Chapter - III

Review of Literature
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The research scholar referred number of publications and websites related to the research study and reviewed the literature. ‘Soft Skills’ is a new and evolving discipline and unfortunately lot of material could not be generated. However the websites have come handy for the research work. The research scholar found out lot of gaps between his research study from the research work done by the previous researchers. Nobody endeavored this study from the perspective of engineering and management institutions. We shall take a look at few definitions of Soft Skills from literature:

1. A book published in 2001 – “Good to Great” by Jim Collins (2001) explains why some companies become highly successful for a sustained period of time. The second chapter deals with Leadership and the attributes of successful people in an organization. The book describes various levels of leaders, Level 5 leadership being the highest. Among the attributes: Ambitious, but first and foremost for the company not themselves, Development of successors, Modest and understated Fanatically driven to produce sustained results, Workmanlike diligence, Attribute their success to factors other than themselves, but take full responsibility when things go wrong. But whether you desire to become a leader or not, at some point you will work within a team, perhaps in a design and development project or in implementing a process. Working as a member or a team or as a leader of a team, “Emotional Intelligence” is often considered a more successful indicator to success than one’s IQ.

2. A recent article in Techniques magazine (May, 2007) demonstrated that businesses want to hire employees who can contribute more than technical knowledge to the workplace. These businesses cite the lack of soft skills as the
chief cause of project failure. ("Soft Skills: the Curriculum for Hard-Core Technical Professionals, by Randy Bancino and Claire Zevalkink) They are not just talking about frills they’re talking about the polished habits and social and teamwork skills that make the companies successful. Yes, they are the soft skills.

3. AC Neilson, 2000 Employers in an Australian study indicated that creativity and flair, independent and critical thinking, oral business communications and problem solving capacity were the areas of generic skills with greatest perceived deficiencies 120. Two studies, one by the American Society for Training and Development (ASTD) (Carnevale et al., 1990) and one by the Secretary’s Commission on Achieving Necessary Skills (SCANS, 1991) have been the foundational works in identifying employability skills, often used as benchmarks or beginning points for other international, national, state, regional, and local studies. ASTD emphasized 16 skill groups across all job families: Basic Competency Skills: reading, writing, computation. Communication Skills: speaking and listening. Adaptability Skills: problem solving and thinking creatively. Developmental Skills: self-esteem, motivation, goal-setting and career planning. Group Effectiveness Skills: interpersonal skills, teamwork and negotiation. Influencing Skills: understanding organizational culture and sharing leadership.

4. According to Drucker (1993), the main duty of a manager is to create “a true whole that is larger than the sum of its parts, a productive entity that turns out more than the sum of the resources put into it”. This is what we may call synergy - the cooperative action of one or more parts, when the whole is greater than the sum of its parts New Webster’s Dictionary of the English Language (1988).
5. Advanced Technology Alliance (CATA) (2005) titled 'Success', asked more than 100 Canadian business leaders what they thought were the most important leadership skills in the workplace. The top attributes were mentorship and leadership followed by vision, entrepreneurship and communications capability. This is invaluable information to students looking to land their dream job.

6. Agarwala (2008) points out, “Most of us think we are perfect...with perfect communication and presentation skills, accents, attitudes, table manners. It is impossible to find a person who says ‘I need to be told how to hold a knife and a fork;’ either he does not know that he does not know, or is too shy/proud to acknowledge this need. Because of this there is no pull, as opposed to technical training, where every techie wants more and more training.”

7. Agrees Rahul Thapan, the head of Tata Infotech’s education services division, who believes that it is soft skills that differentiate winners from also-rans. Today, soft skills are the most important input for any individual to communicate well and pave the way to success; it sorts the wheat from the chaff. Increasingly, people are ranked by their ability to deal with others effectively. As one raises the corporate ladder, soft skills become crucial.

8. Akamai Technologies in 1999–2001 These situations typify just a few of the thorny challenges that faculty members can face. Generally unschooled in how best to deal with such human-centered issues, faculty are left to gain experience through “hard knocks.” That’s painful ... and not the most efficient approach for developing leadership skills. So concluded Professor Charles Leiserson of EECS. While on leave at, he saw first-hand the value to that company of engaging a management expert to assist with leadership skills training. Upon returning to
MIT, Leiserson realized that similar training provided to engineering faculty could significantly enhance their teaching and research.

9. Allen, 2000. It is interesting to note that faculty members may decline the challenge to relinquish traditional learning models because they often teach in environments different from their own educational background, one in which underrepresented populations such as first generations college students may have been overlooked.

10. Alpern (1997); Shtub (1994); Tan (1998); and projects failed not engineer was technically incompetent, but because they lacked the requisite soft skills The integration of project management (PM) skills into the university engineering curriculum offers one solution for training and preparing students with the necessary transferable hard- and soft-skills from the classroom to the workplace. Unfortunately, essential non-technical skills are still lacking among engineering graduates because most engineering schools provide students with little practical experience and few applications competencies. Consequently, there is a need to equip students with the skills that employers currently desire. Indeed, many employers have expressed dissatisfaction with their hired graduates, especially with respect to soft-skills.

11. Arora 2005 we shall now look at the ways and means of preparing students for productive and satisfying careers. Knowledge has always been a valuable and desired commodity, most of the time restricted to the elite; now it is available to the greatest number of people. As living standards advance, more people realize the importance of improving the level of their education. The significance of continuing education is now vital for the intellectual development of individuals.
12. As per the AICTE data, there were 1,668 engineering institutes in the country in 2006. About 15 to 20 per cent of these institutes come under tier-I category which have all advanced facilities and good teachers.

13. Aslanian, (1996), Sargent (2000). Data from the Department of Education indicate that nearly half of the enrolled college students in the United States are twenty-four or older. Over one-third is at least thirty-five a subsequent challenge to management instructors involves adapting instruction to accommodate the changing populations of college students in order to provide students with skills that meet business and industry demands. In response, management instructors should consider changing traditional instructions models and adapting learning models that focuses integrated approaches with more student involvement Fink (1999), Black (2002).

14. At the same time, BT Maran, who’s set to move from SSN to SRM University said, “There is a huge demand for placement officers. In my case, I moved from a college to a university and that offers more challenges. The salary is 30 % higher.”

15. B.schools Prominent engineering colleges in the city saw a major churn among placement officers who are being wooed with better pay packages by competing engineering colleges as well as with placement prospects bleak this year thanks to reduced hiring by IT companies, colleges are pulling out all stops to hire enterprising placement officers. As an important point of contact between academia and industry, these officials also have a say in deciding the recruitment slots for companies based on the rapport they share with them.

16. Bancino and Zevalkink quote Wikipedia in defining the soft skills as “the cluster of personality traits, social graces, and facility with language, personal habits,
friendliness and optimism that mark people to varying degrees. Soft skills complement hard skills, which are the technical requirements of a job."

17. Barry Gander, vice president of CAT A and author of Success. Brent Thomson, a co-managing partner of Peak Sales Recruiting, "The things that students are missing out on when the certificates are handed out are lessons in soft skills that actually make a business person who they are. The technological skills are relatively easy to learn, but the soft skills are what make you a business leader," 18 years of experience in sales leadership and has seen first hand how demands from CEOs are changing.

18. Bohm (1996) "Soft skills engender automatic chains of psychological, emotional, and physiological responses which have an immensely real impact within the mind, body, and society at large" - "Soft skills give us the tools with which to take stock of our situation, take control of our development, and take responsibility for our future" - Tobin (2006).

19. By Jane Porter (2007) (Porter is a reporter with Business Week in New York says: When it comes to teaching students management skills, MBA programs deliver the bare minimum at best, according to a new study. Using survey data on more than 8,600 managers, 373 business schools, and 118 deans and program directors, the study finds MBA programs are lacking when it comes to emphasis on human capital and decision-making management course requirements—part of the curriculum area known as "soft skills."

20. Carillo 2006 The main concern for education experts is to provide their graduates with a wide variety of skills required for the new knowledge-based economy. Modern society needs professionals who can learn, explore, analyze, design and innovate. Experts point out that "interdisciplinary is a key to sustaining
knowledge-based development (KBD), since any single discipline can be capable of dealing adequately with the complex realities of the knowledge societies". Integrating interdisciplinary approach to academic programs can become an efficient means of providing multidisciplinary education.

21. Chapman & Martin (1996); Clagett (1997); Goldberg (1996); Goleman (1995); Gordon (2001); Klukken, Parson & Columbus, (1997); NSPE (1992) This shows that having technical skills alone is simply not enough as one also needs soft-skills to interact with others and to get the work task running smoothly. Other studies also affirm the importance of acquiring essential PM soft-skills by new graduates in order to succeed.

22. Charles Leiserson and Catherine Avril (2006) describes in ‘Soft Skills to Help Avoid the “Hard Knocks” as Dealing with the tough (but nonacademic, nonscientific) issues. What do you do when confronted with an apparently unmotivated student? How do you deal with interpersonal conflicts that could jeopardize your research? How does your modus operandi help or limit you in different situations? How would you communicate successfully with that key donor who thinks very differently from you?

23. Clayton, Blom, Meyers and Bateman, (2001). The framework comprehensively lists the elements of each skill, therefore unpacking the components for consideration. So, the skill of communication includes listening and understanding, speaking clearly and directly, and writing to the needs of the audience. This aligns with the guidelines given by the Mayer Committee in interpreting the key competency ‘Communicating ideas and information’ by identifying the purpose, audience and context of the communication, select the appropriate form, communicate and adapt by responding to feedback
But the ACCI framework goes further to identify persuasion, being assertive, negotiating and using networks, as equally important. The employability skills to be incorporated into training packages are yet to be revealed by ANTA, but it appears that personal attributes will not be included, as the subjective nature of these is too controversial. Yet attributes such as enthusiasm, personal presentation and commitment are underlying qualities for which a candidate (including ourselves in job interviews) is often judged, and indeed may even be overtly stated in a job and person specification Clayton, Blom, Meyers and Bateman, (2001).

24. Corinne Mason, Deadtrick Newson and Edward R. Del Gaizo, about trainer and manager opinions from various companies found 23 skills which are needed in work. Communication skills, self-esteem, and ethic work are main factors that determine someone achievement in his work (By Bill Coplin, www.dbcc.fl.com). Another study showed that ethic work, ability to communicate.

25. Csikszentmihalyi (2003) Today’s visionary leaders echo the most ancient wisdom: To be happy for life, you must first try to know yourself As change propels us forward we have to adopt, like the artist, the habit of continuous ‘practice’ - to constantly refine, remember, learn, and re-learn.

26. D.N. Reddy, vice-chancellor, JNTU These fancy new schools that will be set up in most campuses will train students for careers in the retail sector, banking, insurance and finance firms, HR, hospitality and tourism, media, IT industry, graphics, animation and gaming industry etc. We will start out finishing school by January 2009 in collaboration with leading corporates who will provide senior executives and trainers for students.” Apart from industry specific essentials,
these courses will also brush up etiquette, body language, table manners, business communication et all.

27. Daniel Goleman, Psychologist, co-chair of the Consortium for Research on Emotional Intelligence in Organizations at Rutgers University describes the importance of interactions within a company. He states that companies cannot ignore people interactions and emotions. Two of his books, Emotional Intelligence and Working with Emotional Intelligence, describe how this process works. He also goes on to state that EI, Emotional Intelligence accounts for as much as 70% or individual performance, whereas cognitive ability and technical learning account for 30%. This proportion may be a little extreme and may not be correct, but in any case the research certainly shows that emotional intelligence plays a significant role in one's effectiveness in interfacing with other individuals.

28. David Perry of executive recruiting firm Perry-Martel International said these personality traits are especially important for new job seekers with little experience to market to employers. "When you come out of school are you packaging yourself for the job market as a commodity or a value add? That's a serious question because if 700 students come out of the same program and they all have similar work experience, what's the differentiator? Your soft skills make the difference," he said.

29. Deccan Chronicle newspaper report titled “City grads to get groomed” dated (23 November 2008) mentioned as below: Soon, students passing out from universities in the state will be armed with more than just a degree. In a bid to make fresh graduates more “Employable”, the AP Higher Education Council will now start finishing schools in university campuses across the state. This
A "welcome" move was initiated after a recent study conducted by the council revealed some appalling facts. Of the 1.5 lakh students who graduate every year, only 10 per cent are employable. Over 90 per cent lack basic skills, which is the main cause for the steep rise in the number of "educated unemployed youth".

30. Dr. Sandra Yingling, of the Hay Group also quoted by the Harvard article states that emotional intelligence is "not just a warm and- fuzzy". "It unlocks productivity and creativity in a way that nothing else does."

31. Dr. Meenu Wats, Rakesh Kumar Wats (2007) in 'Developing Soft Skills in Students' outlines as below: With the changing educational trends, versatility in educational courses, availability of masses of qualified personnel, the competition for job acquisition and job sustainability is becoming tougher. To get an edge over the competitors, students are left with no choice but to add values to their hard skills with soft skills to exhibit their true potential. Hard skills are academic skills, experience and level of expertise while soft skills are self-developed, interactive, communication, human and transferable skills. Literature suggests that hard skills contribute to only 15% of one's success while remaining 85% is made by soft skills. Most employers these days want to hire, retain and promote persons who are dependable, resourceful, ethical, and self-directed, having effective communication, willing to work and learn and having positive attitude. With the onset of economic liberalization, the Indian market is also becoming global, so the attributes of soft skills are to be imbibed by Indian youth to show their real potential at intra and international levels. Understanding the importance of this newly raised important aspect, most of the educational institutions in India have initiated programmes, projects and activities for developing soft skills in their students. A study was undertaken in the most
dynamic city of India, The Chandigarh, also recognized as Knowledge City, where almost all types of educational facilities and job opportunities are available. The study tries to understand the awareness, need and importance of soft skills in students, type of courses/projects/activities initiated by varied educational institutions at undergraduate and postgraduate levels, their relevance, teaching-learning process, their impact in developing soft skills and benefits to students. This paper presents the findings of the above study. The paper also puts forward some suggestions for making above initiatives more effective for developing students fully equipped with relevant soft skills.

32. Drucker 1993 It is apparent that technological progress stimulates economic growth; the development of modern society is directly associated with the quality of a country’s educational system. Consequently, at the center of the knowledge-based society is the educational system, on which this society relies. Education is the key resource in today’s knowledge-driven society (Schleicher 2003), and knowledge, in its turn, becomes the key resource of production.

33. Economic Times (08 Sep 2008) titled “Catch 'Em Young: Sector needs skilled manpower” highlights the gap in skills. It is not just the IT and ITES industries which are struggling to retain manpower. The story is much the same for the construction sector, the second largest employer after farming.

34. Economic Times (11 August 2008) titled ‘We need employable engineers’, says NR Narayana Murthy, Chief Mentor, Infosys Technologies,” The report goes as stated below: Although an estimated 4 lakh engineers pass out every year, only a quarter of them are employable, according to Infosys chief mentor NR Narayana Murthy. “Hiring best quality people is needed today for highest professionalism.
Students need to work hard and focus on excellence in education,” he said at an interaction with students of the Indian School of Business (ISB).

35. Economic Times (26 August 2008) titled “Creator of Future Masterminds, Offering IT Training And Certification Programmes” points out, “The training and education industry was in its formative years, and our sense of timing was good for a plunge in this industry. My passion and family background of being educationists also played a pivotal role in the choice of this industry,” says Mr. Darshan Ramniklal Shah, Founder, karROX Technologies Ltd. karROX was incorporated with a vision to offer best-in-class IT training and certification programmes. The company’s Endeavour is to provide resources to the fast growing IT industry. “We believe in making people employable through training and education. It is the need of the hour that consequently leads to a sustainable business proposition,” states Mr. Shah. “Teaching 2, 50,000 students and adding new business verticals each year has been a milestone for us.” he affirms. KarROX being recognized as a brand through its overseas operations is a recent feather in his cap.

36. Economic Times (30 Jul 2008) the report writes: Wipro is planning to train 1, 000 engineering faculties in Andhra Pradesh by September this year. This is part of the company’s “Mission 10X “program focused on enhancing employment opportunity for fresh engineering graduates. India has over 1,600 engineering colleges of which over 500 are in Andhra Pradesh. However, Nasscom surveys have shown that only 8% of these graduates are employable. “The workshops have helped us improve presentation skills by about 30%. In fact the company, Wipro spends about 2% of its revenues on training and development including Mission 10X. “Mission 10X is aimed at bringing about systemic changes in the
teaching and learning paradigms in engineering education in collaboration with academia. It involves capability building workshops to help the engineering faculty nurture talent pool,” said Pratik Kumar, executive vice-president (HR) Wipro. The company has already launched the program in three southern states- Karnataka, Andhra Pradesh, Tamil Nadu besides Orissa and Maharashtra. In Andhra Pradesh we have tied up with eight engineering colleges in Hyderabad and Visakhapatnam. Soon, we will extend it across the country and plan to cover 10,000 faculties by September 2010”, Pratik Kumar said on 29 Jul 2008.

37. Economic Times in association with Sujana Metal Products Limited. The booming construction industry in the country suffers due to a lack of skilled manpower to execute big projects. Clearly, a greater focus on the training of manpower and collaboration with educational institutions is a must, said panelists.

38. Economic Times newspaper in its report titled “Engineering colleges see placement officers’ churn” dated (21 August 2008) mentioned as below: Initially, we thought we had dialed the wrong officers – or even wrong colleges. However, it took a few more calls to realize that the war for talent in engineering campuses had shifted from students to placement officers.

39. Economic Times newspaper report titled ‘Infosys moots IT tie-up to train grads’ dated (6 August 2008). The report goes: Infosys Technologies, the country’s second largest IT services company, is in talks with other leading IT firms to jointly offer training programmes to produce more industry-ready graduates. The company hopes to finalize such initiatives by December, beginning with 1,000 colleges across the country. Various IT companies run such programmes on their own. Infosys itself has a programme called Campus Connect which covers over
500 engineering colleges and includes faculty and student training apart from assistance for industry-oriented curriculum. Infosys's planned initiative would bring together the biggest recruiters in the IT industry and lead to more investments into hitherto untapped colleges, particularly in smaller towns, said Infosys VP and group HRD head Nandita Gurjar. "We have been talking for a long time on this. There needs to be a consensus on what we will do together and what separately", she said.

40. Educomp forays into employability training’ reported in The Economic Times (30 Jul 2008) Learning solutions firm Educomp Solutions on 29 Jul 2008 launched Educomp Tele Education Network (ETEN) programme, marking its foray into employability training. ETEN will start with coaching for chartered accounts (Cas), along with training in soft skills and English language. Under the programme, Educomp will set up VSAT-enabled centers for students across the country that will be connected to a central studio where the faculty will teach. About eight centers have been set up in Delhi, Ludhiana, Jalandhar and Chandigarh. Educomp plans to set up 30 centers by year-end and will invest Rs 8-10 crore in the same.

41. Gatto (2000) Knowledge becomes obsolete incredibly fast. The continuing professional education of adults will be the number one industry in the next 30 years Peter Drucker In a society that is increasingly fragmented, in which the only genuinely successful people are independent, self-reliant, confident, and individualistic, the products of school …are irrelevant.

42. Giezkowski 1992 Mature college students can have a favorable effect both on traditional students and on the quality of instruction. The faculties of management and engineering institutions can utilize the tool of ‘active learning'
while teaching soft skills. It is an excellent tool. We shall look at few advantages of active learning:

43. Griffin (1990) characterizes the external environment as the system is comprised of two basic segments: the general environment (composed of "several non-specific components"), and the task environment (composed of "several specific elements of the organization's surroundings: customers, suppliers, partners, etc."). In fact, there are a lot of the general environment aspects that have their impact on the organizational (internal) environment: biological environment; technological environment; economic environment; socio-cultural environment; political-legal environment, etc.

44. Harvard Management Update of (December 2001), an article by Steve Barth described how to maximize the talents and skills of individuals working within a team or organization.

45. In the below compiled report it becomes very clear that all the IT companies are taking lead to impart soft skills to the students for better employability. Let us look at how HCL Technologies has initiated a program in the context of our research study: HCL Technologies has initiated a programme called GoPRO, meaning go professional, to train students and working professionals in non-technical and soft skills. Ravi Shankar, Global Head, Talent Management Group, HCL, feels that the Indian education system is still in the manufacturing era which is far behind the service era and senses a need for up gradation. This training programme concentrates mainly on engineering colleges, for they are lacking the required aspects. The programme's second level of interest is in women's colleges.
46. IT major, Infosys, has initiated a program called ‘Campus Connect’ to prepare ‘Industry-ready’ professionals. ‘Finishing school’ programs have been launched by a few of the National Institutes of Technology which include development of soft skills as one of the program components. The Confederation of Indian Industry (CII) has decided to assist the University of Madras in developing the curriculum for soft skills course. In other words, a few attempts have already been made both by the industry as well as the educational sector in India to rectify the situation. However, industry experts are of the clear opinion that the industry cannot be expected to devote its time, money and efforts to rectify this situation and that it is the educational sector that has to come out with its initiatives.

47. Joe Shirey (2001) quotes in ‘The Softer Side of the Architect’ as “Developing and refining these "soft skills" can take ordinary architects to new levels of effectiveness in their careers. This article outlines a framework I developed for defining these soft skills and strategies for the architect based on my experiences and interactions with architects I admire.” He further added that “In my mind, the successful technical solution also requires three distinct soft skills: business alignment, perspective awareness, and communication”

48. Jon Franklin Ramsoomair Soft skills aren’t soft at all. They require broader thinking, a wider focus and more subtlety of execution. But ultimately, they bring a competitive advantage. They lead to a more integrated operation, more effective management at all levels and most importantly, they help integrate strategic goals with all levels of an organization. And that, my friend, is the whole point.

49. Julie Fortier (2003), Ottawa Business Journal Staff has quoted in his article titled “The hard facts about soft skills”, as below: Although workers with harder-edge
attributes like competitiveness and risk-taking might be able to bring in the big bucks in the short-term, if no one can stand to work with them, it doesn't benefit the company much in the long-term. This is something that technical and business schools should teach students just as thoroughly as the technical skills, according to Canada's CEOs.

50. Knell (2007) Employers are continually asking for a workforce rich in creativity, communication skills and cultural understanding. Knell (2007) However, the link between artists and this skill set seemed little recognized and consequently remains undervalued by artists and the wider society; in what specific ways, I wondered, are artists' wider skills now relevant, and how can more be extracted from this underused resource for the benefit of all.

51. Kulwinder Singh, HR from Satyam BPO While students are glad that they'll finally have something that will prepare them for the competitive corporate world, the real ones who are rejoicing are the recruiters from various firms, “Freshers who come for interview are quite a sight. Even the bright ones who clear interviews have to be trained in everything from dressing to speaking. They don’t even have a proper CV when they appear for interviews. If these courses deliver all they promise, life will be easier, both for employers and for them”.

52. Lately, IT companies have been working with colleges and schools in order to produce more corporate - ready graduates. Such programmes would, in the long run, reduce the time and money spent in training these graduates on their joining the company. Infosys, for instance, spent $ 170 million on training in the last financial year. Infosys, which also runs a training programme for non-engineering colleges for its BPO recruitments, plans to cover both engineering and non-engineering colleges under the joint programme. While IT companies
have mainly tapped engineering colleges for recruitment, they are also hiring arts and science graduates, either for their BPO operations, or to deploy them in non-technical roles in their technology operations. The 502 colleges under Infosys’ Campus Connect would also come under the joint initiative. “We would be able to invest more in infrastructure in these colleges,” Ms Gurjar said. Infosys plans to hire 22,000-25,000 people this year, against 35,000 last year. Of these, nearly 60% would be fresh graduates. Infosys decides on lateral hiring in the third quarter depending on the economic environment.

53. Lee Fui Tong Monash University Malaysia the below literature is related to the learning skills for the students of engineering. Identifying essential learning skills in students’ Engineering education.

54. M.D.Christopher, secretary, AP State Higher Education council. “Through we have changed the syllabus to focus on things that will help them sell themselves better in the job market; a lot of students who pass out are not up to the mark. That’s why we came up with the idea of these finishing schools. We are hopeful that they can help better students’ employment opportunities and win them some brownie points on the personal front too.”

55. Ma Foi management consultants CEO E Balaji said, “Among academic circles they are hot property because all these private engineering colleges compete to show 100% placements.” Other experts added that the placement record of a college also has a bearing on the capitation fee that a private college can command from students during the time of admission. While the placement officers head for greener pastures, they leave behind worried institutions and corporates. While institutions fret over losing officials who successfully liaised with recruiters, companies worry about losing top hiring slots in colleges.
56. Major K V Rajan (2007), Soft skills can broadly be defined as the ability to communicate in both written and verbal forms, as well as the ability to interact with fellow employees in a positive manner. He further adds that "We must realize that technical-skills education and soft-skills education are very different from each other. Soft skills training require an in-depth understanding of the other person's nature, their background, their personality temperaments and even previous work experience. The ability to deal with one's feelings and understand the feelings of others in any given situation helps one to complement academic intelligence/cognitive capacities (IQ) with a humane understanding of issues. This Emotional Intelligence, also referred to soft skills, strengthens individuals from within and helps them understand "who they are" and how best to deal with various situations." Developing soft skills and honing soft skills involves two parts. One is developing attitudes and attributes, and the other part involves fine-tuning communication skills to express attitudes, ideas, and thoughts in the best possible manner. Crucial to successful work is the perfect integration of ideas and attitudes with appropriate communication skills in oral and written abilities, and non-verbal areas. Attitudes and skills are integral to soft skills. Each one influences and listening skills, are important facets of a well-rounded personality. These soft skills are enormously valued in business organizations.

57. Major K.V.Rajan (2007) opines that Soft skills play an important role in the development of the students' overall personality, thereby enhancing their career prospects. Students must undergo training in soft skills which will provide strong practical orientation to them and help them in building and improving their skills in communication, the effective use of English, business correspondence,
presentations, team building, leadership, time management, group discussions, interviews, and inter-personal skills.

58. Mantz Yorke, (2006) says, Achievements outside the boundaries of the discipline such as the possession of 'soft skills' are generally considered to be important in the recruitment of graduates.

59. Mayer Committee in the early 1990s the below literature talks about employability skills which are none other than soft skills. Let us take a look at this as it correlates with the research study. Employability skills are based on the seven key competencies developed by the key competencies formed a firm foundation for the identification of skills required to successfully participate in the world of work Australian Education Council and Ministers of Vocational Education, Employment and Training (1992). But, more than a decade on, it has been recognized that the uptake of key competencies has been poor, leading to a number of important studies which focus attention on these skills once again, and interpret them for the new economy. Employability skills incorporate the key competencies.

60. McGraw 2004. The problematic questions that European educators ask are as follows: "How good is European education?", "How to adapt it to the needs of the knowledge-based society?", "How to respond to the globalization of jobs?" The global job market needs first-rate professional skills, so we must teach people for more complicated jobs. On the other hand, we have to re-evaluate what professional education is about to add enough value to our students. The global job market also demands multidisciplinary skills including good teamwork skills. Today, in business and in science, to use multi-functional and intercultural teams to cope with complex problems has become a widespread practice.
61. McMahon, Patton, Tatham, (2003). Create a learning environment with pastoral care for students at its center, intense contact in the first few months to establish the expectations of communication and commitment. Place the training emphasis on learning how to learn McMahon, Patton, Tatham, (2003) – concentrate on how people learn, not just the content, and lead students to recognizing their own learning styles and to seek the resources that meet their needs.

62. Ministry of Higher Education, Malaysia, 2006 In the Malaysian context, ‘Soft skills’ can be said to incorporate all aspects of generic skills that include the cognitive elements associated with non-academic skills.

63. Ministry of Higher Education, Malaysia, 2006. Though there are no specific soft skills, however majority of these skills are associated with positive values, leadership skills, team work force, communicative skills and life-long learning. Soft skills are identified to be the most critical skills in the current global job market especially in a fast moved era of technology.

64. Mintzberg says Criticism of what B-schools teach isn't new. One longtime critic, Henry Mintzberg, a management professor at McGill University in Montreal, says that the problem isn't necessarily that schools are teaching the wrong thing, but that schools allow too many young and inexperienced students through the doors. "We don't have it right because we let in the wrong people,"

65. Mishel & Bernstein (1994) there are many factors driving change in today's undergraduate business classrooms. One factor, our transformed workforce, is directly linked to these changes. Their findings supported by the increase of non-traditional college students enrolled of higher education.
Moss & Tilly (1980) state that the term ‘soft skills’ was first used in 1972, but not widely used until the early 1990s. There are several definitions of soft skills. Moss and Tilly define soft skills as: “Skills, abilities, and traits that pertain to personality, attitude and behavior rather than to formal or technical knowledge.”

Moyo & Hagmann (2000) they would also have substantial management capacities and excellent communication skills. Most of these ‘soft’ skills are not at all considered in the present curricula, and disciplines and major reorientation programmes are required to enable graduates to practice effective facilitation of participatory processes.

Mr. Gander. "There are five things employers will pay for. They include leadership skills, project management skills, people skills, communication skills and sales skills. Notice they're all soft skills. Everything else (like technical skills) everyone else has too!" Most people tend to think that "natural born leaders" and "people persons" have innate characteristics that one either has or they don't. Not so, said Mr. Gander. "People don't realize soft skills are learnable. Charisma and the ability to be a leader is something you can develop, you are not born with it," he said.

Mr. Koppel "We also have a career center for management students financed by the management students." "So we teach things like interviewing, stress management, time management, and networking. Our students are differentiated in that they have the skills that other students don't have. Our students appear to be better prepared and able to deal with situations."

Mr. Koppel said "The degree shows you have the capability to learn, but it's all the others things that are really important on a day-to-day basis. Something like 85 per cent of your day is dealing with other people, so you have to be able to
relate. The way society has moved has necessitated this program,” To address this concern, for the past three years Carleton University Sprott School of Business and the University Of Ottawa School Of Management have offered students the opportunity to attend the Mindtrust Leadership Development Program. Through Mindtrust, a CEO-exclusive networking forum, Ottawa CEOs conduct seminars for business, engineering, computer science and technology students. Topics include group process skills, overcoming leadership challenges, communications and leadership management.

71. Mr. Thomson "We're not seeing too many organizations that don't look for both hard and soft skills. They have a defined culture and value system and they have to find people that are a good fit with the organization." Just the other day we were told by a woman in HR that a candidate who was sent to her was technically skilled, but they had to decline the person the hiring manager wanted because he wasn't a good fit.

72. Mr. Kalaichelvan, who was a placement officer at Anna University, is now heading the training and development activities at construction and mining equipment major Caterpillar. The salary for a placement officer, depending on the size of the college and resources, could range between Rs 4-7 lakh. The movements are not restricted between colleges.

73. NASSCOM the standard of teaching is a matter of concern in these institutes. has prepared a three-pronged strategy which emphasizes on first-time education, offline material and mentoring and refreshers' programme. NASSCOM will submit the blueprint on National Faculty Development Programme to the government soon, he said.
74. NASSCOM Vice-President Rajdeep Sahrawat "In the tier-II and tier-III institutes, the faculty members are not in touch with industry. They are not updated on the emerging areas. These teachers need special training," told media on Tuesday.

75. National Employers Skills Survey (2003) While we may struggle in this country with deeply unsatisfactory literacy and numeracy rates, it is soft skills that employers are actually crying out for. The reported that employers regard shortages in soft skills, including communication, teamwork, and customer focus and responsiveness, as far more crucial than 'hard' or technical skills Watkins (2004).

76. Neff and Citrin (1999) The below findings have been generated out of research study emphasizing on the significance of soft skills: Harvard University stated that someone achievement on career are 80% determined by soft skills and only 20% determined by hard skills. The book Lesson from the Top by. Ten-success tips 50 the most successes person in United State of America, eight criteria are containing soft skill and only two criteria of hard skill. Survey from National Association of Collage and Employee (NACE), USA (2002), to 457 leaders in USA, about 20 important quality of success people, the result shown that 18 are soft skill and only two on hard skill. "A Whole New Mind" book by Dan Pink stated that "soft skills have become the source of economic survival" Psychologist David Mc Clelland stated that "the strongest factors that contribute to executive success are soft skills, ones hard skills that include in that are the ability of analytics think. Rinella Putri (Vibiznews-Human Resources) stated that: "communication and interpersonal skill are the most important guarantee to success in any professions."
77. Pankaj Khanna (2008), this makes it acceptable for time management and personal productivity training to take place via e-learning, with presentation and communication skills left to face-to-face interaction. “As compared to technical training, personal interaction is necessary to assess the effect of training in soft skills,” says the vice-president and head of channel sales and search practice, JobStreet.com India. Besides, there are other drawbacks like individual reluctance, and most employees do not like to undergo training in etiquette or communication skills. This is especially true in the case of middle and top managers who already have a relatively good amount of experience in doing things.

78. Penelope Tobe (2004) in his paper titled ‘Soft Skills: the Hard Facts’ remarks, “Soft skills - the traits and abilities of attitude and behavior, rather than of knowledge or technical aptitude - are being called the “21st century skills”; it is largely agreed by forward thinkers in education, business and government that soft skills are the key to enterprise, entrepreneurship, and leadership, as well as underlying many other social issues. Nevertheless, education and government policy continue to treat soft skills as desirable rather than essential, yet all sectors report worryingly inadequate levels.


80. Peter Koppel, vice dean and head of student services and the career center at the University of Ottawa's School of Management, said that times have changed and the way people skills are taught has changed as well.
81. Punita Jasrotia / New Delhi (2007) observes in ‘Selling Hard Skills Through Soft Skills’, While a lot has been written and spoken about soft skills, most experts will agree that when it comes to implementation there has been a lax approach. However, the recent dismissal of two employees of a well-known IT company—due to their bad presentation and communication skills, which led to the company losing an account—has made corporates sit up and start evaluating the benefits of soft skills once again.

82. R Vidyasagar (2008), head, HR, i-flex solutions, reveals that corporates in India spend more than Rs 600 crore a year in direct training costs. “A recent survey revealed that the IT industry spent more than 40 percent of its training budget on skill building. Training was always high priority on the IT manager’s agenda, but amid project completion deadlines, hectic travel schedules and long teleconferences, skill building took a backseat. With the slowing down of the sector, this spending could be better utilized now, with techies having more time on their hands.” Clearly, soft skills are being increasingly recognized for their true worth. And with an increasing number of organizations training their personnel towards it, it can only augur well for the IT industry towards making India Inc globally competitive.

83. Raja Maznah & Firuz, (2007) In fact, two groups migrated from the Yahoo group to Google group. Learning was supported through engagement with the open source tools (LOST) where learning through benchmarking happened.

84. Raja Maznah Raja Hussain concludes that students learn through experience. By engaging them in the environment where the focus was in personalizing learning while developing solutions to solve specific learning problems through project
based problem based learning (PoPBL) students are able to actively participate in
creating knowledge and managed their learning using technology.

85. Raja Maznah Raja Hussain,(2004) ADec, University of Malaya dwells at length
about the learning styles among the students during soft skills development in
‘PLEaSE Strategies for Soft Skills Development’

86. Research scholar strongly believes that it is a step in the right direction so as to
fill the gap between the campus and the industry. It makes the students
employable saying good bye to unemployability problem.

87. Rob Denton of Torrens Valley Institute of TAFE (2003) encourages reflection as
the fundamental learning tool. And at the Pedagogy and Partnerships Forum in
Adelaide (2003) the notion of helping people learn how to learn was determined
as the most empowering force we can let loose – it is a meta-competence.

88. Robinson (2001) These skills are now seen as crucial factors for social and
economic development. These so-called soft skills have been too long ignored or
badly dealt with by education.

89. S Ganapathy, who recently moved from SRM University to IFMR with a salary
hike of 40%. “The new job offered career advancement and a different job
profile. While I earlier took care of placements, here I head placements and
external relations,”

90. Sanjeev Kumar, P.E., F.ASCE and J. Kent Hsiao, P.E., S.E., M.ASCE (January
2007) Here is yet another literature related to the research study. Engineers Learn
“Soft Skills the Hard Way”2: Planting a Seed of Leadership in Engineering
91. Says Radhika Sareen (2008) consultant (training) TCS, “Soft skills through e-learning could be okay at the concept level...they could be made more effective by the inclusion of simulated exercises, and some of them could be done by way of videoconferencing. But the real impact would be seen only in face-to-face dealing, role playing, etc.” Agrees Gautam Sinha, the chief executive officer of TVA Infotech, who says that what are needed are more interaction and more role playing.

92. Says Sanjay Agarwala (2008), the director of Eastern Software Systems (ESS), “With globalization, no more can techies adopt an ostrich-like attitude and say they are happy to live in their own world. They have to deal with other people like clients, collaborators, and global colleagues who expect a certain basic personality skill set.” Another study, this time conducted by Harvard University, found that in 85 percent of cases, a job or a promotion happened because of a person’s attitude, and only in 15 percent because of how many facts and figures he knew.

93. Silberman, (1996) Active learning is recommended to educators as a means to promote a wider and general knowledge base and interpersonal skills such as communication, problem solving and team work Bean, (1996, Sutherland & Bonwell, (1996).

94. Smith (1988) “The brutally simple motivation behind the development and imposition of all systematic instructional programs and tests – a lack of trust that teachers can teach and that students can learn” –

95. SRM University, SSN Engineering College, St Joseph’s Engineering, KCG, SRM Eswari, Sathyabhama and Bharath University. The movements happened mostly in private engineering colleges such as While some placement officials have
been poached by other colleges for a higher salary others are putting their skills
to work in the corporate world.

96. Students are given certain possible problems that a company face and are asked
to come up with solutions. This will not only make them think outside textbooks
but also give them ideas on the ways to tackle real-life problems. An exclusive
sabbatical option is open to the faculty members, who can drop in and work with
HCL.

97. Susanne Culo of Kienbaum Executive Consultants (2001) has summed up the
most important soft skills: Soft skills are personal qualities. Soft skills include a
wide range of skills whose relevance depends on the requirements of the position
in question, complementing the applicant's technical qualifications.

found that first-generation students are more likely than their non-first-generation
peers to have weaker cognitive skills, to underestimate the time needed to study,
and, if economic factors dictate, to work more hours off campus.

99. The ACCI (2002) developed a framework of employability skills as perceived by
industry, and these included the key competencies such as team work and
communication, problem solving and technical skills, but also identified self
management, learning, initiative and enterprise, and also interestingly and most
controversial, personal attributes such as loyalty, integrity and a sense of humor,
to name just a few! (ACCI 2002).

100. The Australian National Training Authority (NCVER, 2001) is determining its
list of employability skills, and has been trailing ways in which employability
skills will be incorporated in training packages. There is a clear imperative that
practitioners ensure that employability skills are included in the training and
assessment they provide. In future, Registered Training Organizations (RTOs) can expect to be audited against their training and assessment of employability skills! But what are employability skills, what is their significance and how do we develop them in students?

101. The Economic Times' newspaper report titled "NASSCOM plans to train 15,000 IT teachers" (27 August 2008) as stated below: Whopping 15,000 teachers in Information Technology and Computer Sciences are not up to date with their knowledge, the quality of teaching in technical institutes, NASSCOM has said.

102. The research scholar further believes that this step may encourage even the non-IT sectors to come under one platform for providing soft skills training to the faculties and students as it helps all the sectors and the society as a whole. In the long run, it helps in creating excellent entrepreneurs and leaders across the world. If all the sectors come under one platform the time and money can be saved and there would be wider reach and focus in the area of soft skills training. And it also helps in covering not only management and engineering students but also other students of non-professional courses. It would be like a revolution in the educational sector.

103. The slot that we get in certain colleges depends on the relationship that we share with the placement officials. We might lose the first-recruiter advantage if this churn happens," said an official from a software company that is a bulk recruiter on campuses every year.

104. The Talent Group employees visit various colleges and give lectures and encourage students to take up this training as a part of their semester. The GoPro has also initiated a multimodal, e-base training module, including a series of
skills i.e. communication, etiquette, attitudinal and behavioral skills. They help students overcome weaknesses in writing, listening and comprehension. They also invite women professionals to give guest lectures.

105. The Talent Group senses that the methodology of teaching in India is not up to the mark, as it often revolves around memorizing textbooks and only directed towards exams to score high marks. GoPro will assist colleges to foster innovation and creativity among students and has come up with a novel methodology to carry out this process.

106. The Talent Group underlines the importance of quick upgradation of faculty and syllabus in line with the latest system followed in noted educational institutions overseas. It is not unusual to see a number of women quitting work after marriage or motherhood, breaking a blooming career. Taking note of this, the Group wants to help increase women’s representation in all fields.

107. The teacher's Rogers (1967) Students feel deeply appreciative when they are simply understood – not evaluated, not judged, simply understood from their own point of view, not the teacher’s Rogers (1967). Soft skills are the support system that everyone needs in a world where we are all now expected to ‘take a solo’. Today's world is asking individuals and organizations to rise to the demands of rapid change, and to be transformed by unplanned evolutions. To do this successfully we need the best support system possible, and we must offer that to the next generations.

108. The training programme is open to all the final year students. GoPro is being implemented in several engineering colleges and women’s colleges in Chennai, Bangalore and the NCR. Stella Maris College, Chennai, has already
included soft skills in the syllabus and HCL Technologies has helped design the course.

This article provides a summary of engineering leadership and its relationship to engineering education, problem-based learning, and service-learning pedagogies as they relate to engineering education, and an example of implementing these pedagogies in an engineering course.

Tobin (2006) "Soft skills are the traits and abilities of attitude and behavior rather than of knowledge or technical aptitude", "The ability to utilize interpersonal skills is essential in the workplace. Interpersonal skills, often referred to as soft skills, include communication, listening, team problem solving, cross-cultural relations and customer service" - (Dubrin, 2004).

Venkata Subramanian, Managing Director, SGSA "Training is an ongoing process and does not end as soon as one finishes the course. Our institution monitors the students at their work place to make sure they are doing the right job," says. The training module includes Managerial Programmes, Behavioural Programmes, Communication, Time Management, Customer Relationship and Team Effectiveness. SGSA has designed an effective curriculum with the aid of experts across different platforms to ensure its effectiveness and applicability.

Yet another report (2008) SGSA(Sri Guru Shishya Academy) is doing commendable things in the context of the research study.

From the above newspaper report it is obvious that the war for talent of students has shifted to placement officers who become the bridge amongst the students, faculties, campus and industry.
Having done extensive research on the literature on soft skills and hard
skills, the research scholar found that there is nobody in this world who has done
research related to filling the gap between the campus and industry and there is
nobody who has done research in finding out innovative tools and techniques in
soft skills teaching and training methodologies. And there is nobody who worked
in effective synchronization and coordination amongst students, faculties,
recruiters (industry) and directors of the management institutions.
Therefore, the research study is unique and will fill the research gaps so as to
make students employable for jobs.

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