Chapter 2

CONCEPTUAL FRAMEWORK

India has drawn its attention as most favorable outsourcing destination in the world since last two decades. A.T. Kearney’s 2017 Global Services Location Index (GLSI) has ranked India at number one position in the world in the selection of destination for Global In-House Centers. India’s IT sector had successfully contributed 7.7 per cent to the country GDP in the year 2017. IT-BPM sector stands for its prime share in total Indian services export with forty-five per cent. IT industry employed nearly 3.9 million employees in India of which more than 170,000 are added in the year 2017. According to a study entitled ‘India’s New Opportunities 2020’ conducted by the High Level Strategic Group in 2003, ensures that in the year 2020, India will contribute to labor market with a workforce of 20-72 million in IT sector. Hence, present study with its earnest efforts likes to examine Employability Skills and Emotional Intelligence as antecedents of Employer Satisfaction in IT sector of India. Over a period, this can be achieved by understanding the promising definitions, models and theories specified by the scientists, management thinkers and researchers, thus interpreting the variables of the study to their operational best.

Engineering is the application of technology and scientific knowledge to the concerns of society, which is learned at institute, college and university.

Skills are the set of knowledge and abilities which make one to perform.

Hard skills are specific skills which show expertise of an individual. These skills can be measured, such skills are job specific and discussed in the job description of an employee. Example - Computer Programming.
**Soft Skills** include non-technical skills such as emotional intelligence, interpersonal communication skills and problem-solving skills needed by the engineers at workplace.

**Employer** under the scope of present study means delegates from various IT organizations, who conduct campus placement drives for the graduate engineering students in universities/colleges/ institutes and select them as an intern. And the delegates who use such recruited students into various projects executed for various customers.

**Information Technology (IT)** is making the use of computers and applications by the employees of IT organization to store, retrieve, transform and edit the data or information for the purpose of regulating business Daintith(2009).

**IT enabled Service** also termed as web enabled services, remote services and teleworking under its domain have operations which explore information technology to it best for enhancing the organizations outputs and include services such as call center operations, back office assignments, human resources services, web services, management of legal database and management of information system.

**Outsourcing** is the effort initiated by the organization to minimize the costs or maximize outputs by giving operations and assignments to a third party for a specific period under an agreement of contract. The contracted functions may be performed onsite or offsite by the third party in the business.
Fresh Engineering Graduate is an individual with bachelor’s Degree in IT engineering selected through campus placement drive from university/college/ institution by the employer and get on the job training for 1-2 years for specific set of tasks.

Employability includes set of skills such as individual knowledge, understanding and self –attribute by which an individual will influence the employers and ensure his/her selection for the job. The domain of employability covers technical, non-technical skills, knowledge and career management skills (Dacre Pool and Sewell 2007). Researchers have used different terms to express employability skills such as soft skills, generic skills and core skills (Brown, 2002; SCANS, 1991; Ramlee and Greenan, 2002; Sattar et al., 2009). Rao (2010) considered two significant employability skills as hard skills and soft skills at workplace. Hard skills concerns with technical or administrative process associated with core business. However soft skills are intangible skills and include emotional intelligence. The present research study includes three sub-constructs of employability skills such as management, technical and communication skills. These employability skills are referred from research of Blom and Saeki (2011).

1. Management skills views as planning, organizing, leading, and controlling functions in achieving the goals of organization (Schermerhorn, 2008). Engineers are lacking in management skills because of scarcity of knowledge in managerial education, administrative functions, interpersonal skills and career management skills during their engineering graduation studies Visser (2003).
2. **Technical skills** are specific skills that help the engineers to support core business. These skills also help the engineers to coordinate, solve problems, enhance outputs of the organization and handle comprehensive problems systematically.

3. **Communication skills** comprises of the ability to express views or ideas to others that include oral or written skills, listening skills, power point presentation skills or audio-visual skills. N R Narayana Murthy, founder Chairman of Infosys Technologies Limited in the year 2009 explained, today’s challenge for a global leader is to make others understand about the ideas. Employers believes that an employee who could speak, write and listen effectively will significantly contribute to the goals of the organization (Shokri et al., 2014, Carnevale and Smith, 2013; Ortiz et al., 2016).

Researchers explained that technical communication skills may vary from non-technical communication skills in presentation, working with the teams and understanding the demands of project (Field, 2001; McLeish, 2002). A survey by Puranik (2015) confirmed that most of engineering graduates cannot communicate in English in India. Communicating in English has been one of the major challenge identified in Indian engineers (Clement and Murugavel, 2015). One and half million engineers graduate in India every year from three thousand five hundred engineering Institutions (Mohanty and Dash, 2016). Besides such huge numbers, Indian IT engineering graduates remain unemployed (Aggarwal, 2011; Mishra, 2014). The major causes identified behind unemployment of engineering graduates are poor accreditation system, lack of
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experienced faculty, poor administration in private engineering IT Institutions, poor funding of
public institutions and low quality of technical and vocational education (Mehotra, 2015).

A very first observation stated by the experts is that, the fresher’s have less idea about IT sectors
and opportunities available in different sections or departments of these sectors. The major domain
available in IT/ITES industry are Enterprise Applications, Intensive Workloads such as Databases,
Business Intelligence and Virtualization, Modeling and Simulation, SAP, Digital Content Creation,
Research and Seismic Processing, Cloud Computing, Network Management Engines, Internet Cache
Engine, Intrusion Detection Systems, Unified Messaging, Gateway/Gatekeeper/SS7 solutions, VOIP
Services and Voice portals, IP Translation Database Processing, e-Commerce, ERP, e-Governance,
Infrastructure Management, Software Testing and Quality Assurance, Transcription / Data capture,
Data Analytics, Data Warehousing, Gaming and Animation, Web based Application Development,
Production Support, Service Providers, Database Management, Business Analysis, UI Design,
Technical Writing, Consultancy and Training.

Information Technology sector in India is recognized for six major roles such as Information
Technology Enabled Service/ Business Process Outsourcing, Development of Software Products,
Information Technology Services, Research and Development activities, Hardware and E-
Commerce. All these sectors of IT industry are growing fast and have significant contribution in
enhancing Indian economy. Paying attention to the contribution made by IT industry in Indian
economy in the last decade, Indian government has initiated various steps for development such as
formation of Software Technology Park, export-oriented units, deduction in tax on imports of IT
products, liberalization opportunity for businessman in external trade, FDI and setting of special
economic zones. All such efforts initiated by government of India has promoted the dominance of
India in the world IT business and has made India to pose as a global force which is ready to support
Thimmaya (2015) confirmed that Indian IT sector proved itself as the major contributor in employment generation employing three million people directly, it has true support for fresh engineering graduates in procuring employment. About 95 percent fresh engineering graduates procure employment through campus placement in India and six billion companies state that Indian engineering graduates need to upgrade their employability skills for employer satisfaction.

To bring the IT industry in limelight in early nineties, strategically many constraints were uplifted by the Indian government. India followed the liberalization privatization and globalization policy (Kumar, 2014). India’s strategic efforts resulted in big success and helped in achieving the second position for holding largest technically qualified workforce. The first position retained by the US with quality skills in English language, with the huge availability of three million technically qualified workforce India has an advantage over the US in labor cost. Indian labor cost in IT industry is one tenth cheaper than the labor cost of US (Kumar, 2014). This has drawn the attention of business fraternity as well to look for entrepreneurship development in India. An example of such entrepreneurship is seven members of technocrat team set up Infosys Technologies. The Government interventions such as reduction in import duties on software and hardware products also supported the development of IT industry in India.
Infosys has shown a fast growth rate of seventy percent compound rate (Kumar, 2014). Five hundred US Fortunes companies are the clients of Infosys. The reasons for success of Infosys are transparency and professionalism. Other Multi-National Companies with their sterling track records for IT services in India are Wipro Technologies, TCS Ltd., HCL, etc. India gains majority of foreign exchange from IT business. Hence, it is worthy to state that IT sector in India has huge growth.

National Association of Software and Service Provider (NASSCOM) an apex body, had assigned a task to promote growth of IT industry in India by looking forward to the scope of development in industry, academia and government. NASSCOM was involved in framing the policies, curriculums and assessments to achieve the objectives. To improve the employability skills among Indian graduates for IT/ITES NASSCOM had initiated programs which can be summarized as:

1. NASSCOM Assessment of Competence (NAC): Assess and certify the skills of professionals and ensure the quality in IT-BPM industry.
2. Global Business Foundation Skills (GBFS): Design programs for students who opt their career to serve IT-BPM industry.
3. Foundation Skills in Information Technology (FSIT): Support the students in enhancing employability skills for IT industry through training and programs.
4. NOS (National Occupational Standards) across verticals in the IT-BPM industry: Set performance standards and provide knowledge to students about the working environment of IT industry.
5. The National Skills Registry (NSR): Provide the database of workers for IT sector and verifies the knowledge of applicants.
6. The Data Security Council of India (DSCI) – Ensures the privacy and security of data.
7. NASSCOM Foundation (NF) – Looks after the corporate social responsibility within IT-BPM industry and ensure the development in information and communication technologies.

8. The National Institute for Smart Governance (NISG) – Promotes public and private partnership with NASSCOM and ensures e-governance.

In recognizing the role of education and labor market, most of studies preferred human capital theory (Schultz 1961; Becker 1964) or job market signaling theory (Stiglitz 1975; Arrow 1973; Spence 1973). Both theories show positive relationship for investment in education and labor market output, but the mechanism to interpret how education affects employment in labor market differs in both theories.

In human capital theory Schultz (1961) and Becker (1964) explained educational qualification achieved by an individual improves his productivity and performance. Educated individual has more employability skills for labor market and has more opportunities to earn income. Gaining education from a foreign country enhances the opportunity of graduate employability in domestic labor market and host country (Chiswick and Miller 1995; Baker and Benjamin 1994; Krahn et al. 2000; Borjas 1995; Bratsberg and Ragan Jr. 2002; Zeng and Xie 2004, Blaug et al., 1969; Pang and Clark 1970; Demetriades and Psacharopoulos 1979; Mohajeri et al., 2009).

The human capital theory described the association between education and labor market productivity, it received criticism on not expressing the factors such as situations which become
uncertain in labor market, poor quality of schooling and inadequate knowledge among the job aspirants for job market (Levhari and Weiss 1974).

Job market signaling theory (Stiglitz 1975; Arrow 1973; Spence 1973) explains the principal agent relationship where information plays a significant role. Job market signaling theory also called as screening theory. It believes Employer’s recruit the employees based on conditions required by them. Giving employment is investment decision of the employer. Job seekers give signals to the employers by acquiring certain education credentials and convince them to understand about their abilities. Hence education, measures the ability of job seeker for employment.

Harvey (1997) developed a simple employability model as ‘Magic Bullet Model’ which expresses the involvement of stakeholders in employability of fresh engineering graduates. Three parties involved in employability are FEG as students, educational institutions and the employers. FEG’s responsibility is to possess the necessary qualification approved by educational institution/university and to influence the employers with their abilities and extracurricular activities. Knight and Yorke (2004) in the USEM model discussed four interlocking components of employability as Understanding of subject, Skillful practices, Efficacy beliefs and Meta cognition.

**Emotional Intelligence**

Emotional intelligence can be explained as individual ability to control personal emotions and the ability to affect emotions of others. Salovey and Mayer (1990) were the first to express scientific aspects behind Emotional Intelligence and explained EI as ‘Individual self-control on
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feelings, emotions, ability to discriminate emotions of others and to decide the action for what is
good or bad’. Further Mayer and Salovey (1997) reconceptualized their definition of EI under
four sub-constructs Viz., Perception of emotion, Use of emotion to facilitate thinking,
Understanding and analyzing emotions and Reflective regulation of emotions.

Perception of emotion is the ability to discriminate and compare emotions in self and
others. The emotions identified by an individual in such stage can be recognized physically and
psychologically. For Instance, Individual perceptions on behavior of others in specific situation,
ability to discuss honesty and negative emotions in personality of others, discrimination on
appearances and colors. Thus, expressing of emotions shows complex process of problem
solving approach.

Use of emotion to facilitate thinking considers binding emotions for cognitive process
such as understanding the cause and effects, reasoning, inter personal communication and
problem solving. At such stage, individual’s give priority for issues based on available
information and set the mood.

Understanding and analyzing emotions is recognizing the language, meaning of
emotions and understanding the antecedents of emotions. At such stage an individual like to
label emotions with skills and compare similarities and differences. Recognizing the transition
phase of emotion is an important component at this stage. For Instance, understanding of the
complex feelings such as interest and boredom contempt as outcome of disgust and anger.
Reflective regulation of emotions is increase, decrease, prevention and modification of emotions in self and others. It includes range in emotions when experiencing specific situations. For instance, pleasant and unpleasant feelings in a specific situation, monitoring response of self and emotions towards others in a specific situation.

Emotional intelligence literature discussed EI with personality, soft skills and competencies, for more clarity (Goleman, 1998). EI seems to be learning’s that comes from academic institution/university which has a significant role in employability model. EI cannot be transferred genetically or cannot be developed in childhood (Dacre Pool & Sewell, 2007). Emotional Intelligence taken up as part of personal qualities in employability model of Yorke and Knight (2002). It also received recognition as an independent construct which influence the employability of graduates (Dacre Pool & Sewell, 2007). According to Bandura (1995) a person with high EI understands the feelings of others and makes an effective use of group dynamics in achieving the goals of an organization. Previous models on EI emphasized on empathy, Career Edge framework on EI and took it as a social concept and described that it is difficult to measure quantitatively. JET model discusses the four factors such as Self-esteem, Autonomy and control, Grit and determination, Empathy in understanding EI towards employability model (Copps & Plimmer, 2013).

The concept of EI recognized in the twenty first century from driving force of intelligence as IQ (Zeidner et al., 2004). EI is defined as a skill to exercise personal, social aspects of intelligence in professional routine functioning (Steinand Book 2011). Researchers confirmed that higher EI brings high rate of career success in an individual at workplace (Cherniss,
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2000; Lopes et al., 2006). Discussing about EI in students, employer’s perception states they lack such abilities (National Association of Colleges and Employers, 2008). EI includes the personal and social abilities needed at workplace. For instance, Self-awareness, Self-management, Social awareness and Relationship building skills EI also contributes fifty eight percent in job performance of an individual in all sectors of employment (Bradberry and Greaves, 2009).

The three readily used models on EI are trait, ability and mixed (Caruso, 2008). Trait EI discusses personality concepts under four areas such as well-being, self-control, emotion and sociability Petrides (2010). The Ability model shows it’s bent towards emotions and cognitive ability Petrides (2011). The Bar-On mixed model on EI shows the combination of trait and ability model and discusses five factors for life success as intrapersonal skills, interpersonal skills, adaptability skills, stress management skills and general mood.

Literature on employability shows that fresh engineering graduates are affected by institution image, branding, program structure adapted and institutional ranking (Finch et al., 2013). Researchers state that achievement and reputation of academic institution may attract employers for organizing campus placement drives for employment (Chevalier & Conlon, 2003). Institution’s brand image seems to act as moderator in relationship between learning outcomes and employability (Finch et al. 2013).

Higher emotional intelligence shows individual personality with better Self-image in general (Qingwen Dong et al., 2008). Emotional intelligence comes from the life experiences (Lorenzo Fariselli et al., 2009). Recognizing emotions, self-awareness, self-regulations, self-
motivation and empathy are characteristics of EI (wik.ed.uiuc.edu/index.php/Emotional IQ). EI make an individual to look ahead for self-evaluation and self-reflection (Mathews et al., 2004). EI of an individual has the qualities such as open mindedness, good social interaction with people, ability not to harm others, sentimental attachment at home, good adaptability, and passion to achieve goal (Mayer et al., 2004).

The research by Palmer and Gignac (2012) confirmed positive relationship between EI of the manager and employee engagement at work place. High EI in manager improves employee’s performance and employee retention at workplace.

Potgieter et al. (2013) explained EI promotes employability attributes in an individual such as self-confidence, anticipation and entrepreneurship development. Varghese et al. (2013) found self-knowledge, self-esteem, career awareness and adaptability strongly affects the employability skills in graduates.

Emotionally intelligent engineers have good technical knowledge, good problem-solving skills and good quality to give significant consideration with emotions of others in analyzing the problem and selecting the choices (Riemer, 2003).

An individual with EI has calmness of mind, is optimistic and has the adaptability and quality to manage stress and quality to cooperate with others (Orme, 2002). Emotional intelligence is held for advance life goals and predict significant life outcomes. Emotional intelligence facilitates students to secure good academic achievement. It is positively correlated
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with life satisfaction, controls anxiety, facilitates problem solving ability and prepares one to cope with any challenging situations. Emotionally matured person commands higher tolerance, is free from unreasonable fear, aware of ability and achievement, accepts failure gracefully, carries victory and prestige, can delay gratification of impulses and enjoys daily living. Emotional intelligence is an important source for a happy and productive life of an individual. Self-awareness facilitates the possessor to be high in self-confidence, realistic, managing emotions, encourages to control oneself, gain integrity, be adaptive and comfort with ambiguity, self-motivation prepares the individual to take initiative, open to change, have strong desire to achieve and work to self-drive, recognition of the emotions in oneself and others facilitates one to be empathetic and manage the conflict and handling relationship in a person facilitates trustworthiness, influencing skills, communication, leadership, expertise for building and retaining talent and expert in building and leading a team. Emotional intelligence has been linked to competencies that are strong predictors of job performances (Grba, 2009).

Sunindijo (2007) discussed High EI among managers and engineers develops proactive leadership style and are liked by others. However, low EI among managers and engineers miss to get promotions and reduces recognition from others.

**Employer Satisfaction**

Employer Satisfaction is to understand the employer’s perception and feedback on the university and institution education system in affecting the employability skills of fresh engineering graduates.
Harvey (1993) accentuated that employers in UK prefer employability skills in graduates as interpersonal skills, communications skills, emotional intelligence and personality. Australia GCA (2007) discussed commitment, values, academic qualifications, technical skills, attitude, problem solving, and analytical skills play a significant role in employability of FEG.

Harvey and Green (1994) discussed employers’ moderately get satisfied from the employability skills of FEG from which they recruit. Hesketh (2000) conducted a study on 372 employers in UK and discussed the important employability skills in graduates as learning, writing, verbal communication, teamwork and problem analyzing ability. The findings of the study also revealed that employers have the knowledge on the employability skills of a graduate which they recruit from university or institute, because of their previous experience. Employers involve the alumni employed with them for campus recruitment. Murray and Robinson (2001) found that in UK employer visit limited universities for campus placement because of knowing the known probability of quality graduates there.

Hiring new employees is one crucial task for any employer, that is why in the absence of in-house training program, employers prefer applicants who can quickly work independently (Kelley and Gaedeke, 1990; Webster and Taylor, 1995). It is understandable because if applicants are accepted they are expected to take the job without much supervision. However, this is not always the case. For example, a study conducted in four European countries found that employers were not very confident as to the abilities of graduates when it comes to key knowledge areas and key generic competencies (Azevedo, et al., 2012). The Organization for Economic Co-operation and Development (OECD) emphasizes three pillars on skill strategies,
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namely, developing relevant skills, activating skills supply, and putting skills for effective use of
OECD (2012) to make graduates employable and ready for work. These interventions are what
employers desire employees to have the necessary skills or attributes suited for the job they are
hired for.

Apart from being ready for work, employers also preferred applicants who are
recommended by others (Belwal et al., 2017). Specifically, more and more attention is given for
soft skills (Archer & Davison, 2008; Chamorro-Premuzic et al., 2010; Cunningham & Villasenor,
2016; Ritter et al., 2017). Finch et al., (2013) also found that employers considered soft-skills as
the most important and academic reputation as the least. Regardless of which attribute, bottom
line lies on the readiness of employees to take on the job with appropriate skills in carrying it.