, and less-educated, immigrant populations appear more likely to face significant imbalances (which might be alleviated through interstate migration). And over the longer-term, as more baby boomers retire, there is greater risk of substantial skill shortages (David Neumark 2011).

In-order to understand the concept of skill shortage it is important to explore the causes of Skill Shortage. They can be categorized as ‘

Depicted in Figure 4 below. Proximal are immediate in nature

- Training—the number of people entering training
- Wastage—the number of people trained in a skill, but are not working in that occupation
- Migration—the impacts of the global labour market
- Workforce exits—it specifies the number of people permanently leaving the workforce.

They are measurable & hence good indicators of skill shortages

The root causes fall into two broad categories. The first category contains related factors which are drivers of a more macroeconomic nature:

- Technology change
- Globalisation
- National economy
- Regulatory framework.

The second category relates to the flexibility and mobility of workers. This relates to the various human choices of interacting drivers chosen by workers in supplying their labour.
OTHER FACTORS INFLUENCING SKILL SHORTAGE

**Location focus**—Countries not only vary in terms of their geographic dimensions but also their Skill developmental approach – whether they consider developing talent, a critical investment or expenditure. There is a wide disparity, some barely provide a secondary education, while others, such as Singapore make skill development the government’s #1 priority. Despite of the high labour cost & lack of natural resources, Singapore’s best asset is the talent of its people. In order to develop an innovative workforce that also make life-long learning a reality, around 90% of the people in the public sector is undergoing training in these two fields. Australia’s reputation as a leader in tertiary education has slipped over the past few years. They are just ranked one above Turkey.

As per the Research done over 3 years by the American Society for Training & Development showed that companies that spend more than average on training had an 86% higher share holder return than companies that spend the lowest on training.

**Industry focus** - Most government researches are based on industry focused data collection for skill shortage. It varies due to the differing nature, requirements, periodicity of the industry.
It has been observed that it is difficult to recruit members of staff with the appropriate skills but also with a sense of flexibility, willingness and presentation. Skills shortages are even more of an issue in regional areas and for entry level positions such as F&B attendant, room attendant, porter and guest service agent. Another focus group member encountered difficulty in recruiting a qualified career orientated restaurant manager and banquet supervisor even after three months of searching for the applicants. The new generation of graduates are ambitious and do not have the patience to go through the traditional steps of a career path. Additionally, they favour a better work/life balance, which is not always compatible with the hospitality industry. As a consequence, these new graduates tend to leave the industry for more attractive hours and pay (Whitelaw et al)

Health Care industry

Most of the rural areas in India are understaffed, the new initiatives by government of providing financial incentives at getting the delivery dome in hospitals, awarding a sum of money on the birth of girl child has pulled a large mass in government hospitals which are facing acute shortage of skilled professionals. In Australia urban communities have three times as many occupational therapists per capita as rural communities (Lannin & Longland 2003). The new management system has made work more stressful and environment less rewarding it has been identified as a key point in research & has been a major cause of nurses leaving.

Education Industry

The observed trends are that certain subjects that have an alternative job worth like science, Math, Economics are facing skill shortage in comparison to art graduates who enter teaching for more altruistic reasons. Lots of TGT & PGT positions in India’s rural area are left vacant, similar situation is observed across Australia, particularly in regional areas and in some
specialised subjects (such as maths, science and LOTE—Languages Other Than English) (DEWR 2006a). Webster, Wooden and Marks (2005) recommend that this be recognised and teaching employers consider introducing different pay scales or incentive payments for maths and science graduates. Higher Education areas too face the heat due to shortage of competent faculties who can lead to the creation of employable professionals.

Child care centres

A high attrition rate is prevalent in this industry due to low salary, high stressed work environment, long hours, poor family friendly policies, pressure from parents, high child to staff ratios and a high administrative workload. It has been found that in the smaller institutions the career development opportunities available to child care workers are limited.

Construction Industry

Mr. Hari Bhartia, president of the Confederation of Indian Industry, commented that India needs to learn from Germany, where industrial workers command good salaries, and, more importantly, social respect. Whereas in India working with hands is not being celebrated rather the job of a white collar clerk in the office is considered better than a welder. It indeed calls for not just economic evolution but also a social revolution. This has created a dire situation where an esteemed organization also suffers through the recruitment difficulty of skilled manpower not just at blue collar level only but also at the Mechanical engineer level too.

Information and Communication Technology

It is a highly dynamic nature industry leading to quick redundancies thus causing skill shortages so the situation can surplus and back to equilibrium in a very short period of time. The in ICT seems to play a role in this rapid adjustment.

However, the Productivity Commission identifies some shortcomings in the system, mainly in the relationship between training organisations and the industry. The industry noted concerns about training organisations, ITI’s, universities and TAFEs, not providing training of the appropriate skills required for an increasingly sophisticated sector.

RECOMMENDATIONS

There was a time when a revolution was being created by Ford through invent of assembly line system & batch manufacturing which brought more & more low skilled hands together to collaborate & create a product but today most of the low skilled jobs are decreasing where as high skilled & knowledge based jobs are increasing this calls for future skills mapping through proper HRM initiatives. Today’s dynamic environment calls for the multi skill development approach thus making HRs role more critical. HR can no more function as an Generalist only but also a need for HR teams that are lean, technology-enabled, well-trained, familiarity with integrated talent management, understanding of workforce planning, and comfort with social networking.

According to the survey “best places to work” in Business Today 2011, 39 per cent of the respondents said they will leave an organisation if they feel that learning opportunity are less.
Competency-based HR management “focuses attention on the people who do the work rather than the work done by those people” (Dubois et al., 2004, p. 10). Hence in order to counter the problem of skill shortage an integrative approach has to be implemented. The foremost method of ascertaining that the right skill set is being hired is through the use of competency based application bank & filtering of candidates through well planned competency based interviewing method. This will at least eliminate the possibility of initial skill gap.

The orientation program ought to be designed in the manner that it may reinforce the desired competency of the candidate & also induct an employee towards his smooth placement.

This leads to the second phase of talent management where the shortage needs to be assessed individually, with the help of skill audit and treatments need to be tailored to the situation.

As per Henry Edmondson, Founder, Plato Alliance-competency based Training Alliance focuses on Industry’s Skills Shortage. Competency models provide a firm baseline for assessing skill levels and ensuring training is fit for purpose. It has been shown that training based on a competency model shortens time to professionalism, or time to autonomy.

The answers to the above problem can be addressed through the two approaches: Industry led In-Training & Development vs Publicly funded training. General assumption is that in most cases, industry must take the lead on training and development only where it is highly difficult to retain trained workers should the government may step in to fill the gap. Public funded training should be used when candidates are unable to fund their own training, when a decline in the ratio of persons being trained to total employment & the “in-training” ratio has been observed, where it has misread market information and decreased training places whereas demand for those occupational skills has increased. In Australia, Canada Governments are often asked for more publicly funded training as a response to skill shortages but it has its set of problems like this training will not help industries with significant wastage reduction, may lead to a mismatch between the training provided and that demanded, hence industry led training is often more effective.

New fundings to be provided to training organisations to develop or improve these processes.

In the construction and property services industry, new nationally recognised certificate level qualifications are to be developed, for ex. in the health sector, the Australian Government will increase the number of student places available, and the cap on full fee paying places for medical students will be lifted from 10 to 25 per cent. COAG has also agreed that all governments will share labor market information to identify and understand the location and extent of skill shortages & design competency based training interventions (COAG 2006). A more effective approach may be to encourage a culture of training among industry (Shah & Burke 2003,) which means employers need to take a longer-term perspective on training and profits.

**Training subsidies**—There are provisions for subsidies available for employers who take on trainees or apprentices. A subsidy of up to $1250 for employing a new apprentice can be given to the employers (DEST). If the employer is in a regional area and the training is in an identified skill in demand area, the employer will receive an additional $1000 when the apprentice moves from certificate II to certificate III/IV training.
Hence when the present skills requirement will be taken care of through proper competency based T & D then the next step will be routing the future career chart & creating succession planning intervention through leadership development for the managerial & senior level employees. This step would later lead to the level where these employees will be assessed for their performance & their competencies would be evaluated & training needs may be identified. This stage would lead to the next level where the performance has to be compensated & skill shortage to be alleviated by raising wages or fringe benefits. Wages are generally not flexible enough to adjust the labour supply with sufficient speed. Partially it is due to the wage setting system and regulatory framework, where sub-specialisations in demand are not paid more than those in surplus. Hence flexible wage system needs to be evolved.

The cycle will move towards closing itself with the organisational redesigning which is done through altering the working conditions; delaying retirement of older workers, and facilitating re-entry into the labour force, particularly of women; endeavoring to have immigrants enter the labour market; increasing the hours of work or/and the intensity of work and discretionary effort of existing personnel; changing internal workplace practices (e.g. broad-based job classes, multi-tasking, multi-skilling, job rotation); and adopting alternative work organization (e.g. problem-solving teams and self-directed work groups) and non-standard employment (e.g. limited-term contracts, subcontracting, part-time employment, temporary help, and telecommuting).

Certain initiatives when used in combination with above also lead to the decrease in skill shortage-

1-Bonded education/Condition of employment in Health care - In Indian recruitment of doctors a condition is such that it is mandatory for each doctor to spend 3–4 years of his work life in rural area. In Australia students receive an annual scholarship, but are contracted to work in rural and remote for six years following completion of basic medical and post-graduate education.

2-The provision of article ship in Charted Accountancy & the requirement of Summer Internship & live projects in the MBA program are another ways of inculcating the requisite skills.

-Work-integrated programs have the purpose of preparing students for the workplace by identifying and developing the important competencies that are believed to be needed by employers (Hodges & Burchell, 2003).

3-Timely and accurate national information capable of being disaggregated to a regional scale is an important element when responding to skill shortages. This information needs to be available on a geographic basis so that the location of shortages can be pinpointed & addressed. On February 2006 in Council of Australian Government agreed to share (COAG-2006), such agreement is needed in India too.

4-Cross cultural exchanges-An initiative leading to the delegation of 21 SME Managers visited Germany as a part of Indo German Managers Training Programme (IGMTP). Participant came back contented, with new business opportunities. They established contacts leading to long term technology sharing, knowledge exchange, improved work culture and
most importantly joint ventures, signing of Memorandum of Understanding (MoU), Export/Import contracts for quite a few. They found Germans’ professionalism, the value of time and delivering services to the client, precision and care for detail worth adapting. Participants got inspired from their perfectionism; focus on highest quality levels and R&D, few also incorporated Germans' work cultures, HR practices and aggressive marketing tactics in their company's strategy. Others said there is lot to learn from Germans’ good visual controls on shop floor, plan and utmost priority given to safety & security.

Taking the lead from the existing Best Practices

Organizations like Confederation of Indian Industries (CII), Planning Commision & National Skill Development Corporation keep collecting data, develop & share reports to lay a hand in countering the skill shortage. NSDC is been mandated to skill 150 million people by the year 2022. The NSDC, a Public-Private Partnership (PPP) Enterprise, is intended to foster private sector industries to encourage skill training in 21 sectors. Besides Ministry of Finance, all prominent industry bodies have contributed to the initial capital of this 51:49 venture between the private sector and government. The NSDC aims to develop skills and requisite capabilities in 30% of the overall target of 500 million people by the year 2022.

Similar role is played by the National Centre for Vocational Education Research (NCVER) had a number of projects in their 2006 strategic plan that addresses some of the issues relating to skill shortages in Australia (NCVER 2006b). Large number of regional surveys were conducted by DEWR of skills in demand throughout 2006 and 2007 & then the results were presented at Better Connections Workshops, which bring together employment services providers, government agencies and the local chamber of commerce to develop solutions to local employment issues.

Besides the above Two other initiatives can be taken up – firstly the adoption of a few ITIs by NSDC on a ‘management contract’ basis, so that models for better management of the existing infrastructure can be evolved. Secondly, attempt to bring in best ‘techno-managerial’ practices, in conducting skill development programs for workers in various sectors in collaboration with their Ministries, "It will develop Sector Skill councils to manage skill shortage.

Various attempts by esteemed organizations taken towards bridging the skill gap need to be appreciated & seen as role model as incorporated by other agencies to create a multiplier effect. They are as mentioned: European Union Project on Vocational Education and Training for Vulnerable and Marginalized Groups in India by CII, HPCL’s project Swavlamban-Sponsored by HPCL is a CSR initiative to train local youth. The program successfully covered Bhiwadi, Rae Barelli and Dehradun in 2006. Pravaranagar Project which is in currently in its third phase is a wonderful example of public - private partnership. Around 1100 candidates for multiple trades in 17 different institutions have been enrolled in the project this year. Project at Machilipatnam, Andhra Pradesh -Successfully led to the certification of 400 candidates in 2005 through external assessment & is further expanding to skill over 2500 young men & women. Project at Rohtak, Haryana with LPS Bossard Pvt Ltd -Re-focused efforts of industry in setting up a Skills Development Centre for providing multiple skills training as per the needs of local community. Project with Schwing Stetter -In Chennai currently has the 6th batch receiving training for Plant Operation and Pump Operation trades. Till now 84 candidates have been trained, certified and provided

CONCLUSION

Thus it can be summarized that industry needs to contribute in the human capital formation as role modeled by Larsen and Tubro, the Indian engineering and construction giant, It is willing to provide in-depth training, accommodation and subsidized food to young people to teach them construction skills. Jobs afterwards are virtually guaranteed.

The responsibility of managing skill shortage has to be shared between employee, industry & Government. As a country India too needs to question its old notions of undermining manual work & thus needs social revolution before the economic evolution.

Owing to Globalization various challenges transcending the national boundaries have arisen. This requires that human capital is trained in a systematic manner for developing managerial skills, behavioral skills and conceptual skills. This calls for having a systematic roadmap for competency based management practices & across the board recognition of the skill gaps along with designing a model for skill upgradation mechanism for acquisition of such skills, and their percolation at diverse levels in the system.

Employer needs to focus on adoption of flexible hours and greater reliance on flexible jobs, rely on increases in overtime hours as a short-term solution, introduce self-directed work groups and, to a lesser extent, problem-solving teams, to extract synergy and economic efficiency. Governments, employers, employees, and labour unions should work in harmony to counter the skill gap crisis(Fang,2007)

To make the high performing organization, it is essential that the individual skills be developed to achieve and fulfill the organizational needs. This calls for a competency management model for having systematic & continuous roadmap for skill up-gradation of human capital thus leading to alleviate skill shortage.

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