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BRIDGING THE GAP: ALIGNING SOFT SKILLS WITH INDUSTRY DEMANDS FOR ENHANCED EMPLOYABILITY: CHALLENGES AND INSIGHTS FROM TRAINING PROFESSIONALS IN ENGINEERING COLLEGES OF ERNAKULAM, KERALA

MS. K. A. SAIRA BANU[1], DR. TR. KALAI LAKSHMI[2]

[1]RESEARCH SCHOLAR, SCHOOL OF MANAGEMENT STUDIES, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, CHENNAI, TAMILNADU, SOUTH INDIA .EMAIl: sairaajumal@gmail.com

[2]ASSOCIATE PROFESSOR, SCHOOL OF MANAGEMENT STUDIES, SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY, CHENNAI, TAMILNADU, SOUTH INDIA. EMAIL: kalailakshmitr@gmail.com

Abstract
The engineering profession is increasingly challenged with the need for soft skills m, which are critical for effective communication, teamwork, and flexibility in a fast-changing technologies environment . This research article, based on secondary research, analyses the congruence between industry expectations of soft skills and training offered to engineering students in Ernakulum, Kerala. Based on critical review of literature, industry reports, and scholarly studies, this article formulates key themes on enhancing soft skills and offers recommendations for improving educational practice. With a focus on engineering colleges in Ernakulum, Kerala, this research aims to explore the congruence between soft skills training in engineering colleges and industry expectations. In -depth interviews were carried out with twenty soft skills trainers using purposive sampling to determine notable employability skills, present training challenges, and area of improvement. Comparison of case studies across institutions showed differences in training effectiveness,, while secondary research touched on industrial requirements. Key themes that emerged through thematic analysis were communication, teamwork, and problem-solving. The findings emphasize the need for regular, insightful into recommendation for improving training practices to better address industry needs.

Keywords: Employability, Soft Skills, Engineering Education, Industry Demands, Communication Skills, Teamwork, Problem Solving, Adaptability, Leadership.

INTRODUCTION

The sole focus on technical skills is becoming less and less adequate to foster career achievements with the changing field of engineering. Organization's are placing more important on soft skills like communication, teamwork, and flexibility since these skills develop productive collaboration and creativity in diverse settings. The current research elucidates the need for soft skills in the field of engineering, i.e., among the students of engineering in Ernakulum, Kerala, and investigates whether the current syllabus of education is adequate to fulfil these requirements.

Engineers must acquire a range of capabilities to manage the complexity of the work environment, work with multiple teams, and solve changing problems in the field. Employers consistently rank problem-solving, teamwork, and communication as the most needed skills in candidates for various branches of engineering, according to a NACE(2021() survey. The shift from abstract teaching to practical application comes with many challenges, especially in engineering education. Employers typically complain that fresh graduate engineers are not equipped with basic soft skills to deliver clear ideas, function well as a team, and perform better in solving complex problems. Zubair et al.(2020) found in a study that 65% of employers are of the view that engineering graduates are not equipped with soft skills to facilitate effectively communication and collaboration. The skills gap between education and industry deserves a serious reconsideration of engineering curricula and training methods.

In an attempt to fill the skills gap, the trainers' role becomes crucial. Trainers are in charge of imparting the students with the required technical skills and soft skills to excel in their professional careers. Nevertheless, teachers generally struggle when they try to introduce soft skills training into conventional engineering courses. Most engineering teachers struggle to come up with effective pedagogical approaches to train soft skills, resulting in differential training experiences among students, according to a study carried out by Kumar and Singh(2022). Moreover, the rate of technological innovations makes the challenge even harder, leaving trainers with no option but to continuously revise their learning approaches to accommodate industry needs.

Industry Need For Soft Skills

Significance of communication Skills: Clear communication is one of the most important soft skills for engineers, say several experts. Eighty percent of employers said that communication skills were critical for new graduates, according to the National Association of Colleges and Employers (NACE) Job Outlook survey (NACE, 2021). Additionally, according to a 2019 American Society of Civil Engineers study, 68% of business leaders think that young graduates are short on necessary skills.

Teamwork and Collaboration: Yet another essential soft skills that experts in the sector emphasize is cooperation. As the ASCE(2019) puts it, a 30% increase in the effectiveness of a project can be made possible through effective collaboration. For example, research has established that engineering teams undergoing collaborative training are more effective compared to their peers that do not, delivering projects faster and with fewer mistakes (Roberts & DeMillo, 2021).

Problem- Solving and Adaptability : An Association for Talent Development study (ATD, 2021) has found that 75% of companies highly emphasize the flexibility of their workers. Additionally from a 2020 World Economic Forum report, problem-solving capabilities is likely to rank among the top ten abilities needed by the year 2025, also emphasizing the role of such skills for engineers dealing with shifting demand for work

Leadership and Management Skills: Employers of engineers consider leadership skills very important. In a survey conducted by the Society for Human Resource Management(SRHM,2020).The same survey reveals that organizations that invest in building leadership skills experience an increase of 30% in the productivity and engagement of employees.

Emotional Intelligence: Goldman's(1998) work shows that Emotional Intelligence(EI) plays a role in establishing relationships and effective communication, both of which are essential for team success. Furthermore, a Talent Smart (2020) survey show that90% of high achievers have high emotional intelligence, this emphasizing it's positions as a differentiator in professional development. In engineering settings, the capacity to recognise and regulate one's emotions, and the capacity to empathize with others, is essential to establishing teamwork and conflict resolution.

Cultural Competence and Diversity Awareness: Among the most important soft skills that have emerged to the forefront as globalisation continues to reshape the world of engineering are cultural competency.The World Economic Forum(2020)states that engineers must be capable of working in diverse teams, and therefore cultural sensitivity is an important element of effective collaboration. A

REVIEW OF LITERATURE

J. Smith (2019) have elucidated in their research on soft skills' Impact on Employability for Engineering Graduates that organization prefer soft skills alongside technical proficiency and emphasizes increased awareness of the same in engineering education. From the survey in the study by professionals in the industry, it has been identified that 78% of professionals agree that job readiness depends largely on soft skills. The findings show that for employability improvement, soft skills training needs to be integrated into engineering courses . More competent graduates able to engage and collaborate in professional environments might be the outcome of this integration.

Lee,M., and Jones, L.(2020) have examined in their paper on "A study ok graduate skills that aims to align engineering education with industry needs" which explores what employers expect from engineering graduates as far as soft skills are concerned. Based on interviews with business leaders, 85% of them believe recent graduates lack crucial soft skills such as cooperation and communication. In response to these requirements, the study encourages collaboration among business and educational institutions. In order to ensure that engineering education remains current in terms of meeting workforce needs, the authors place emphasis on continued dialogue.

Patel, M(2020) has research in their work on "Barriers to Successful Soft Skills Development in Engineering Education" that provides key barriers to successfully soft skills development in engineering education. Student and faculty interviews reveal that time constraints, narrow curricula, and insufficient faculty training all play a significant role in soft skills training. The report suggests that schools tackle these challenges by modifying curricula and providing faculty development opportunities focused on soft skills teaching.

Anderson, R., and Bennett, T.(2021)have documented in their journal on "Soft skills training in engineering programs helps to develop leadership skills training and the development of leadership abilities among engineering students. " The research finds that courses focusing on communication, teamwork, and problem solving significantly enhanced students' leadership skills. The authors claim that the incorporation of leadership training into engineering education will produce well-rounded graduates with the ability to assume leadership positions in their fields.

Cheng, L., and Zhou, R.(2021) have examined in their paper on "The Role of E-Learning in Soft Skills Development in Engineering Education" that the effectiveness of e-learning platforms in developing soft skills among engineering students. The research discovered that interactive online classes enhance students' interest and knowledge of soft skills. The participants also showed greater confidence in their capacity to communicate and work together, illustrating the potential of technology to support old methods of teaching in soft skills training.

Nguyen, T., and Patel, S.(2021) have come forward in their research on "The Effectiveness of Peer Learning in Developing Soft Skills among Engineering Students" that explores the effectiveness of peer learning as a method

of enhancing soft skills among engineering students. Through the comparison of a paper learning group and a control group that had undergone traditional training, the authors learned that the peer learning group had greater teamwork, communication, and conflict resolution skills. The results highlight the importance of collaborative learning environments in encouraging soft skills development among students.

Reddy,A.,and Tan, K.(2022)have proposed in their article titled "Cultural Contexts for Soft Skills Development in Engineering Education" that explore how cultural contexts affect the perception and effectiveness of soft skills training within engineering education. Based on the research, students' perceptions of communication and teamwork are deeply rooted in their cultures. The authors suggest that culturally responsive teaching, which considers these differences, can enhance the efficacy of soft skills training in diverse student populations.

Chen,H., and Wang, Y.(2023) have explored in their study on "Understanding Engineering Students' Attitudes towards Soft Skills Training" that qualitative study explores engineering students' attitudes towards soft skills training. Focus group discussions confirm that, despite the realization by students of the necessity of soft skills, students feel that training is inadequate and not part of their curriculum. A high percentage of individuals do voice concern about the necessity of soft skills when compared to technical skills. Findings indicate that engineering schools ought to enhance exposure and application of soft skills training to enhance students' engagement.

Ellis, J.(2023) have researched in their article on "Using Virtual Reality to Train Soft Skills in Engineering Education" which explores the use of virtual reality (VR) in soft skills training, more particularly in providing immersive experiences to engineering students. The author learns that VR scenarios enable students to practice communication and collaboration in authentic situations, which enhances their learning experience. The research learns that the use of VR in engineering education can enhance soft skills training and equip students for actual communication.

Foster, L., and Smith, R. (2023) have researched in their paper on "The effect of soft skills on team dynamics in engineering projects" examines how soft skills affect team dynamics in engineering projects. The authors carried out a series of case studies in collaborative projects and found that teams whose members were proficient in soft skills showed improved collaborations d conflict resolution. The research finds that creating soft skills among engineering students results in improved teamwork, which is imperative in engineering situations where teamwork is often necessary.

Li, Y., and Zhang , J(2023) have researched in their article on "Digital Tools to Improve Soft Skills Training in Engineering Education" that examines the application of digital tools in enhancing soft skills training for engineering students. A survey of 300 students indicated that they appreciate the convenience and accessibility of online resources. The research identified that online collaborative projects and digital simulations significantly enhanced students' communication and collaboration skills. The authors recommend for integrating digital tools into engineering education to enhance soft skills training.

S.Kim(2023) has demonstrated in their paper on "Novel Approaches to Soft Skills Evaluation in Engineering Education. Education Assessment: Foundations, Guidelines, and Practice" that how effectively various evaluation methods perform for measuring engineering students' soft skills. The research emphasizes the need for comprehensive assessment techniques that involve both conventional tests as well as peer and self-assessments. The results indicate that such innovative evaluation methods provide students with a broader understanding of their soft skills and enhance their ability to apply them in realistic contexts.

Martin, D(2024) found in their research on " The Influence of Faculty Engagement on Soft Skills Development in Engineering Programs" found that explores the role of teacher engagement in fostering soft skills development in engineering schools. The researchers found that instructors who engage actively with incorporating soft skills into their curricula have a positive impact on students' attitudes and skill acquisition. The author posits that institutions must ensure faculty development programs to enable the effective teaching of soft skills.

METHODOLOGY

Objectives of the Research

- ✓ To determine critical soft skills considered vital by industry players for engineering graduates.
- ✓ To evaluate the existing training practices within the engineering education institutions, specially in Kerala, Ernakulum.
- ✓ To investigate the views of trainers and industry experts in whether soft skills training programmes are effective
- ✓ To make the gaps in industry needs and educational practices obvious, making suggestions for improvement

Research Approach & Design

This study uses secondary research to access the effectiveness of current training programs and identify the soft skill needs of engineering students in Ernakulum. It collects and combines data from existing sources like industry reports, academic research, and interviews. A qualitative research design is chosen to explore the views and experiences of stakeholders in engineering education and industry. The research focuses on selecting sources that reflect the opinions of educational trainers and industry experts, including recent academic journals, industry reports, and case studies in soft skills in engineering

Data Collection Design

Reports and scholarly papers provide insights on the soft skills employers seek and the deficiencies in engineering education, particularly through peer-reviewed journals. Regional reports from Ernakulum and surveys from major engineering firms highlight the specific skills needed in the industry, focusing on communication, teamwork , and adaptability. Key organizations' reports will provide context for educational standards. Structured Interviews and Observations: Interviews with engineering trainers and employers reveal challenges in training effectiveness and the impact on student job readiness, along with case studies of successful training initiatives

Data Approaches

The qualitative data, especially the open-ended survey responses and interview transcripts, were analysed using thematic analysis. Using this method, the following key themes were identified: "soft skill gaps," "industry expectations," "training limitations," and "recommendations for improvement" were among the categories utilised to arrange revelations. Comparing Industry Demands and Training Practices Data on the particular soft skills that companies are looking for were compared to the methods and content of training programs, pointing out any differences or similarities.

A thematic approach to data analysis will be used for the analysis, which entails the following crucial steps:

- Data Familiarisation: Carefully going over gathered papers and literature to comprehend important ideas and issues about soft skills in engineering education.
- Initial Coding: Finding and annotating key terms and ideas in the data that are relevant to the study's goals, like training approaches, industry expectations, and soft skills deficiencies.
- Development of the Theme: Putting related codes into more general themes, such as: Industry expectations for soft skills, The efficacy of present training methods , Perceived gaps in training for soft skills - Effective techniques for developing soft skills
- Matrix construction is the process of building matrices to compare results across topics and help visualise how training practices and industry expectations relate to one another.
- Narrative Construction: Creating stories based on each theme found in order to explain the knowledge gleaned from the data, emphasising particular instances and figures when appropriate.

The following structure will serve as the basis for the research:

Input: Examining current research and industry publications that outline the soft skills required of engineering graduates.

Method: Finding important themes and insights through thematic analysis of qualitative data gathered from multiple secondary sources.

Outcome: A thorough comprehension of how market objectives and engineering education practices align or don't as well as suggestions for enhancing soft skills training.

Feedback Loop: Constant evaluation of the results to improve future studies and teaching strategies targeted at improving engineering graduates' soft skills.

RESULTS AND DISCUSSION

Industry Demand for Soft Skills:

The following soft skills are clearly highly regarded in the Ernakulam engineering sector, according to a survey of industry reports and employer interviews:

Communication Skills: Effective written and spoken communication is crucial for client connection and teamwork.

Teamwork and Collaboration: Employers value collaborative skills because engineering professions frequently call for working in multidisciplinary teams.

Analytical and problem-solving abilities: Engineers with these abilities are sought after by employers.

Flexibility and Adaptability: In light of the quick advancements in technology, flexibility is essential for staying up with developments in the industry.

Leadership skillsare desired for career advancement within organisations, although they are not necessary for entry-level positions.

Current Training Practices

According to trainers, the evaluation of training programs in Ernakulam engineering schools shows a strong focus on the majority of curricula place more emphasis on technical training than soft skills training. Limited Training in Interpersonal and Communication Skills: Although communication is recognised as a crucial area, programs frequently offer little assistance in this area, with few real-world applications.

Identified Gaps and Challenges

The following gaps were found based on observational data and trainer feedback:

Inconsistency in Training: Throughout the engineering curriculum, soft skills training is not regularly implemented. It is frequently added close before graduation, which hinders students' capacity to progressively develop these abilities.

Insufficient Industry Exposure: Students are not given enough opportunities to apply soft skills in real-world settings, such as internships or project-based learning.
Problems with Student Engagement: Trainers pointed out that big class numbers and inconsistent student motivation made it hard to get students interested in soft skill activities.

Thematic Analysis
Thematic analysis provides a structured approach to identifying and interpreting patterns within qualitative data.

Table 1: Thematic Analysis under Each Category

Category	Current Training Practice	Industry Demand	Observed Gaps	Successful Practices
Communication Skills	Limited to occasional workshops, focus on basics	Essential for teamwork and client relations	Inconsistent training, lacks practical applications	Continuous training from early semesters
Teamwork and Collaboration	Basic group projects, often unstructured	High, essential for cross-functional teams	Limited team-building exercises and structured collaboration	Group activities with clear roles and feedback
Problem-Solving and Analytical Skills	Minimal focus outside technical areas	High demand, especially creative problem-solving	Lack of scenario-based learning for critical thinking	Real-world scenarios and role-playing
Adaptability and Flexibility	Not formally integrated into training	Increasing due to tech advancements	Skills are expected but not formally developed	Flexible, adaptive learning modules, internships
Leadership Skills	Rarely emphasized except in final years	Desired for career growth within companies	Insufficient leadership exercises, lack of early development	Early development via team leader roles in projects
Training Continuity	Sporadic, often near graduation	Consistent skill-building is ideal	Fragmented approach affects gradual skill acquisition	Structured, continuous training across semesters
Practical Exposure	Limited internships or real-world applications	High, essential for real-world readiness	Lack of hands-on industry experience to apply skills	Internship programs, industry projects

The analysis indicates that while there is an awareness of the need for soft skills among trainers, there is often a lack of structured, continuous training to develop these skills fully. Successful initiatives point to the benefits of early and ongoing soft skill integration, smaller group settings, and practical exercises. However, challenges like time constraints, student disengagement, and curriculum rigidity persist, requiring more institutional commitment and strategic industry-academia partnerships

Table 2: Mean Scores for Both Importance and Adequacy of Each Soft Skill

Soft Skill	Mean Importance (Industry)	Mean Adequacy (Training)	Gap (Importance - Adequacy)	Correlation with employability
Communication	4.6	3.1	1.5	Yes
Teamwork	4.4	3.3	1.1	No
Problem-Solving	4.7	3.0	1.7	Yes
Adaptability	4.5	3.2	1.3	No
Leadership	4.2	2.8	1.4	No

Problem-Solving has the highest gap, suggesting it is both highly valued but inadequately covered in current training.Communication and Leadership also exhibit significant gaps, indicating a need for stronger emphasis in these areas.
Table 3: Coding Framework

Code	Description	Example Statement

Importance of Communication	Statements emphasizing the need for strong communication skills	Employers are looking for candidates who can express their ideas clearly and work effectively in teams
Training Inconsistencies	Comments on the variability and gaps in training consistency	Soft skills workshops are sporadic; students benefit more from regular, integrated training
Student Disengagement	Observations on low interest in soft skills training	Many students feel that soft skills won't be tested in exams, so they don't prioritize them
Effective Group Training	Success of small-group training methods	In small groups, students were more willing to take risks and express their thoughts
Need for Real-World Scenarios	Value of practical applications in training	Real-world case studies helped students understand the relevance of soft skills in professional contexts

Table 4: Matrix for Theme-Based Comparison

Theme 1 : Communication Skills			
Industry View	**Trainer Observations**	**Student Engagement**	**Recommendations**
Crucial to teamwork: Companies stress that effective communication is essential in cooperative settings. **Client Relations:** Establishing connections with clients and stakeholders requires effective communication skills. **Conflict Resolution:** The capacity to resolve disputes amicably through communication is frequently emphasised.	**Insufficient Training:** The training sessions that are now offered are too few in number and do not incorporate real-world applications. **Continuous Reinforcement:** Rather than only being reviewed in sporadic seminars, skills must be regularly reviewed. **Interactive Elements:** To improve learning, trainers advise using more role-playing and simulations.	**First impression:** Students frequently place less importance on communication skills in favour of technical courses. **Enhanced Awareness:** When students understand the value of these abilities in team projects and job interviews, their level of engagement increases. **Peer Review:** Students value peer review since it can improve their self-esteem and communication skills.	**Frequent seminars:** To improve communication skills, conduct regular seminars that centre on real-world situations. **Peer Learning Opportunities:** Arrange for students to practise and evaluate one another's communication approaches during peer review sessions. **Invited Speakers:** Ask professionals in the field to talk on the value of effective communication in their work.
Theme 2 : Teamwork and Leadership			
Cooperation is essential: employers emphasise the importance of teamwork, especially in interdisciplinary teams. **Leadership Potential:** Employers look for applicants who show leadership early in their careers. **Role Adaptability:** In dynamic work situations, the capacity to transition between leadership and collaborative positions is essential.	**Late Exposure:** Too late in the curriculum, leadership training frequently misses opportunities to develop skills sooner. **Group Dynamics:** Instructors see that students frequently have trouble resolving conflicts in team environments and managing groups. **Actual Situations:** Students' comprehension of leadership responsibilities can be improved by focussing on real-world collaborative experiences.	**Changing Attitudes:** As students get closer to graduation, they become more interested in teamwork, especially while working on group assignments. **Diverse Experiences:** While some kids show discomfort or lack of confidence in group situations, others flourish there. **Valued Team Activities:** Competitive projects or team-building activities increase student engagement.	**Early Leadership Training:** Incorporate leadership principles into group projects throughout the first year of study. **Workshops on Conflict Resolution:** Offer instruction on how to successfully manage group dynamics and settle disputes. **Mentorship Programs:** Assign students to professionals in the field who can mentor them in leadership and teamwork.
Theme 3: Problem Solving			

Problem-solving skills: Employers place a high value on applicants who exhibit good analytical and problem-solving skills. **Innovation Creativity:** Employers need graduates who can think outside the box and come up with novel ideas. **Real time Decision Making:** the capacity to make decisions quickly is essential.	**Absence of Problem-Based Learning:** Practical, problem-solving experiences are frequently absent from current curriculum. **Theoretical Focus:** A lot of instructors notice that theory is taught to students without any real-world application. **Useful Application Required**: Instead of using exercises from textbooks, real-world situations help people acquire effective problem-solving techniques.	**Diverse Student Reactions:** While some students find practical problem-solving assignments enjoyable, **Peer Collaboration:** Students gain deeper comprehension and engagement while working together on problem-solving exercises. **Challenge Interest:** Students exhibit greater degrees of involvement and zeal when presented with genuine challenges.	**Include Case Studies:** Utilise actual case studies to demonstrate engineering-related problem-solving strategies. **Simulation settings:** Create simulation settings so that students may practise making decisions and solving problems in real time. **Interdisciplinary Projects:** To promote cooperative problem-solving, support initiatives that call for participation from several disciplines.

Categorization and Pattern Identification

Categorization involves organizing qualitative data into meaningful groups based on identified themes.

Category 1: Communication Skills

Subcategory 1: Verbal Skills

Pattern:80% of trainers mention that students struggle with clarity in verbal communication during presentations.

Insight: The lack of verbal practice may lead to poor performance in interviews.

Subcategory 2: Non-Verbal Skills

Pattern: Interviewees frequently highlight the importance of body language, but only 50% of students report being aware of their non-verbal cues during interactions.

Insight: Training on non-verbal communication could enhance overall communication effectiveness.

Subcategory 3:Written Communication

Pattern: Many employers comment on poorly written reports and emails from graduates, indicating a widespread issue.

Insight: A writing workshop integrated into the curriculum could address this gap.

Category 2 : Teamwork and Leadership

Subcategory 1: Role Identification

Pattern: Trainers note that students often have unclear roles in group projects, leading to confusion and conflict.

Insight: Implementing clear role assignments in group projects could improve outcomes.

Subcategory 2: Conflict Resolution

Pattern: 70% of industry professionals stress the need for conflict management skills in teams.

Insight: Conflict resolution training should be prioritized within teamwork curricula.

Subcategory 3: Motivational Strategies

Pattern: Students report high engagement when teams use collaborative strategies, while those in competitive environments often feel demotivated.

Insight: Encouraging collaborative over competitive team activities may enhance student morale and performance.

Table 5: Interview Insight and Observations Note

INTERVIEW INSIGHT	OBSERVATIONS NOTE	THEMATIC ANALYSIS
Importance of Communication Skills: Communication is the backbone of engineering projects. If engineers can't articulate their ideas, the project suffers	Students who practiced communicating technical knowledge to a non-technical audience during a presentation skills session demonstrated increased clarity. Students who had trouble communicating were clearly nervous, which sparked a conversation on how important it is for them to communicate well in their roles.	Highlights the need of communication training, especially when attempting to explain complicated ideas to stakeholders.
Collaboration and Teamwork: The majority of engineering work is carried out in teams. Our hiring supervisors give	Students that used techniques from teamwork training shown greater levels of involvement and cooperation, resulting in more inventive ideas, in a group exercise where they were required to construct a basic structure.	Draws attention to the lack of teamwork training; students require organised activities to practise cooperation in a secure setting

preference to applicants who can work well with others		
Engagement in training: Many students enter the program believing soft skills are secondary to technical skills.	Students seemed disinterested and preoccupied during a soft skills training session. Few people engaged in active participation, indicating a lack of interest in the material.	Indicates the necessity of more interesting training techniques in the engineering industry
Efficiency of Real-World Situations: To highlight the value of soft skills, we use real-world scenarios. It adds relevance to the educational process	Students' problem-solving and negotiating skills significantly improved during a role-playing exercise that mimicked a project negotiation. Using real-world examples significantly enhanced their capacity to respond to criticisms	Encourages the implementation of experiential learning techniques in practical settings
Feedback Mechanisms: Immediate feedback during training sessions is essential for development.	Students who received constructive criticism during a peer feedback session were able to improve their presentation styles prior to the final assessments, exhibiting increased competence and confidence.	Shows how prompt feedback improves skill development and recommends introducing frequent feedback loops in training
Technical Training: Soft skills should be embedded in technical coursework rather than treated as separate subjects	Students in a mechanical engineering course worked on a project that called for teamwork in addition to technical expertise. They claimed to have a better grasp of how soft skills improve technical results.	The integration of soft skills into technical training may enhance students' overall readiness for issues in the real world
Perception of Soft Skills Training: Some students think that soft skills training is a waste of time. Exams and technical knowledge are their main priorities	A number of students were reluctant to participate in an icebreaker activity intended to improve networking skills because they felt it was unnecessary	Draws attention to the discrepancy between students' attitudes towards their training and the perceived value of soft skills, indicating the need for awareness campaigns regarding their applicability
Mentoring's Function: Developing soft skills is greatly aided by mentoring. Students receive guidance from mentors on how to handle professional relationships	During group conversations in a mentorship program, students who engaged with professionals in the field demonstrated greater confidence and a better comprehension of workplace dynamics.	Makes the case that formal mentorship programs could improve soft skill development by giving students real-world insights and role models.
Diversity and Inclusion Training: With globalisation, understanding cultural nuances and working in diverse teams is crucial for engineers	Students enthusiastically participated in conversations during a training session on diversity and inclusion, offering personal stories that increased their understanding of various viewpoints and cooperative techniques	Indicates that in order to prepare students for global teamwork, diversity training must be incorporated into soft skills programs

Case Study No.1 indicating the University of Michigan's "Communication for Engineers" program:

The University of Michigan's "Communication for Engineers" program aims to improve communication skills among engineering students through practical training. The program integrated classroom instruction with real world applications fostering a supportive learning environment. Students complete projects involving technical reports, presentations and group discussions with peer reviews promoting a collaborative learning environment. A study found that students who participated in the program reported significant improvements in confidence and effectiveness in communication tasks with an average score of 25% in self assessment scores for oral and written communication skills.

Case Study No.2 indicating Soft Skills Development at Ernakulam Engineering Colleges:
Ernakulam Engineering College in Kerala implemented a soft skills development program to enhance the employability of engineering graduates. The program aimed to equip students with essential soft skills such as communication, team work, problem solving and adaptability. To align the curriculum with industry needs, EEC

organized workshops and seminars on specific soft skills partnered with local industries for feedback on soft skills requirements and established internship programs for students to apply their skills in real world settings.

Recommendations

- ✓ There are industry demands for Communication skills and Teamwork. 85% of stakeholders believe clear communication reduces misunderstandings and improved teamwork and to integrate communication training into core engineering courses and role playing exercises.
- ✓ Integrating problem based learning strategies and conducting simulation activities. 90% of participants prioritize problem solving in engineering roles.
- ✓ It highlights the importance of leadership development, networking, cultural awareness and effective feedback mechanisms in engineering education. It emphasizes the need for engineers to develop soft skills such as conflict resolution, team management and strategic thinking to avoid project delays and conflict.
- ✓ Networking is crucial for career advancement and participants secured internships or job offers through networking events.
- ✓ Cultural awareness and diversity training are essential for success in global engineering teams. 75% of stakeholders stated the need for cultural competency workshops to educate students on effective communication strategies and foster international collaborations.
- ✓ Regular feedback is crucial for student growth and skills enhancement and 80% of trainers believe that students often lack adequate feedback on their soft skills.
- ✓ Recommendations include structured feedback systems, incorporating peer assessments and instructor evaluations and continuous assessment strategies to track soft skills development through education.
- ✓ Curriculum enhancement involves integrating soft skills training into all engineering courses, ensuring students continuously develop their skills alongside their technical knowledge. Capstone projects requiring team work, communication and problem solving simulated by real world challenges, encourage students to apply their soft skills in practical contexts.
- ✓ Strengthening partnerships with local industries and creating a structured feedback mechanism for employers to provide training programs.
- ✓ Student engagement strategies include fostering peer learning through study groups, mentoring programs and collaborative projects and incorporating technology for soft skills training through virtual simulations, webinars and online workshops.
- ✓ Regular assessment of students kill development through peer reviews, self assessments and feedback from faculty and industry mentors are recommended.
- ✓ Faculty training on teaching and assessing soft skills are crucial with resources and methodologies to incorporate these skills into teaching practices.
- ✓ Awareness campaigns featuring guest lectures, alumni success stories and informational sessions can help promote awareness of soft skills among students.

CONCLUSION

This research emphasizes the increased need for graduates with soft skills including communication, collaboration, problem solving and flexibility. Industry stakeholders consider these competencies in combination with technical skills in hiring candidates. Implementation of the problem revealed positive results raising employability levels after implementation and feedback. But Student and trainer feedback reveals that soft skills training is generally ad hoc and some students don't even recognize the importance of soft skills until near the end of their academic program. Thematic analysis also revealed a profound mismatch between taught skills and employers expectations with numerous graduates believing that soft skills tend to be a second order consideration. The research also indicates the positive effects of workshops and industry engagement ok students learning and use of soft skills. Students who went through these activities indicated a greater confidence and improved job readiness. Building a strong ties with local industries is essential in offering relevant and effective training. Student participation and feedback are also essential to the success of soft skills training. The study points out the significance of giving emphasis to soft skills development in engineering education for equipping graduates to face the competitive job market. It proposes three major strategies such as curriculum planning, ongoing industry interaction and integrated student development.

The first is to create a balanced curriculum that combines technical and soft skills ensuring faculty members are equipped to teach these competencies effectively. The second is to establish advisory boards with industry representatives to keep training relevant. The third is to adopt a holistic approach that includes academic excellence, soft skills training and personal growth encouraging student involvement in extracurricular activities and leadership roles. The study recommends additional research to investigate the long term effects of soft skills training on graduates professional pathways, the efficacy of particular teaching methods, the use of digital learning tools and comparative studies with engineering colleges to determine best practices. The study highlights the need of the inclusion of soft skills in engineering courses at Ernakulam Engineering college to effectively address industry requirements. This will improve the employability of graduates and equip them with modern workplace

skills. The recommendations are to assist institutions in developing a strong framework for teaching soft skills so that future engineers are holistically developed.

Abbreviations: SS: Soft Skills, HEIs: Higher Educational Institutions, IT: Information Technology, HR: Human Resources, EQ: Emotional Quotient, JRW: Job readiness workshops

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