# Interpersonal Skills and Communication Skills: Bedrock of Professional Success for Engineers

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#### Abstract:

It is grossly misunderstood that engineers have to deal only with design and technical problems. This is far from the truth. In reality, social interactions are part of their day-to-day work life. Engineers do not work in isolation. They have to interact with their clients, end users, superiors and peers which require both communication skills and soft skills. Engineering profession involves a lot of human interaction, communication – both written and spoken, problem solving skills and emotional intelligence. Soft skills are not addressed seriously in educational institutions and emphasis seems to be only on grades. Surveys and studies show that there is a huge divide between novice engineers and the industry expectations. Academicians and the employers in the industry are increasingly concerned about the unemployability of engineers. The two most essential skills – interpersonal skills and communication skills have been taken up for study.

**Key Words:** soft skills, engineers, academicians, employers, employability, lacuna

This academic study is part of an ongoing research on bridging the skills between novice engineers and the industry. Many studies and surveys have shown that there is a huge skills gap between the engineering students and the skills required by the industry. Aspiring Minds, an employment solutions company, conducted a study based on 150,000 engineering students in 2013. It was found that an overwhelming 97 per cent of graduating engineers aim for jobs either in software engineering or core engineering. But, only 3 per cent have the necessary skills to be employed in their field, and only 7 per cent are employable in core engineering jobs. The Times of India (2014) published an article highlighting the fact that only, "18.33 percent of engineers are employable." The situation remains more or less the same even after four years. TechMahindra CEO Gurnani (2018) in an interview to Times of India on 5th June 2018 has said, "Ninety-four percent of the Indian IT graduates are not eligible for jobs in the IT sector." A research conducted by Harvard University, the Carnegie Foundation and Stanford Research Center (2016) has extrapolated that, "Eighty-five percent of job success comes from having well-developed soft and people's skills, and only fifteen percent of job success comes from technical skills." The main objective of this study is to analyse the two most sought after soft skills required as pre-requisites by prospective employers from the young engineering graduates. Pre-final and final year engineering students and employers were the subject of the study.

Daniel Goleman, the author of "Emotional Intelligence at Work," has presented his findings based on his research. He found that executives of various companies said that soft skills were the reason for the success of top performers in their companies. Hence, they put soft skills above IQ and experience. Goleman goes on to say that, CEOs of some of the world's top companies - Amazon, Xerox and Tesla - have made a mark as great leaders because of their EQ, and they have modelled their entire corporate structure around soft skills. Reiterating Goleman's views on soft skills, employers' responses were unanimous in their view that they placed more importance to soft skills than technical knowledge. Recruiters bemoan the lack of soft skills among fresh engineering graduates. Academicians at the college level focus only on teaching to mandated tests to ensure maximum pass percentage. Hence, soft skills training take a backseat. Some colleges outsource soft skills training to increase students' placement prospects, and the trainers coach the students only in aptitude, conduct a few routine group discussions and provide them with a few tips to face the interview. Most often the trainers are young engineering graduates who join as trainers as a stop gap arrangement and the faculty in engineering institutions also lack soft skills. Hence, the scenario in engineering institutions does not augur well for the young engineers. So, with the employees looking for soft skills among the young engineering graduates, and the engineering institutions unable to provide students with the requisite skills, the future of the engineers seem rather bleak.

A closer look at what employers mean by soft skills will go a long way in making sense of this oft repeated word. The Collins English Dictionary defines the term "soft skills" as "desirable qualities for certain forms of employment that do not depend on acquired knowledge: they include common sense, the ability to deal with people, and a positive flexible attitude." The employers attribute interpersonal skills, communication skills and social skills as the most important aspects of soft skills. Interpersonal skills involve both verbal and non verbal communication and etiquette, while Emotional Intelligence (EI) is the essence of soft skills. Social skills include professional, societal and interpersonal and intrapersonal skills. In a nutshell, interpersonal skills, EI and social skills contribute to the holistic development of an individual. A large majority of employers reiterate that finding young graduates with the much needed soft skills is extremely challenging. There is an apparent consensus when asked about their opinion on what constitutes soft skills. The most essential skills the employers look for are: communication skills, interpersonal skills, Emotional Intelligence (EI) and problem solving skills. These four skills are intertwined and complement one another and for the holistic development of one's personality all the four skills are equally important. Owing to the comprehensive nature of these four key skills, the current study focuses only on interpersonal skills and communication skills. Moreover, these two skills form the crux of soft skills and they have a strong alignment with soft skills.

Interpersonal skills and communication skills are complementary; they are the most sought after skills in the industry. Teddy Roosevelt, the twenty sixth President of the United States said, "The most important ingredient in the formula of success is knowing how to get along with people." Interpersonal skills form the most important part of a person's existence. However, these skills are not focussed in schools and colleges. Educational institutions focus on mandated tests which essentially require solitary performance and individual achievement is the yardstick for success, whereas, interpersonal skills which involves working in a team, are critical for a person to be successful in his profession. It is only in educational institutions

that students work in isolation and they appear to revel in individual work and measure success based on an individual's lone contribution. An overwhelming majority of employers spontaneously defined soft skills simply as interpersonal skills. Employers are on the hunt for employees who can interact well with their co-workers, superiors and customers. An employee is the face of an organization he works for, and engineers rely on day to day interactions and collaborative work. Engineers do not work in isolation; they have to work in collaboration with their peers, superiors, clients, suppliers, end users and so on. Hence, interpersonal skills have become synonymous with soft skills among the industry circles. Interpersonal skills and communication skills are the top identified skills that employers require but they are not in a position to spend time or money to address this issue. It is quite challenging to infuse soft skills in a few hours or even weeks of training, as it is an undeniable fact that the person has lived with these traits and behaviours all his life and habits die hard. So, the likelihood of firing the employees who lack these skills is not uncommon.

Mastering these skills is an ongoing journey and it continues lifelong learning and reaching a level of competency in soft skills is forever evolving as new encounters, new situations or people will necessitate more learning and unlearning. Establishing a cordial professional relationship at workplace and displaying proper social graces will lead to success in one's career. To maintain a friction free interpersonal relationship at workplace, self-awareness is the key. Hence, intrapersonal skills pave way for good interpersonal skills. Both intrapersonal skills and interpersonal skills have to be addressed by engineering institutions. It is a commonly acknowledged fact that even pre-final and final year engineering students are not aware of their career preferences, their goals, their passions, and their strengths and weaknesses. They do not introspect and they are totally unaware of their inner traits and how they appear to others. Institutions do not impose discipline, etiquette and do not insist good behavioural skills. On the contrary, institutions are apprehensive that if they enforce discipline or rules, it will affect admissions; while parents openly support their wards and give them a free hand. Students are not exposed to any kind of criticism, instead constantly praised, spoon-fed and pampered in institutions. This is a far cry from reality. When they enter the workforce, it is like a culture shock to the young graduates. They have to co-exist with co-workers from various socio-economic backgrounds, face criticism, work independently, work as a team, do collaborative work and above all follow workplace decorum and ethics. The must have interpersonal skills must be acquired in their educational institutions, without which they will fail miserably in their workplace. It is true that soft skills cannot be taught and that too within a short span of time. Engineering institutions can impart these skills on a regular basis from the first year and it must be ensured that these skills are practised on a day-to-day basis by the students. Engineering students must possess the ability to build a rapport, interact and work effectively with others. They should be comfortable to work effectively with anyone and work amicably with people with different personalities, work styles to achieve good results for the company. As the young engineering graduates would be working with co-workers from different socio-economic and different educational backgrounds, they should have the skills to deal with the nuances of office and people dynamics.

Emotional Intelligence has a strong impact on interpersonal relationships and performance at workplace. The core of EI is self-awareness and the lack of self-awareness can impede one's ability to think rationally and that has an adverse effect on interpersonal relationships. Most of the engineering students have little or no understanding of their effect on others and they do not realize that EI plays a vital role in interpersonal relationships. Daniel Goleman has proved that beyond a certain point there is little or no correlation between IQ and professional success. It is EI which accounts for nearly 90% of an individual's climb in their professional career. As Maya Angelou said, "I have learned people will forget what you said. People will forget what you did, but people will never forget how you make them feel." Emotional Intelligence is also the ability to understand the effect we have on others and manage ourselves accordingly. This ability is the key in establishing good interpersonal relationships at the workplace. Emotional Intelligence coupled with good interpersonal skills helps managers, team leaders and team members to go beyond the call of duty, as they are more willing to work with people who are empathetic. This kind of team work boosts productivity and ensures a conflict free work environment.

As mentioned earlier, interpersonal skills and communication skills are complementary and both the skills are essential for an individual's success in his professional career. Engineering practice is not all about solitary technical work, engineers have to communicate on a regular basis. Communication is threefold – listening, speaking and writing. The study by Aspiring Minds revealed that 73.63% of engineering graduates lack English communication skills. Almost all the major sectors require employees who are fluent and articulate in English. Siddart Bharwani, Vice President, Jetking Infotrain Limited, has this to say about how important communication skills are for young engineers, "The lack of the individual to deliver his views effectively at the interview leads to rejection of even the most brilliant candidate. This is because training institutes do not make an effort to ensure that the candidates develop their skills in a wholesome manner which can contribute towards clienthandling and team communications skills." Communication skills are ignored in schools and the focus is only on marks, even students from English medium schools enter into engineering institutions with poor or total lack of speaking and writing skills. In engineering institutions the academic environment is akin to schools with the focus on grades and not much is done to improve the communication skills of the students. Language cannot be acquired within a short period of time and it requires consistent practice and enrichment. Engineering institutions emphasize only on technical skills and projects, not realizing that engineers need to be articulate enough to ensure that everyone involved in producing products or providing services understand the essential features and satisfy the end users. Very often, engineers have to explain how their products need to be designed, built and work most effectively. Good communication skills are necessary to get along well with colleagues, and understand instructions and express their point of view without sounding aggressive. Good communication skills also help in solving conflicts and convincing people to accept their viewpoint and also persuading customers to the benefits of buying a product. Young engineers, within two to three years of experience on the job would have to communicate with international clients. Listening skills are an integral part of communication skills, as good listening skills help in understanding what other people say and respond in a way that is

expected. Young engineering graduates will be spending more time in training sessions and meetings, thereby, spending at least 25% of their time listening. While speaking and listening dominate engineering practice, they are seldom addressed in educational institutions.

Many engineering graduates with good grades are rejected in interviews because they lack communication skills and interpersonal skills. Even graduates from premiere institutions are denied lucrative job offers for precisely the same reason. Engineering institutions may give the students theoretical knowledge on how to go about doing their job, but they rarely teach how to manage their emotions or how to handle conflicts at workplaces. Interpersonal skills and communication skills are absolutely essential for success in professional and social aspects of the young adults' lives. A survey by LinkedIn, showed that more than half of nearly 300 recruiters reported that the lack of soft skills is limiting their company's productivity. Soft skills are increasingly being considered as a predictor of success and engineers who have the in-demand soft skills can easily land a lucrative job. Due to the intangible nature of soft skills, it is deep rooted in emotional intelligence and depends to a large extent on an individual's personality and upbringing. With an eclectic and nuanced approach to imparting soft skills, there can be some visible improvement in the behaviour of young graduates and this will facilitate in the increase of employability of engineering graduates.

Employers agree that plans have to be devised on how best to develop soft skills in the employees and how to collaborate with engineering institutions to develop a talent pool so that the crucial soft skills are already ingrained in the young engineers and they come to the industry ready with all the requisite skills. Engineering institutions can develop their curricula to meet industry needs as the current engineering curriculum is structured only around engineering practices with practically no attention to the development of soft skills. Some state universities and private universities have attempted to re-balance the education by incorporating soft skills in the curriculum. Unless, there are competent faculty to handle soft skills and communication skills, such changes will just be on paper. More time and effort have to be spent on skills such as interpersonal skills, communication skills, emotional intelligence, problem solving skills and time management. It is an undeniable fact that the focus should be on how best to facilitate these skills among the graduates in innovative and interesting ways and prepare them for their career and life.

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