Assessing the Importance of Employability Skills Training on Engineering Students' Career Readiness

Sunakshi Tongia

Department of Training, Prestige Institute of Engineering Management & Research, Indore, India

Abstract: *The value of employability skills for engineering students has increased as a consequence of the fast advancements in technology and the shifting nature of the employment market. This study intends to evaluate the impact of employability skills training on the career preparation of engineering students. Finding a solid job after finishing their engineering degree is a significant challenge for engineering graduates nowadays. Employers all over the world are looking for knowledgeable candidates great in their specific fields of expertise and technical skills, and who have distinctive qualities to fulfill the employers' steadily rising needs. Employability skills, often known as soft skills, refer to particular aptitudes that make an engineering graduate marketable. In order to help students acquire, learn, and preach employability skills, this article focuses on specialized courses created by Prestige Institute of Engineering Management & Research, Indore. The article also focuses on the techniques for training employability skills with the help of content, tasks, and presentations, offering an environment for the development and inculcation of employability skills in detail to enhance an engineering student's complete personality.*

1. Introduction

Engineering education has long been a driving force for societal and national development. In recent 10 years, there has been a vital shift in the field of engineering education, recognizing the importance of not only hard skills but also soft skills. Today, engineering graduates are expected to go beyond technical expertise and demonstrate creativity, decision - making abilities, and exemplary leadership, ultimately contributing to the global economy. They are required to be adaptable to diverse work environments across various sectors. Engineering has consistently attracted students from all backgrounds in India, evident in the millions of aspiring engineers who appear for entrance examinations each year. Upon completion of their four - year engineering education, students acquire a degree and often assume it is sufficient to secure a favorable job through an interview.

However, the current global economy, driven by rapid technology advancements, intense competition, globalization, and heightened customer expectations, necessitates the development of a set of universal skills alongside technical proficiency. These universal skills, commonly referred to as employability skills, are crucial in making graduates marketable. These skills include but are not limited to effective communication, interpersonal capabilities, problem - solving proficiency, leadership abilities, teamwork, adherence to ethical standards, and other related traits. Engineering education equips graduates to excel in a competitive job market by combining essential technical skills with employability skills, creating a harmonious blend that fosters success. As a result, employers are presented with the chance to choose the most exceptional candidates from this diverse group of recent engineering graduates. In summary, the transformation in engineering education has expanded beyond solely imparting hard skills. The integration of employability skills has become vital to meet the demands of the dynamic global economy. Engineering graduates must have a mixture of hard skills and soft skills to increase their employability and increased chances of getting selected in the desired job role. According to the research in the field these skills are the capabilities and attributes that help a person find and succeed in a job. These skills include things like communicative skills, teamwork, Solving problems, time management, and being able to adapt to different situations. Employability skills are important because they make a person more valuable to company and accentuate their opportunities of getting selected and advancing in their career.

Employability skills are greatly considered by employers as employability skills contribute to an individual's overall performance and productivity in the workplace.

Dorsey asserts soft skills as employability skills as a pill which one has to swallow or else face the consequences. He believes employability skills "are often times the area that will determine failure or success for many in the workplace in personal life as well as individual contractor. Some of the most important peoplein the world are failing, because though they have mastered the hard skills, they can't cope with the world that is fuelled by soft skills. " (Dorsey 1). It has long been commonly accepted that employers expect candidates to have strong communication skills regardless of the field. The National Association of Colleges and Employers each year in its annual Job Outlook has ranked communication skills in the top five of important attributes (….) (National Association of Colleges and Employers, 2020 2) Soft skills are highly prioritized and required in a job. For someone who mastered these soft skills, he will not only be able to adapt to changes and developments in the sector of employment even facing of

everyday life. Soft skills also provide a person act as citizens and workers in the face of rapid technological change and continuous (….) [Jaffar3]

In another review Klaus holds the view that employability skills are make candidate versatile. She claims, "Today's organizations value people who are versatile. Presumably, if you've moved around from job to job—within reason, of course, and with good recommendations—you've been exposed to a wide range of situations and have demonstrated your ability to succeed in a business climate marked by constant change. Sometimes we work ourselves up into such a dither that we box ourselves in and fail to see the possibilities" (Klaus 4).

Engineering aspirants need a huge for ray of employability skills in order to be competent and particularly employable. At engineering universities, these skills should compulsorily be taught with the combination of theory and practice in addition to their University syllabus. The engineering schools not only suggest that engineering students learn lessons that will last a lifetime, but they also make a point of identifying and acknowledging the discrepancy between the various engineering competencies and Company's expectations. The institution prioritizes the development of these skills among its students, actively taking steps to cultivate valuable abilities and promoting holistic growth of their personalities. With an emphasis on educating and preparing students for their future employment, the syllabus at Prestige Institute of Engineering Management Research has been purposefully created to meet the demands of its teaching team. The teaching strategies used in specialized courses that emphasize critical employability skills, such as interpersonal and communication skills, teamwork, creativity, problem - solving, and effective body language, particularly during presentations, are highlighted in this study report. These courses are designed specifically to help students of engineering acquire, develop, and use the aforementioned skills of employability.

2. Speciallized Curriculum

Aspiring engineers nowadays need a mix of hard skills and soft skills in order to thrive in the competitive job market. Numerous engineering colleges work to generate competent graduates by establishing specialized curricula that cater to the development of necessary skills in recognition of this important factor. The Indore - based Prestige Institute of Engineering Management & Research has created a syllabus for its engineering students that efficiently teaches and encourages the practice of employability and soft skills. The syllabus is thoughtfully designed to give educators precise instructions, reducing confusion and fostering the best learning environment. In order for students to grasp their instructors' expectations and respond appropriately from the start, it seeks to create a mutual understanding between teachers and students.

2.1 1st year curriculum

The English Communication Skills topic, which consists of three theoretical credits and one practical credit, is now part of the first - year curriculum. There are four modules in this topic, each with a set amount of instruction time. Through both theoretical ideas and practical activities, the main goals of this course are to transmit fundamental information and emphasize the importance of successful communication. Teachers are in charge of helping students improve their writing abilities in a variety of formats, including emails, letters, circulars, reports, and proposals. Additionally, students should concentrate on honing their oral communication abilities, notably their English fluency when giving presentations, including both PowerPoint and non - PowerPoint ones, various other spoken activities like debates, roleplays, etc. The curriculum also emphasizes how critical it is for students to understand how businesses operate and includes chapters that help them grasp how people communicate differently across cultures.

2.1.1 Objective of the curriculum
1) Developing Communication Skills: The curriculum aims to equip students with the necessary skills in written and verbal communication, enabling them to effectively and confidently express themselves. The focus is on improving writing abilities, enhancing fluency in presentation speaking, and developing listening comprehension.
2) Enhance Writing Skills: The curriculum strives to enhance students' writing skills by instructing them in various forms of written communication, such as emails, letters, circulars, reports, and proposals. It aims to cultivate their capability to produce well - structured and formal written documents.
3) Enhance Oral Communication: The curriculum strongly prioritizes assisting students in enhancing their oral communication skills, particularly in English, during presentations. It aims to elevate their proficiency in effectively communicating in clear and captivating manners using PowerPoint and other presentation formats.
4) Foster Intercultural Communication: The curriculum encompasses chapters and relevant content that facilitate students' comprehension of how communication functions in diverse cultures. Its primary objective is to enhance students' cross - cultural communication skills, enabling them to effectively collaborate and interact with individuals from various backgrounds.
5) Develop Soft Skills: Recognizing the importance of soft skills in contemporary society, the curriculum provides instructors with the necessary tools and knowledge to deliver fundamental soft skills instruction. It endeavors to educate students about the significance of soft skills in professional settings and supports instructors in integrating various aspects of soft skill development into their teaching methodologies.

2.1.2 Learning Outcome for Students
1) Students obtain knowledge of the need of English Communication and become acquainted with the essential aspects that influence good communication.
2) The students understand the principles of suitable and incorrect body language use, as well as the effects of both on interpersonal skills and communication.

3) Students learn about various kinds of presentations and why non - verbal communication is important for giving them in a way that others can understand and connect with.

4) They also develop a clear distinction between technical skills and employability skills, recognizing the significance of each aspect of employability skills throughout the job - seeking process, from securing interview opportunities to successfully navigating interviews and developing a stable position in the professional setup.

5) Candidates comprehend the concept of inter - cultural activities and the limitations that impede cross - cultural communication.

6) They also learn about various written - communication modes used in work life with a clear understanding of the usage and relevance of writing in correct industry specific formats.

2.2 2nd & 3rd year Syllabus

Two years ago, before 2021, the syllabus of the second and third year was intended to educate communicative for company preparedness. Total training duration for the section is totaling 20 hours per semester. Two years cover total of 4 semesters and therefore 80 hours of classroom training and consist of several practical tasks in which students are provided background knowledge about the assignment and the tasks to be performed.

2.2.1 Objective of the Syllabus

1) The first session is to write a job application in professional English, and the teacher will educate the students on the difference between plain, basic language and professional language.

2) Next work involves creating a résumé. The trainers use PowerPoint slides to demonstrate samples of at least five exceptional and five substandard resumes to offer students with a fundamental knowledge of the differences between a CV and a resume.

3) The third session focuses on group discussions, and the trainers talk about the positive & negative rankings, suitable voice modulations, and appropriate body language throughout these sessions.

4) The fourth class task gets students ready for interviews. The instructor gives the students instructions on how to dress officially and stresses the need of using suitable body language, such as gestures, postures, facial emotions, clothes, and general look during the lesson. The most typical interview questions are then asked to the pupils. The trainer then plays back the original interview footage after recording the entire session.

5) The fifth class task entails breaking the class up into different groups and subgroups and giving them various business scenarios. The trainer then gives students instructions to participate in role - playing exercises while adopting roles that are similar to those seen in corporate settings. The emphasis of this assignment is on formal communication.

6) The focus of the sixth session is collaboration. Each small group of students focuses on a subject associated with their area of specialty. They are required to prepare PowerPoint presentations, and each team member is required to give three slides of the presentation to the instructor and the class. The team that works together the best, uses suitable body language during the presentation, and clearly explains the subject is recognized and given additional points.

7) The seventh session focuses on finding solutions to problems. Each team of students receives a business - related case to solve within a set amount of time after being separated into groups. Bonus points are provided to the team that solves the case the quickest, and each team member earns major individual credit.

8) The eighth task promotes originality. Without stating the reason, students are instructed in advance to bring newspapers, scissors, chart paper, and glue. They are then given a topic and given a certain amount of time to demonstrate their creativity by selecting words from newspapers and pasting them in creative arrangements on paper to produce an instantaneous paragraph about the subject.

9) The ninth lesson is all on writing arguments. Students are expected to select a contemporary social topic and compose a persuasive essay that presents their side of the subject using strong language and convincing reasoning. In class, the writings are then distributed and debated.

10) Critical analysis and thinking are the main topics of the tenth class. Students are tasked with critically analyzing and summarizing the key arguments, strengths, and flaws of a group of articles or research papers on a certain subject. They discuss their results with the class after presenting them.

11) An assignment for class eleven entails completing market research. Students choose a product or service to analyses while working in teams. They create a research strategy, conduct surveys or conduct interviews to gather data, analyses the results, and then deliver a thorough report with suggestions for enhancing the good or service.

12) The subject of the twelfth class is intercultural communication. Each couple or small group of students represents one or more different cultures or nations. They act out role - playing scenarios in which they come against cultural differences and need to develop efficient means of communication and conflict resolution.

13) The focus of the thirteenth assignment is financial literacy. A fictitious budget and set of financial objectives are given to the students. They assess their earnings, outgoing costs, and savings before making decisions that will help them manage their money wisely. They explore methods for establishing financial stability while presenting their budget ideas.

14) The focus of task number fourteen is entrepreneurship. The assignment for the class is to write a business plan for a company idea. They carry out market research, choose their target market, develop marketing strategy, make financial estimates, and then present their thorough business ideas to a group of "investors" or peers.

15) The fifteenth task entails carrying out a practice negotiation. Students are split up into groups or pairs to represent various business stakeholders. They use

16) The sixteenth assignment is all on making moral choices. Students are exposed to moral dilemmas that frequently arise in professional situations. They assess the circumstances, take into account many points of view, and suggest moral responses or acts, justifying their decisions with good logic.

17) Project management is the focus of the seventeenth task. Teams of students are assigned a challenging task to develop, carry out, and keep track of. They establish project objectives, assign tasks, establish schedules, manage resources, and report on project progress to the class.

18) The assignment for task number eighteen is to design a social media campaign. A full campaign strategy, including content production, target audience analysis, message techniques, and evaluation measures, is created by students for a social issue or cause they are passionate about. They discuss the possible effects while presenting their campaign strategies.

19) The focus of assignment number nineteen is data analysis. Students are given a dataset and instructed to use relevant statistical techniques to analyze the data, interpret the findings, and draw meaningful conclusions. They share their research and talk about the ramifications of it.

20) The next task is all about presentation abilities. Students select an interesting topic on their own or in small groups, produce an interesting presentation, use effective speaking skills, visual aids, and audience interaction approaches. Presentation abilities are improved through peer reviews and criticism.

2.2.2 Learning Outcome for Students

The professors spend a lot of time with the pupils, making sure they understand the importance of each work and its future relevance. These engaging and instructive homework assignments are intended to foster a pleasant learning atmosphere. When taught in a stress - free environment, students flourish and learn best. The tasks are thoughtfully designed to maximise student potential and showcase their best skills.

1) Writing a job application - Students are expected to comprehend the differences between professional English and plain/simple English by completing this assignment. The goals of each paragraph in a job application will also become known to them. Students can improve their written communication abilities with this task, particularly when used for professional purposes.

2) Writing a Resume - Students will learn how to write a CV that stands out, including the essential elements and formatting rules. Students may analyse and learn from samples of both excellent and substandard resumes using PowerPoint presentations, furthering their ability to write resumes.

3) Group Discussions - Students will gain proficiency in verbal communication and acquire the proper body language and voice modulation for participating in group conversations. Additionally, this assignment aids students in developing their capacity for group communication and teamwork.

4) Interview Preparation - They'll comprehend the significance of body language and nonverbal cues in interviews. Additionally, students will become familiar with typical interview questions and practise coming up with answers. The interview session will be recorded as part of this assignment, allowing students to study the original interview footage and improve their interviewing techniques.

5) Role - Playing in Business Scenarios - Students will improve their capacity for problem - solving and decision - making in business situations by taking part in these role - playing exercises. Students will also develop the interpersonal and negotiating skills that are essential for productive communication in a formal business setting. Students gain a broader grasp of the many roles and duties included in business organisations thanks to this project.

6) Team Work and Presentation Skills - Students will learn how to create and give interesting presentations, using both visual aids and effective speaking methods. Students can improve their presenting and public speaking abilities by completing this assignment. Students will receive feedback to enhance their cooperation and presentation skills by taking part in the assessment process, where the top team is acknowledged and granted extra marks based on collaboration, body language, and clarity of presentation.

7) Problem Solving in Business Cases - Students will improve their analytical skills by working together in teams to solve difficult business problems within a specific timeframe. This task will challenge students to come up with effective ways to analyze cases and solve problems efficiently. The team that solves the case the fastest will earn extra points, which promotes teamwork and collaboration. Completing the assignment successfully will give students a feeling of accomplishment and motivation.

8) Creativity and Spontaneous Paragraph Creation - By doing this task, students can enhance their vocabulary, language skills, and overall communication abilities. It involves organizing and presenting information visually, which encourages creativity and effective communication.

9) Persuasive Writing –Through this assignment, students will learn how to convince and persuade others through writing. They will develop their skills in analyzing and thinking critically to create strong arguments. Additionally, students will improve their research abilities and learn how to gather evidence to support their persuasive writing with convincing arguments and proof.

10) Critical thinking and analysis - By working with a collection of articles or research papers, students will learn how to analyze and understand the main points presented in these papers and articles. They will be able to assess each piece, which will enhance their understanding of academic discussions and research methods. Moreover, students will improve their communication skills by learning how to effectively summarize and convey their findings.

11) Market Research Project - By working together in teams and selecting a specific product or service to study, students will learn valuable skills in gathering data, analyzing it, and understanding what it means. They will gain knowledge about competitors, market trends, and the people they want to sell to, which will help them make smart decisions.

12) Cross - Cultural Communication - They will improve their capacity for adaptation and comprehension of various viewpoints as well as their intercultural communication abilities. This task encourages cultural sensitivity and a deeper understanding of cultural subtleties.

13) Financial Literacy - They will build long - term financial planning skills and improve their analytical capacity to make wise financial decisions. Through this task, students are encouraged to manage their finances responsibly and are given the tools they need to do so.

14) Entrepreneurship and business planning - Students will improve their creativity and ingenuity in coming up with company ideas by writing a thorough business plan for a startup idea. In order to make strategic decisions, they will gain understanding of company planning, market analysis, and financial predictions. Students will develop their presentation and communication skills while presenting their company proposals, receiving criticism, and honing their entrepreneurial talents.

15) Mock Negotiation - Students will gain skills in problem - solving and conflict resolution by participating in negotiating activities. They will develop good listening and communication skills, allowing them to negotiate deals that benefit both parties. Students will learn about negotiating methods, strategies, and the dynamics of group decision - making via this project.

16) Ethical Decision - making - Students will develop their moral judgment and ethical decision - making skills by analysing ethical challenges that are frequently encountered in personal and professional situations. They will gain the ability to take into account other viewpoints, analyze ethical ramifications, and put forth suitable ethical answers. With the help of this assignment, students will gain understanding to deal with ethical dilemmas.

17) Project Management - They will acquire efficient teamwork techniques and time management techniques in a project - based workplace. Additionally, the project reporting and stakeholder participation in this assignment will improve their communication and presentation abilities.

18) Social Media Campaign - They will discover effective ways to use various social media platforms, evaluate campaign stats, and reach informed judgments. This assignment encourages the development of digital marketing and communication abilities while encouraging originality and creativity in the use of social media as a communication tool.

19) Data Analysis - They will become more adept in using software and tools for data analysis, enhancing their ability to gather information, make judgments, and effectively communicate results. By enhancing their communication and analytical abilities, this project equips students to make data - driven judgments.

20) Presentation Skills - The capacity to make captivating and aesthetically attractive presentations will be developed in students via the preparation and delivery of presentations on a variety of themes. They will develop their public speaking skills and learn how to engage an audience. Students will continually hone their presenting abilities by getting and using helpful criticism, which will help them convey ideas and information with impact.

For its final - year students, the institution has created a pre - placement training programme targeted at continually upgrading their abilities and preparing them for their professional future. By supporting the students' entire growth, this instruction acts as a springboard, opening the door for a bright future. The Prestige Institute of Engineering Management & Research offers pre - placement training tailored exclusively for engineering students, emphasizing their strengths and resolving their inadequacies. The curriculum is specifically created to assist students in discovering their areas of competence and use them to improve their soft skills. The training is designed to increase, among other crucial factors, confidence, motivation, professionalism, and ethical behavior. To guarantee that students can get the most out of the programme and successfully implement what they have learned, top - notch training is provided by experienced, devoted experts who are knowledgeable about the most recent market trends.

3. Conclusion

The study especially focuses on the curriculum of the Prestige Institute of Engineering Management & Research in Indore, India, and emphasises the significance of employability skills in engineering education. The development of employable skills is prioritised in the institute's programme in addition to fundamental engineering disciplines. Effective communication, interpersonal relationships, group discussion skills, résumé building, stress management, creativity, problem - solving, and teamwork are some of these qualities. According to the survey, institutions throughout the nation should provide students with higher - order employability skills courses to improve their employability and make it easier for commercial organisations to hire them. It is advised that excellent training be provided in a relaxed, stress - free environment by trained professionals and faculty members who are specialists in soft skills and personality development. This will allow students to freely express their thoughts and views. To ensure that the students are prepared with technical knowledge and employability skils for their professional employment, employability skills must be included into technical curriculum. Further research could explore different pedagogical methods and assessment strategies for effectively incorporating and evaluating employability skills within engineering education. Lastly, the study primarily addresses the perspective of the academic institution and the curriculum design. Future research could incorporate the viewpoints of industry stakeholders, employers, and engineering

graduates themselves to provide a more detailed understanding of the relevance of employability skills in the professional engineering landscape.

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