Chapter 3

REVIEW OF LITERATURE

A review of literature is an approach to understand the development of knowledge on the research topic by recognizing, the knowledge added in the past by previous researchers and summarizing the existing knowledge for future scope of work. Present chapter in the research study is an effort to understand Employability Skills and Emotional Intelligence as determinants of Employer Satisfaction in IT Sector – India.

1. Employability Skills

Ravichandran and Abirami (2017) discussed in their conceptual research paper about the significance of employability skills such as fundamental, technical, interpersonal and critical skills in the selection of engineering students by the employers. Researchers stated that employers identified the skill gaps among above skills in students. Hence, engineering graduates needs to pay attention in learning these skills properly for their employability. Researchers also suggested that future scope of studies on these skills need to be analyzed with statistical technique as ANOVA.

Sood (2017) states that Bangalore in India recognized as Silicon Valley is also known for its technological competencies in the employees of IT sector. Researchers suggested for selection of employability skills in IT engineering graduates. Traditional companies favor ‘generalist’ skills, the candidates can accommodate themselves in the environment of different technologies as per the requirement of the projects. Whereas new companies prefer ‘expert’ skills in
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engineering graduates for specific technologies and Multinational companies in software like to recruit IT engineering graduates locally from leading IT Institution.

Mishra and Khurana (2017) explained choosing right employability skills in engineering graduates cannot be ignored from global economy aspects. The study recognized required employability skills of IT sector by analyzing theories and models to understand skill gaps that exist between knowledge imparted by academia and skills requirement of industry, while hiring IT engineering graduates. The findings of study focused on six important employability skills in IT industry such as technical, cognitive, personal, social, generic and self-perceived skills. The practical implications in the study will be supportive for academician and industrialist in developing employability skills in IT engineering graduates.

Mishra (2016) acknowledged that in India Engineering education imparts knowledge, principles and professional practices to students. Parents’ perception is to enroll their ward in the institution where better campus placement opportunities exist. ‘Employability’ expressed for delivering value to work and drawing money for efforts delivered, developing skills and updating abilities for future roles. The researcher discussed about various types of employability skills required at workplace. The study findings after referring various articles, journals, paper and reports recommended that engineering graduates must have good command over demonstrating skills as generic, personal presentation, technical, leadership, self-assessment and goal setting skills.
Gowsalya and Kumar (2015) examined the employability skills of engineering and MBA students of University in Coimbatore district of Tamilnadu. Researchers reviewed the existing literature of India on employability skills and examined the employability skills in the students such as analytical skill, leadership quality, problem solving approach, communication, general management and self-understanding. The findings of the study recommend need for improvement in employability skills of students. Being good in specific employability skill is not sufficient enough. Students need to be multi-tasking in their skills and must have ability to meet the industry demand.

Maran and Chandra Shekar (2015) affirmed that the role of universities and institutes are important to make the students understand about required employability skills by Industry. But it has been found in engineering context, universities curriculum in India covers the technical aspects. Perception of students on reality of employability skills for non-technical and general skills remains untouched. There are very few research studies that focus on perception of engineering students on employability skills. Researchers conducted the study on perception and satisfaction of students towards employability skills with structured questionnaire and made the use of convenience sampling and SEM techniques. The findings of study recommended the universities/institutions to cover soft employability skills aspects in the course curriculum program of engineering graduates.

Koka et al. (2015) in their research study investigated the attributes of engineering students towards employer expectations for employability. The finding of study revealed that, engineering graduates lack the understanding of employability skills during their course of
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graduation. This study recommends education institutions to prepare the graduates as per the need of IT and Multi Nationals Companies. Researchers further mentioned global industry beside technical expertise also requires soft skills in the job aspirants. Hence the requirements of soft skills in engineering graduates are high.

Kalbande and Handa (2015) found that global companies invest huge amount of money in India to recruit fresh engineering graduates, but due to non-availability of adequate employability skills in them, they must compromise with their expectations in the selection of candidates. The study investigated the engineering graduates for employability from several regions of India that include rural, semi urban and urban, analyzed the collected data with statistical techniques such as Chi square, T-test and logistic regression. Besides this, campus placement drives were conducted to understand sensitivity of engineering graduates towards employability. Engineering graduates were analyzed also for their aptitude, communication and technical skills. Efforts were made to identify the employability gaps. The findings support the lack of employability skills as per expectations of employers and the study recommends academia to make the changes in following traditional practices in imparting education to fresh engineering graduates.

Badgujar (2015) has put efforts in exploring mindset of employers towards employability skills in recruitment of fresh engineering graduates. The results of the study showed that there are certain factors which influence employer and student’s mindset for employability such as global recession, economic factor, lack of resources and poor-quality education.
Meshram and Dubey (2015) studied the case study of COEP College of Engineering Pune in employability of IT engineering graduate. Researchers marked the same model for benchmarking practices to be followed by others in bringing positive change towards employability skills.

Chavan and Surve (2014) conducted comparative research between public and private sector companies’ by investigating fourteen variables on employability skills for graduates. Employers from public and private sector were interviewed for their views on employability of graduates. Findings of the study show negligible difference exist in expectations of both public and private sector employers.

Hari Prasad et al. (2014) conducted a research study titled ‘Alarming employability skills deficiency among budding engineering graduates – a study on engineering graduates in Chittor district’. The objective was to find out significant employability skills in FEG. The study evaluated the offered training programs in education as CTEEP (Corporate Training and Employability Skill Empowerment Program) and STEP (Student Training and Empowerment Program). The findings of the study revealed significant impact of involvement of peers group and personal experiences. Further, the study recommends the significant role of focus group discussion and professional networking in employability of graduates must be given weightage.

Wheebox (2014) concerned with bringing improvement in Indian education system (Parda Phash, 2014) state that not even a single university from India made its position in the top 275 best universities of the world as per the report of ‘Times Higher Education Survey’. It was reported that 34 % of graduates in India are employable whereas about 60% contribute to GDP.
Aspiring minds (2014) reported shortage of IT skills in India. Indian graduates were found lacking in English, communication and cognitive skills. The AICTE (All India Council of Technical Education) parent body in India administering the policies program for Engineering Universities and Institution working on it. India will fulfill the world requirement of employability in IT sector as stated by Union Minister of Human Resource Development by the year 2020.

Bektaş and Tayauova (2014) discussed the importance of universities and industries in context of employability. Universities impart knowledge to students hence contribute to economy and social life. Industries need the multi-skilled and educated workforce which comes from universities. Researchers recommend need for cooperation between universities and employers of industries to promote sharing of knowledge and graduates must be supported for innovation and creation of new technology.

Mannan (2014) discussed the role of soft skills in the career of engineers. Researcher recognized the significant need of non-technical skills and industry demand. Soft skills deliver imperative role in contributing towards dynamic personality of an engineer.

The National Board of Accreditation (2014) describes the quality parameters for sustainability of technical education in India. NBA is also a signatory to Washington. Membership to such is recognition to global program and gives assurance in following quality standards in undergraduate engineering education program at world level. NBA has quality standards for undergraduate engineering courses recognized as ‘Graduate attributes for UG engineering programme’. The key standards formulated for engineers are problem solving
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techniques, engineering knowledge, knowledge of modern tools, ethics, conduct of investigation for the complex problem, teamwork and communication, project management and finance.

Varwandkar (2013) conducted a research study titled ‘Factors impacting employability skills of engineers’. The objectives were to recognize the significant factors towards employability skills among engineering graduates in Chhattisgarh. The findings of study after using descriptive statistics and regression analysis revealed that the means for variables in the study such as domain knowledge, empathy, communication and managerial skills affect significantly affect the employability of engineering graduates, whereas independent variable ‘Motivation’ was not found significantly affecting the employability of engineering graduates.

Chithra (2013) discussed the perception of employers from graduate engineers at the entry level in multinational software companies mentioned in the study titled ‘Employability skills - A study on the perception of the engineering students and their prospective employers’. The findings of study showed significant difference in perception of students and employers towards employability. The result of the study confirmed that students with previous experience show good employability skills rather than students with no experience. Researcher suggested that employability skills can be improved in candidates if followed by specific training program.

Reddy et al., (2013) acknowledged the need of effective communication for engineering graduates. Effective communication was found imperative in analyzing the problems. The paper
discussed about facets of effective communication skills for engineers as listening, writing, speaking, reading skills and body language. The researchers after interaction with graduated engineering students shared some hurdles faced by them as shyness and inadequate practices in education program, psychological pressure, and lack of exposure to English speaking environment.

Mehra and Virgandham (2013) discussed the need of hour for specific communication skills needed by the engineers for ensuring employability at workplace. The study in comparison to global perspectives found fresh engineering graduates in India lacking in communication skills, expression of ideas, cognitive skills, summarizing and writing skills. The study recommends the integration of communication and adaptive skills helps the engineers to learn better English language.

Vijaya (2013) explained about the comparison on learning soft skills from trainer and from practical intelligence such as e–learning classrooms in context to employability of engineering graduates. The research paper summarized that learning soft skills from trainer would be more beneficial for engineering graduates as it enhanced social awareness, communication skills, interpersonal skills, entrepreneur skills and other skills. The paper affirmed that E-learning technology is getting famous now a days is optimal for learning primary technical skills but do not withstand to address the future professional requirements.
Shanmsuri and Saad (2013) discussed the necessary employability skills that employer, as an expectation like to see in fresh engineering graduate as problem-solving, tool handling, expert evidence and presentation skills.

Varwandkar and Deshmukh (2013) conducted a research study to identify the factors which affects the employability skills of engineering graduates in Chhattisgarh-India. 75 engineering graduates were selected with incidental non-probabilistic sampling. Selected engineers had an experience of more than 5 years of service. Survey questionnaire was used. Five independent variables were chosen such as subject knowledge, empathy, communication skills, motivation and managerial competencies to measure their effect on employability skills. All independent variables had shown significant outcomes on employability skills, but the independent variable ‘Motivation’ was not observed showing its significant effect on employability skill.

Somalingam and Shanthakumari (2013) explored views on engineering graduates and competencies in the research study ‘Testing and exploring graduate employability skills and competencies established a strong view on the skills and competencies of engineering graduates.’ The findings of the study revealed insight on employability that large number of engineering graduate in India were facing the problem of unemployment and those who were employed received inadequate compensation for their efforts. Lack of employability skills and competencies are crucial factor that can be considered for full employment.

Shukla (2012) acknowledged about the employability of graduate engineers in the study titled ‘Employability skill among professionals – HR executives in Indian labor market: a study
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on engineering graduates of Bhopal’. Attempts were made to distinguish students based on demographic factor in context of employability skills. The findings of the study revealed that University curriculum need to be redesigned with the concept of more apprenticeship and live industry projects for improving the employability among engineering graduates.

Agata (2012) discussed the process of imparting education to graduate engineers in India. In the study titled 'Engineering education in the context of labor market requirements and expectations - Polish experiences', researcher explained the challenges of higher education as the failure to meet labor market demands, inadequacy in quality of education at school level, educational trends and demographic gaps. Researcher focused on the need of some factors that may support higher education and engineering education system in gaining employability for the students. These factors considered as career service, cooperation between employers and universities, technology transfer, career service and research on problems of engineering student in context to employability. Hence, for future scope some determinants are suggested by researcher for analyzing employability and engineering education.

Kakepoto et al. (2012) explained the significance of oral communication at job. A research study was conducted by researchers with sample size of 32 engineers. Data was collected by designed survey questionnaire based on likert scale of 5 points which cover various facets of communication skills. The finding confirmed the role of communication skills such as oral presentations, participations in conferences and meetings, day today conversations delivered considerable role in careers of engineers. Findings of study also revealed 60% of time spent by
an engineer at the job in communicating with people at workplace. Hence, demand of oral
communication is always significant in employability skills for engineers.

Rao (2012) acknowledged some methods for improving employability skills in fresh
engineering graduates by giving special consideration to communication skills which in India
always remains an employability gap between students and employer. Methods suggested for
improving communication skills of engineering graduates are classroom simulations which
provide them real life situations. Innovative practices followed in improving communication
skills are showing them cartoons, cricket commentaries, films, discussion on newspaper. These
practices followed by engineering graduates help them in gaining employability skills.

Aring (2012) discussed the report on employability skill gap in India. According to
researcher analysis of World Bank which state that Federation of Industries and Employers found
Indian engineering graduates have lack of soft skills, cognitive skills and perception of
youngsters were not found clear about the concept on employability skills.

Jolly (2012) explained that engineering graduates have perception, they are employable
after completion of their graduation. They are required to maintain rationality between technical
skills and soft skills because both are considered significant in demands of employers. Further
researcher suggested soft skills must be included in course curriculum and programs of
engineering graduates such as orientations, group discussions, interview skills, personality
development and debate must for employability.
Kanagaluru (2011) conducted a research study on private engineering college to understand perception of the students on satisfaction. Researcher designed a questionnaire on 4 point likert scale and collected data on 33 different statements that cover college environment, placement, infrastructure, study material, education, extracurricular activities and student’s development. The findings observed highest gap in the dimension as ‘education’. Students were not found satisfied with education in private engineering colleges.

Aggarwal (2011) found the difference that exists between employability rate and expectations valued by employers for types of IT companies for the employability of engineering graduates. The information revealed only 2.68% IT engineering graduates were procured by IT product companies as they had greater expectation of knowledge and understanding for the concepts of computer science and algorithms. However, employability was found 17.45% in IT service companies where companies impart prior 3-6 months training to engineering graduates. It was found employers show interest in engineering graduates with good understanding of cognitive and soft skills so that they can train them easily.

Gokuldas (2011) examined the determinants of employability for fresh engineering graduates in campus placement drives conducted by Indian based software companies. Data was collected from 559 engineering graduates as respondents from reputed colleges of South India. Their performances were analyzed on technical and non-technical aspects with correlation and multiple regression. The findings affirmed that technical competencies as subject knowledge of engineering and commands over English language were the significant determinants for employability of fresh engineering graduates.
Blom and Saeki (2011) mentioned World Bank in second phase of Technical Education Quality Improvement Program with the Ministry of Human Resource Development, Government of India and Federation of Indian Chamber of Commerce and Industry examined the employability skills in engineering graduates. ‘Expected learning outcomes’ by the National Board of Accreditation (NBA) were also included in framing the questionnaire item statements. The data were collected from 157 employers. The findings of the study revealed that skills such as self-discipline, self-motivation and communication skills, integrity, reliability, teamwork were of importance in procuring employability for engineering graduates.

Aspiring Minds Assessment Pvt. Ltd (2010) recruit engineers as per the requirement of companies. They recruit the engineers from universities and institutions, conducted a standardized computer-based test on national employability skills in the year 2010. More than 40,000 engineering graduates were examined, sample were collected from 12 states. The test emphasized on factors to measure necessary employability skills required by IT and ITES sector. The test examined the factors such as knowledge of English, quantitative skills, problem solving skills and programming skills. The findings ensured that soft skills such as verbal and quantitative skills recommended for improvement in training program to enhance employability skills in engineers.

NASSCOM (2010) NASSCOM the key body for IT industry in managing functions has important role in improving education for IT engineers and make them employable globally. The NASSCOM Mckinsey study 2005, discussed some lacking employability skills statistics in
graduate engineers in India. To improve employability skills of engineers, NASSCOM has initiated programs with government and private sectors. Among the optimal initiative was ‘finishing school concept’ for fresh engineering graduates to help them in achieving industrial employability. A pilot initiative was conducted in year 2007 in institutes for example IIT Roorkee and seven NITs. The course curriculum designed were found covering important technical skill and soft skills.

Popli and Rao (2010) tried to understand entrepreneurship inclination among the final year engineering students of Delhi. The research study selected 200 engineering students in sample size. Findings of study revealed 68% of students had shown their interest in entrepreneurship but were found lacking in gaining self-confidence to initiate risk. The study also confirmed 80% of students wanted change in course curriculum of engineering pattern and desired entrepreneurship subject to be included in main stream. Researchers recommended the significant role of education and industry in promoting the concept of entrepreneurship for employability.

National Knowledge Commission India (2008) recognized that there is an increase in number of engineering colleges in India, but these increase in number of colleges could not withstand in delivering quality to the engineering graduates and even not meeting to the demands of global economy. The industry is still facing skill deficiency. The report acknowledged that industry needs the following employability skills in graduate engineers such as generic skills, reasoning ability, process orientation, cognitive ability, English communication and developing
program fundamentals, but the present education system found incompetent in fixing such programs.

Pitroda (2008) acknowledged that engineering education in India stand for growth of Indian economy. The study reports, the increase in un-employability of engineering graduates largely resulted due to incompatible design of course content, retention of faculty, failure in integration of science and technology, failure in conducting research activities and failure in academic and industry efforts. Further, researcher recommended that engineering graduates, to improve cognitive skills and English communication for employability.

Yusoff et al., (2012) studied the factors that affect employability skills of engineering students among various nations such as Malaysia, Japan, Singapore and Hong Kong to recognize the similarities and differences that exist in the practices followed under different cultures, ethics, economical condition and value system. The study findings found that employer’s expectation and perception play a significant role in identifying the necessary employment skills.

Goel (2006) acknowledged that NASSCOM had given low estimates values to spoken English skills, team work and creativity among IT engineering graduates in India. It is estimated around one third of fresh engineering graduates join IT industry irrespective of their specialization. A comparison was made by researcher between Indian NBA and USA NAE (National academy of Engineers) on employability skills for IT engineering graduates. The study shows in USA faculties put good efforts to prepare the student for non-academic activities.
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However, on Indian part about NBA, faculty competencies were not found suitable to connect employability needed for the industry.

According to Yorke and Knight (2004 and 2006) employability taken as set of attributes for procuring a job. It relies on three factors such as knowledge, skills and attitude. ‘Employability characteristics do not withstand in meeting job demands only, but how one varies in skills from others within the job aspirants (Brown and Hesketh, 2004). Hence, to prove better from others in skills is the general concept behind employability.

Zinser (2003) explained that employability and career take account of managing resources, procuring job, retention, interpersonal and communication, cognitive skills and active participation in team work.

Harvey (2002) designed a model on employability called ‘Magic Bullet Model’ for developing fresh engineering graduate skills involving stakeholders and factors for employability. Stakeholders discussed in the model are employers, fresh engineering graduates and educational institutions. Graduates given the opportunities to enhance employability skills by participating in extracurricular activities organized by education institution. Student participation in extracurricular is recommended.

Vidanapathirana (2001) described employability skill gaps as the difference that exists between employer’s satisfaction and employability skills actual possessed by fresh engineering graduates. The employability has two main factors, educational qualification of
fresh graduates and set of skills possessed by fresh engineering graduate such as attitude toward work, skills—technical, communication, management and socio-economic backgrounds. The major problem of unemployment among fresh engineering graduates is that, they do not recognize the importance of employability in career and they do not possess the necessary employability skills.

Humphreys et al., (2001) emphasized on importance of soft skills for graduate’s employability such as communication, presentation skills, problem-solving, team-work and leadership skills. The researcher recommended need for change in universities curriculum to develop a methodology for enhancing transferable employability skills and to encourage students to take more proactive role in evaluating their performance. The researchers developed an Integrative Studies (IS) module at the University of Honk Kong for transferring employability skills in students.

Nguyen (1998) conducted a research study and examined the engineering students, academicians and industry personnel with the help of survey questionnaire which included generic and technical skills. The findings of study ensured that an engineer is required to maintain balance between technical and soft skills for employability. Non-technical skills found to enhance vast knowledge of engineers.

2. Employability Skills and Emotional Intelligence

Aziz and Pangil (2017) conducted a descriptive research to recognized the moderating effect of emotional intelligence between perceived soft skills and employability among
Malaysian business graduates. The data was collected from 380 students of four universities such as USM, UITM, UUM and UM of Malaysia. The collected data were analyzed with SEM. The findings of study show, that soft skills positively affect employability. Emotional intelligence significantly moderated between the relationship of perceived soft skills and employability. The research shows the imperative role of soft skills and emotional intelligence in gaining employability to students.

Matsouka and Mihail (2016) acknowledged that emotional intelligence is an ability which employers like to look in new graduates who are likely to get hired. According to researchers about 79.3% human resource managers had shown the desire of emotional intelligence in new graduates (Matsouka and Mihail, 2016). The human resource managers were enquired whether new graduates possessed emotional intelligence. They replied only 13.8% of graduates meet with emotional intelligence. A research study was carried in the year 2007 on sign language interpreters to measure skills and their own competence. The findings revealed that practitioners showed discrepancy between self-monitoring skills and self-reported ability (Bontempo and Napier, 2007).

Jameson et al. (2016) explained that employers favor the candidature of graduate for employability who possessed high emotional intelligence. The researchers studied 500 employers through survey in different sectors of Ireland which include IT/computing, professional services (including accounting, business, finance, HR, law, retail), science (including pharmaceutical and life), and social science to explore opinions of employers on social and emotional competency requirements among graduates in these sectors for
employability. The findings showed discrepancy between expectation of employers towards emotional intelligences and emotional intelligence possessed by the graduate employees. The researchers recommended the graduates to improve emotional intelligence to meet with employability skills standards of employers.

Goyal (2015) acknowledged in his study, to understand interpersonal skills at workplace is very important for new graduates, as they must work in teams and group. An interpersonal skill, as significant soft skills contribute to graduates effective communication and helps in achieving organization performances.

Elegbe (2015) examined the Nigerian universities engineering programs and found them with technical competencies oriented with negligible efforts to promote emotional competencies. The research study had taken fresh engineering graduates and managers who were engineers in organizations as respondents. The objective of study was to understand perception of both groups towards emotional intelligence, required employability skills, job performance and effective leadership. The findings ensured that engineering graduates, engineering skills were more significant. For managers, emotional intelligence was more significant. The differences in opinions were due to subjective understanding of emotional intelligence. The researchers recommended the universities to include programs in engineering education for improving the emotional intelligence of fresh engineering graduates.

UK-SPEC (2014), the UK Standard for Professional Engineering Competence likes to enroll the students in the stream of engineering if he/she has interpersonal skills such as
communication skills, ability to discuss proposals and ability to explain personal and social skills. The ABET requirements give significance to effective communication, professional competencies and understandings of ethics, knowledge of global/societal context and knowledge of multidisciplinary teams. Further in UK – SPEC (2014) third edition research was conducted to understand relationship of emotional intelligence and employability among college students. Data was analyzed using correlation and regression. The findings confirmed that correlation and regression predict the relationship between employability and emotional intelligence. Science and engineering students showed more employability skills than arts students.

Belagodu (2013) conducted a research study in India to understand the perception of final year engineering students towards employability. Researcher used questionnaire survey and found communication skills and positive attitude as important soft skills for employability. Perception of final year engineering student was at alarm stage as they had little knowledge about significance of soft skills for employability.

Vijayakumar and Ramalingam (2013) in their research study tried to understand perception of employer towards employability. A questionnaire was developed based on skills such as core employability, communication and professional skills and data was collected from five companies. Core skills ranked first with 57%, Professional skill ranked second with 27% and communication skills third with 15%. The researchers confirmed that communication skills received third ranking, but they are crucial because job aspirants must face the interview, where communication plays a significant role. The other attitudinal and affective skills that rated significant, were personal willingness to learn, emotional stability and empathy.
Varghese et al. (2013) accentuated that Indian higher education institutions found career meta-competencies such as adaptability, self-knowledge and a sense of purpose, self-esteem, and career orientation awareness have direct and significant influence on employability.

Sadri (2012) conducted research on 40 managers, to understand the relationship of emotional intelligence with leadership traits. The findings show that managers with high emotional intelligence will be a good leader.

Ahangar (2012) acknowledged that individual with high emotional intelligence have more success than individual with low emotional intelligence, because an individual with good emotional intelligence has good emotional self-awareness and can manage other people well, perform better under pressure and can adapt to organization change.

Tan and Arnold (2012) expressed their views on employability, in the report titled ‘Employability of Graduates in Asia’. According to author’s views, oversupply of engineering graduates was the issue behind employability. Malaysian data on employability shows engineering graduates of ICT and technical program studies have more probability of employability. Researchers further discussed that universities prepare the students for industry with employability skills. Students stated that they acquired skills from universities, but employers articulated that students lacked in employability skills. Hence, identifying and addressing of employability gap among stakeholders is an interest of importance for future research.
Seal et al. (2011) considered that fresh engineering graduates are in the age group of 18-24. During their graduation degree program, they must need to prepare for intellectual, social and emotional learning’s in order to minimize negative career effects and for academic readiness, but it has been noticed that universities academic curriculum are least bothered about the demographic, social and emotional concept of students; they like to make them technically experts only.

Chisholm (2010) acknowledged that in current scenario of business global environment, a lot of contingencies can be observed in the system, the role of emotional intelligence is significant for an engineer to promote emotional competencies in global society were social justice, ethics and social responsibility are the part of role. They need to manage decently in an organization.

Gryn (2010) discussed the results of call center research on leadership qualities which showed that emotional intelligence and job performance withstand for small relationship, but emotional intelligence and behavior contribute significantly towards employees’ performance.

Male et al. (2009) in a research study examined essential competencies among engineers for employability in Australia, 64 competencies were found crucial among which were problem-solving and practical engineering were higher to promote technical competencies. The researchers considered cognitive skills, creativity, management skills and communication skills were also of significance. The authors further emphasized all these skills cannot be learned by engineering students if traditional teaching approaches were followed in universities.
Archer and Davison (2008) explained about perception of employers towards employability skills considering the need of hard and soft skills at graduate level among students. The authors also tried to understand the satisfaction level ratings of employability skills by employers. Ten employability skills were found important by authors such as decision initiating quality, communication, integrity, intellectual, teamwork, personality, confidence, planning, management skills and writing skills. The authors further explained employers were interested in looking into social skills and personality of students at graduation level. Among the soft skills, communication and team work were considered as most important.

Pool and Sewell (2007) acknowledged that employability skills, knowledge, understanding and personal attribute ensured satisfaction and success in the career of candidate for employability. The authors’ recommended personal experiences, career learning’s, technical knowledge, generic skills and emotional intelligence are crucial for employability of graduates. Authors discussed skills in combination with self-esteem, self-efficacy and self-confidence determine employability. Goleman (1998) considered emotional intelligence as ability to recognize own feelings and those of others, self-motivation and managing emotions helps in building relationships at workplace.

Dacre Pool and Sewell (2007) explained, if individuals were given the opportunity to give views on development of employability skills, authors considered self-esteem and self-efficacy as significant component for employability.
Bar-On (2006) discussed emotional intelligence as managing social and emotional skills to recognize self, expressing self, understand emotions of others, and deal with life challenges. Job performance enhanced when one is in optimistic state and recognizes his/her abilities to manage social and emotional skills (Moon & Hur, 2011). People with good emotional intelligence skills were able to manage the life challenges and workplace obstacles (Slaski and Cartwright 2002, 2003).

Quah and Lim (2006) shared the perceptions of employers and students on employability skills. Interpersonal and communication skills recognized as important by both parties. Employers believed enthusiasm and self-starter abilities attract them much towards fresher’s. Students perception were giving opportunities in decision making, influencing others, organizing plans, managing projects and self-started were regarded as important employability skills in their perceptions.

Lawrence (2006) discussed the importance of self-esteem in employability model. Self-esteem in educational psychology explains that individual’s achievements are influenced by how he/she feels about self.

Boussiakou, Boussiakou and Kalkani (2006) considered emotional intelligence as benchmark in human resources management practices followed for recruitment and selection of job aspirants. Employers’ two benchmark priorities in recruitment and selection of college graduates are teamwork and communication (Bhavnani and Aldridge, 2000).
Quek (2005) shared their views on employers and employee’s perception for employability skills. According to researcher, employers believed that interpersonal skills, knowledge acquiring skills and flexibility are crucial skills for success of employees at workplace, whereas graduate employees affirms that value acquiring, practical orientation and cognitive skills are the benchmarks in job for successful career.

Hidalgo et al. (2004) recommended graduate engineers must be imparted knowledge of emotional intelligence, economies, managing people and technical assignments by universities for good learning’s and implications for future. The researcher further proposed teachers to use emotional intelligence as tool in explaining technical concepts to IT engineering students, because, managing daily assignment at workplace cannot be handled with technical expertise only. The knowledge of ethics, mathematical logics, case studies approaches are crucial for fresh engineering graduates in IT sector to understand the essence of employability.

Riemer (2003) acknowledged that earning technical expertise cannot affirm engineering graduates for better performance and successful career. Fresh engineering graduate with high emotional intelligence can better handle the work better because he/she was found to be competent in integrating technical and emotion concepts for analyzing the circumstances and initiating decisions. Palmer and Gignac (2012) affirmed emotional intelligence as increasingly validated predictor for job performance.

Lees (2002) put an earnest effort in summarizing literature for required employability skills by employers in context to need of higher education in United Kingdom. Researcher
revealed that personal qualities, core skills and process skills are crucial components of employability skills for the students pursuing higher education. Personal qualities include qualities such as, emotional intelligence, self-awareness, adaptability, flexibility, conscious learning’s, self-theory and adaptability to stress. Core skills include, skills such as global knowledge, writing skills, numeracy, verbal communication and presentation skills, listening ability, problem analyzing skills, self-management and creativity. Process skills include, planning, cognitive skills, computer literacy, technical knowledge, ethics clarity, negotiation and teamwork skills.


Harvey (2001) considered that students during their graduation work laboriously to improve themselves in academic and do compromise with co-curricular activities, which affect their personality and they cannot groom appropriately with the need of employability skills by employers. The blend of employability skills exists in competing with hard and soft skills both. Hence, researcher recommends the students to learn both soft as well as hard skills for improving their personal qualities and employability skills.

Warn and Tranter (2001) stated that while recruiting engineering graduates, employers show their interest in employable skills among graduates as personal and intellectual attributes
which include subject knowledge, leadership quality, better communication skills, teamwork, problem analyzing skills and self-management.

Yorke (2001) acknowledged that learning’s as cognitive, emotional and behavioral skills would be of no use for graduates until and unless the implications of these cannot be worked-out with challenges of employability. According to author, perceived self-efficacy delivered significant role in improving personal qualities and individual employability. Knight and Yorke (2001) explained that actual learnings come from mistakes which prepare an individual to bear stress for achieving success.

Cherniss and Goleman (2001) explained that employers like to see certain employability skills among job aspirants. In general, these skills are subject knowledge, leadership quality, communication skills, teamwork, decision initiating quality, interpersonal skills, discipline, problem analyzing and solving skills and self-management. All these discussed factors for employability skills found in competencies of emotional intelligence mixed model.

Goleman (1995) identified some crucial traits in a successful leader in context to emotional intelligence as empathy, social skills, self-awareness, self-motivation and self-regulation. Beard et al. (2008) considered the following skills are important in a good leader as communication, cognitive, teamwork, self-motivation and self-management.
Aspiring Minds (2016) a report on national employability has brought consolidated views on employability of engineers in India, based on the data collected from 150,000 engineers. The report findings depicted that less than eight percent of engineers are employable in core engineering roles. There is scarcity of employability in IT software development sector. Most of the engineers in India were found with inadequate employability skills which will hamper the future growth rate of manufacturing in India. This certainly required immediate and necessary interventions.

McKinsey (2012) discussed in the report on employability in India that only 25% of technical workforce in India is employable. According to NSDC information in India, only 8% work force possessed the necessary skills for employment in India. About 92% of the workforce is in unorganized employment sector and need to develop their skills. PMO and NSDC have a target of 500 million work-force per year (NSDC, 2014).

Replacement migration (2009) confirmed that India has competencies to contribute to the requirements of the global talent market, but the immense challenge of employability of graduate engineers has hampered the growth of India (Talent shortage survey, 2005). However, in India 400,000 engineers pass out every year, but still employers are not satisfied in finding qualified employees with appropriate employability skills they require. According to (Talent shortage survey, 2005) India’s National Association of Software Services Companies forecasted about the shortage of 500,000 technology employees in India by the year 2010.
World Bank (2009) explained that India is facing crisis of skilled workforce which has hampered the growth of Indian economy. The Indian economy almost move ahead with growth of more than 8% over the last 5 years on an average, including the year 2009 of financial crisis. The IT, infrastructure and power sectors of India were not meeting with the requirement of necessary employability skills among their engineers. The road sector had a crisis of qualified workforce (World Bank, 2008).

Aring (2012) acknowledged, according to TCB report in year 2008, India produced 450,000 engineers every year but only 25 percent have adequate employability skills. Indian company’s top executive’s claim shortage of skills beside the apparent fact of Indian’s largest population. According to an Indian employer, graduate engineers lacked in spoken English communication skills.

Wadhwa et al. (2007) considered that in-spite of India producing bright engineers, even the US also has software engineers in their business organization from Indian origin, India contributes to several international research publications but the employer’s expectation from Indian engineers are very high. In a US survey on employability skills of engineering graduates shows that the employer satisfaction rate was found 4.01. This reflects the attitude in employer satisfaction.

The Confederation of British Industries (CBI 2007) has added to employer satisfaction for employability of engineering graduates, employers expect entrepreneur, creative, analytical and application of information technology skills.
THE ROLE OF EMOTIONAL INTELLIGENCE IN EMPLOYING THE GRADUATES

Blom (2011) acknowledged 64% of the employers admit that they are somewhat satisfied with the performance of Indian engineering graduates. Talent shortage survey (2005) shows 34% employers satisfaction in employability skills of Indian graduate engineers. The findings recommend the proper awareness of training among graduate engineers to enhance employability skills.

**Hypotheses**

1. There will be significant relationship among employability skills, emotional intelligence and employer satisfaction in recruiting fresh engineering graduates.

2. Employability skills and emotional intelligence will be significant determinants of employer satisfaction in recruiting fresh engineering graduates.

3. Emotional intelligence fully mediates the relationship between employability skills and employer satisfaction in the context of recruiting fresh engineering graduates.