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The Integration of Soft Skills in the Teaching/Learning Programs: Engineering Schools in Morocco as a Case Study

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Abstract

In contemporary Moroccan education, the significance of soft skills alongside technical competencies has gathered increasing recognition, particularly within engineering institutions tasked with preparing Moroccan graduates for multifaceted professional landscapes. This paper explores the integration of soft skills within the teaching and learning process, focusing on engineering schools in Morocco. Through a comprehensive examination of pedagogical strategies, curriculum design, and institutional practices, this study elucidates the efforts undertaken by Moroccan engineering institutions to cultivate well-rounded engineers equipped with the communication, collaboration, critical thinking, and adaptability skills necessary for success in today's dynamic world. Drawing upon empirical evidence, the paper highlights the benefits of student-centered approaches, experiential learning opportunities, and inclusive educational environments in fostering the development of soft skills among engineering students. More importantly, the study underscores the significance of aligning educational objectives with industry demands and societal needs, thereby enhancing graduates' employability and competitiveness in the global workforce. By shedding light on the integration of soft skills through education, this research contributes to the ongoing discourse on engineering education reform and underscores the key role of engineering schools in Morocco in an attempt to shape the next generation of socially responsible, innovative, and adaptable engineers.

Keywords: *Soft skills, engineering programs, teaching and learning, workforce.*

Introduction

In the last few years, a diversified set of skills and a wide range of behavioral and value-based dispositions are strongly required more than any time before. Significant technological changes and developments in teaching and learning research are causing a

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rethink of the role, content and direction of education in schools (Bellanca & Brandt, 2010). The development of knowledge economy along with increased globalization have given rise to a greater need for enhanced cultural understanding, awareness, and consideration of a set of different skills, dispositions and attitudes (Gilbert, 2005). Today, employees in various organizations and firms are looking for workforce with capacities that will go together with the organization's existing structure (Jacobs, 2010). Claxton, Chambers, Powell and Lucas (2011) believe that successful teaching and learning programs should focus on mastering of these enduring skills, as they are crucial to create robust, resilient, resourceful and reflective citizens with ability to fight for and win places in the workforce. When creating new job opportunities, organizations expect from the prospective employees to have more than an understanding of the nature and knowledge of the field. This means the working staff must be well versed in a range of emotional skills and abilities. Notably potential recruits are being interviewed and required to complete a range of psychometric type testing to validate their suitability to the workplace and identify both strengths and potential weaknesses that candidates might not have previously been aware of.

Certainly, teaching and learning heavily depend on the explicit development of the 'soft skills' that will withstand times of change and promote new knowledge creation (Bolstad, 2011). Students need to prepare themselves for increased collaborative work, be significantly more engaged in their learning and develop the will and enthusiasm to maximize opportunities (Riggs & Gholar, 2009). Professors, on the other hand, will have to put questions to their existing beliefs of teaching and learning to prepare content, recourses and systems. This strategy will allow for a mixed approach of content-knowledge and skills, dispositional development and student-led learning by means of new-age technologies. Programs of work in Technology Education are ideal to meet these new demands. This paper will explore the nature of these 'soft skills' to provide insight into ways that will allow professors in Moroccan engineering schools to create opportunities for students and consider the extent to which teaching practices may help in identifying future learning programs.

1. Social-Emotional Learning on Academic Achievement

The relationships between social-emotional learning (SEL) and school success are multifaceted and deeply interconnected. Great efforts have been made in the fields of education to release several studies, documents and set out a list of skills, knowledge, and competencies necessary for success at university, workplace and society. From the perspective of educational interventions aimed at developing soft skills, educators draw attention to the emerging belief that traditional notions of basic skills, such as literacy and numeracy, are no longer sufficient for success at university and workplace. They also add that and a unique experience of education cannot provide learners with the knowledge and skills they would need throughout their lives. Instead, they confirm that a huge number of intra- and inter-personal skills or socio-emotional competences are strongly recommended (Bolstad, 2011).

Based on this assumption, it has become essential that learners prepare themselves for increased collaborative work, be strongly engaged in their learning programs, and develop the will and enthusiasm to maximize opportunities. (Riggs & Gholar, 2009). More importantly, Wagner (2008), who is one of the leaders in the promotion of dispositions and attitudes for the 21st century learners, has advocated seven survival skills that students need to attain: critical thinking and problem solving, collaboration across networks and learning by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information together with curiosity and imagination.

Claxton, et al. (2011), in their work on Building Learning Power (BLP), have also identified four key overarching domains in what they call the 'Supple Learning Mind'. The latter suggests a mental state characterized by flexibility, adaptability, and resilience in the context of learning. A "supple" mind is one that is agile, capable of bending or adapting to different situations and challenges. In the context of learning, a "supple learning mind" would refer to an individual's ability to approach learning with an open and adaptable mindset. It implies a mindset that is receptive to change, willing to explore new ideas, and able to recover from failures in the learning process.These qualities of mind are the dispositions and attitudes that effective learners can utilize and which, if they are to be used successfully, need planned interventions. They can be classified as follows:

- Resilience, which refers to the learner's ability to adapt and surmount challenges and setbacks. It involves maintaining a positive attitude, staying flexible, and using coping strategies to navigate difficult situations. Resilience allows students to challenge obstacles, learn from failures, and continue moving forward towards their goals. Developing resilience involves building self-awareness, practicing mindfulness, fostering social support networks, and cultivating problem-solving skills.
- Resourcefulness: This one involves being able to find creative solutions to challenges or problems using the resource available. It includes adaptability, creativity, critical thinking, and the ability to think on one's feet. Resourceful students can effectively navigate obstacles and achieve goals by making their best to take advantage of the main cognitive skills including: questioning, making links, imagining, reasoning, and capitalizing.
- Reciprocity is another quality, which involves the ability to give back or contribute to the learning community in return for what one receives. It includes sharing knowledge, collaborating with peers, and supporting others in their learning journey. This skill fosters a sense of community and helps students develop interpersonal relationships while enhancing their own understanding through teaching and collaboration.
- Reflectiveness is also very significant since it refers to the ability to engage in critical thinking, and self-assessment to gain insights into one's learning process, experiences, and outcomes. It involves actively analyzing and evaluating one's thoughts, actions, and decisions in order to improve understanding, problem-solving abilities and future performance. The following are some key aspects of reflectiveness as a skill:
- Self-awareness: Reflectiveness involves being aware of one's strengths, weaknesses, and learning preferences. Students need to recognize their own thought processes, emotions, and motivations, as well as the extent to which these factors can influence their learning and behavior.
- Critical thinking: Reflectiveness entails critically analyzing and evaluating one's experiences, beliefs,

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assumptions, and perspectives. It involves questioning assumptions, considering alternative viewpoints, and examining evidence to deepen understanding and inform decision-making.

- Learning from experience: Reflectiveness involves learning from both successes and failures. It requires students to reflect on past experiences, identify patterns, extract lessons learned, and apply these insights to future situations.
- Problem-solving and decision-making: Reflectiveness enhances students' problem-solving abilities and decision-making skills by encouraging them to consider multiple perspectives, weigh evidence, and anticipate consequences before taking action.
- Continuous improvement: Reflectiveness fosters a growth mindset and a commitment to lifelong learning. It encourages students to seek feedback, set learning goals, and actively engage in self-improvement to achieve their full potential.
- Application across disciplines: Reflectiveness is a versatile skill that can be applied across various academic disciplines and real-world contexts. Whether in STEM fields (stands for Science, Technology, Engineering, and Mathematics, Humanities, Social Sciences, or Professional Settings), the ability to reflect critically on one's learning and experiences is valuable for success and personal growth.

In fact, an extended 'soft skills' list also includes social emotional skills, often referred to as SEL skills. The latter refers to the abilities to regulate one's thoughts, emotions and behavior (Durlak, 2011). It is also considered as the process through which children enhance their ability to integrate thinking, feeling and behaving to achieve important life tasks (Elias et al., 1997). Social emotional learning (SEL) is the methodology that helps students of all ages to better understand their emotions, fully feel those emotions, and demonstrate empathy for others. These learned behaviors are then used to help students make positive, responsible decisions, create frameworks to achieve their goals and, of course, build positive relationships with others.

Indeed, the skills mentioned above differ from cognitive abilities mainly related to Long-Term Memory, logic and reasoning, because they focus on the way people manage their emotions, perceive them and engage with others. In this way, one would argue that social and emotional skills can considerably determine the way learners adjust well to their environment, the extent to which they behave in their lives and, more importantly, provide them with the ability to adapt, respect and work well with their peers and take personal and collective responsibility.

It is worth noting that social and emotional skills may not be hard to achieve bearing in mind that learners do not learn alone, but rather in collaboration with their professors, their colleagues, and with the support of their families. The collaborative nature of learning environments, where students interact with their professors and peers, can significantly contribute to the development of social and emotional skills. As students engage in discussions, group projects, and teamwork, they have opportunities to practice and refine important skills such as communication, empathy, teamwork, and conflict resolution. Moreover, interactions with professors can provide valuable mentorship, guidance, and support, fostering students' self-confidence, resilience, and emotional well-being. Therefore, while social and emotional skills may not be hard to achieve, the supportive and collaborative learning environment facilitated by professors can really play a vital role in their cultivation.

Furthermore, interactions and emotional processes have a great influence on the content we learn. This means that schools and families certainly play an effective role in the educational process for the benefit of all learners (Elias, Zins, & Weissberg, 1997). Research has shown that emotional skills are prerequisite for the thinking and learning skills focus of education. For instance, emotion is believed to be very important to the educative process, because it draws attention, which drives learning and memory. Moreover, emotions have an impact on perception, motivation, critical thinking, and behavior (Um et al., 2012).

The social aspects of the learning environment also contribute significantly to learning. When the level of attachment, communication, and respect shared between a learner and a professor is enhanced, the learner's attention and learning is likely to take place. Students, who report warm, supportive, positive, and respectful interactions with their professors also tend to display academic motivation and engagement. When students feel connected emotionally to peers and professors with high values of learning and expectations of academic success, they adopt these positive values and achievement orientations. Similarly, students perform better academically when they experience a sense of belonging at school and learn in environments characterized by positive relationships. (Pianta & Hamre, 2009)

Extensive developmental research indicates that effective mastery of social-emotional competencies is associated with greater well-being and better school performance whereas, the failure to achieve competence in these areas can lead to a variety of personal, social, and academic difficulties (Zins & Elias, 2006). The findings from this study have stimulated the creation of many school-based interventions and programs specifically designed to promote young people's social and emotional learning (SEL). These skills may be taught, modeled, practiced, and applied to diverse situations in order to foster the development of five interrelated sets of cognitive, affective, and behavioral competencies: awareness of self and others, self-management, social awareness, social interaction skills, and responsible decision making. These competencies, in turn, should provide a foundation for better adjustment and academic performance as reflected in more positive social behaviors, fewer conduct problems, less emotional distress, and improved test scores and grades (Elias et al., 1997).

Quality soft skills also provides students with opportunities to contribute to their class, school, community and experience the satisfaction, sense of belonging, and enhanced motivation that comes from such involvement. It fosters students' social emotional development through establishing safe, caring learning environments involving peer and family initiatives, improved classroom management and teaching practices. All these components promote personal and environmental resources that can help students feel valued, experience greater intrinsic motivation to achieve, and develop a broadly applicable set of social-emotional competencies.

The following are some strategies for delivering high-quality soft skills instruction:

- Active Learning: Incorporate active learning techniques such as group discussions, role-playing exercises, case

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studies, and hands-on projects to engage students in the learning process. Active learning encourages participation, critical thinking, and skill application in real-world contexts.

- Experiential Learning: Provide opportunities for students to gain practical experience and apply soft skills in authentic settings. Internships, service-learning projects, and simulations allow students to practice communication, teamwork, and leadership in real-world situations, enhancing their skill development and confidence.
- Feedback and Reflection: Offer constructive feedback and encourage students to reflect on their performance and progress. Feedback helps students identify strengths and areas for improvement, while reflection promotes self-awareness, metacognition, and continuous learning.
- Curricular Integration: Integrate soft skills development into the curriculum across various disciplines and subject areas. Incorporate opportunities for communication, teamwork, and leadership into coursework and assignments, reinforcing the relevance and applicability of soft skills in diverse contexts.
- Interactive Technologies: Utilize interactive technologies such as online discussions, virtual simulations, and digital portfolios to enhance soft skills teaching and learning. Technology-enhanced activities provide flexibility, accessibility, and opportunities for personalized feedback and reflection.
- Collaborative Projects: Assign collaborative projects that require students to work together to solve problems, complete tasks, or achieve common goals. Collaborative projects promote teamwork, communication, and interpersonal skills while providing opportunities for peer learning and support.
- Professional Development: Invest in ongoing professional development for professors to enhance their own soft skills and teaching strategies. Participate in workshops, seminars, and peer learning communities focused on soft skills development to stay current and effective in supporting student learning.
- Assessment and Recognition: Develop clear criteria for assessing soft skills and provide opportunities for students to demonstrate their proficiency. Recognize and celebrate students' achievements in soft skills development through certificates, awards, and public recognition.

By implementing these strategies, educators can create dynamic and engaging learning environments that foster the development of essential soft skills, preparing students to be successul in their academic life.

Of course, soft skills programs should be designed in a way that helps learners develop essential interpersonal communication, and professional elements that are highly valued in both academic and workplace settings. These programs aim to enhance students' abilities to collaborate effectively, communicate clearly, think critically, and adapt to diverse situations. In addition to this, soft skills can enhance students' academic performance in different aspects. To confirm this fact, it may be argued that students, who are more self-aware and confident about their learning capacities, try harder and persist in the face of challenges. Students, who set high academic goals, have self-discipline, motivate themselves, manage their stress, and organize their approach to work, learn more and get better grades. The same thing with students who tend to use problem solving skills to overcome obstacles and make responsible decisions about studying and completing homework do better academically. In the same vein, students who need to fight against their tendencies to procrastinate or stress over their studies, social-emotional learning is vital because it teaches them crucial life skills, including the ability to understand themselves, develop a positive self-image, take responsibility for their actions, and forge relationships with the people around them.

Compelling conceptual rationales based on empirical 70 findings have been offered to link Social Emotional Learning competencies to improved school attitudes and performance (Zins & Elias, 2006). For example, students who are more self-aware and confident about their learning capacities try harder and persist in the face of challenges. It should be acknowledged that students, who set high academic goals, have self-discipline, motivate themselves, effectively manage their stress and organize their approach to work. Further, new research suggests that Social Emotional Learning programs may affect central executive cognitive functions, such as inhibitory control, planning, and set shifting that are the result of building greater cognitive affect regulation in prefrontal areas of the cortex. In addition to person-centered explanations of behavior change, researchers have highlighted that interpersonal, instructional, and environmental supports can produce better school performances through the following means: (a) peer and adult norms that convey high expectations and support for academic success, (b) caring professor–student relationships that foster commitment and bonding to school, (c) engaging teaching approaches such as proactive classroom management and cooperative learning, and (d) safe and orderly environments that encourage and reinforce positive classroom behavior. The following are some key components and characteristics of SEL programs:

- Curriculum Design: SEL programs typically have a structured curriculum that covers a range of social and emotional competencies, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The curriculum may be organized into lessons or units, each focusing on specific skills or topics.
- Explicit Instruction: SEL programs provide explicit instruction on social and emotional skills through interactive lessons, activities, and discussions. These lessons may incorporate evidence-based strategies, such as role-playing, modeling, storytelling, and reflective exercises, to engage students and facilitate skill development.
- Integration with Academic Content: SEL programs may be integrated with the academic curriculum to reinforce connections between social and emotional skills and academic learning. This integration helps students see the relevance of SEL to their academic success and provides opportunities for applying SEL skills in various contexts.

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- Promotion of Positive School Climate: SEL programs promote a positive school climate by fostering a sense of belonging, safety, and respect among students and staff. This may involve implementing strategies to prevent bullying, promote empathy and compassion, and create a supportive and inclusive learning environment.
- Collaboration with Families and Communities: SEL programs collaborate with families, and community partners to support students' social and emotional development both inside and outside of school. This may involve providing resources, workshops, and opportunities for family involvement in SEL activities.
- Professional Development for Educators: Educators in SEL programs receive professional development and training to effectively implement SEL instruction and create a supportive learning environment. This may include workshops, coaching, and ongoing support to enhance educators' knowledge, skills, and confidence in SEL practices.
- Assessment and Monitoring: SEL programs assess students' social and emotional skills and monitor their progress over time to inform instruction and support. This may involve using validated assessment tools, such as surveys or checklists, to measure students' social and emotional competencies and identify areas for growth.
- Continuous Improvement and Evaluation: SEL programs engage in continuous improvement and evaluation to assess the effectiveness of program implementation and outcomes. This may involve collecting feedback from students, educators, and stakeholders, analyzing data on program impact, and making adjustments to improve program quality and effectiveness over time.

Overall, SEL programs play a critical role in promoting students' social and emotional well-being, fostering positive relationships and school climate, and supporting academic success. By providing students with the social and emotional skills they need to navigate challenges, build healthy relationships, and thrive in school and beyond, SEL programs help prepare students for success in life.

2. The Significance of Soft Skills for Engineering Students

Definitely, education is considered as the lifeblood of the country's new development model. This implies that talking about Morocco as a developed country necessitates the improvement of education performance and teaching qualities. Bearing this in mind, the Ministry of Higher Education has taken some steps to ensure that soft skills would be highlighted in the curriculum because they are as important as hard skills needed by graduates in order to be employable in this global era. These steps imposed by the Ministry of higher education are justified by a host of brand-new and well-revised skills prompted by advances in technology that are emerging in recent years. For technical jobs like engineering, soft skills are very important for potential engineers to complement their technical knowledge and enhance their employability and career success (Hairuzila, 2009). The present section tries to bring awareness to the importance of implementing soft skills within public and private Moroccan engineering schools and examine their relevance and potential impact on future engineer students.

In Morocco, engineering degrees are primarily awarded by graduate schools of engineering, with the typical duration of education spanning five years of studies, including two years of preparatory classes that consist of the core courses (mathematics, physics, programming…) and three years of specialization within different subjects. Schools in Morocco provide students with a comprehensive education and practical skills to succeed in the dynamic and evolving fields of engineering. By combining theoretical knowledge with hands-on experience and emphasizing critical thinking and problem-solving skills, engineering programs prepare graduates to make meaningful contributions to society and address complex challenges in their chosen areas of interest.

The engineering curriculum is designed to provide students with a solid foundation in core engineering principles, theories, and practical skills. It typically includes coursework in mathematics, physics, chemistry, engineering sciences, computer programming, and humanities. Students also undertake laboratory work, projects, and internships to gain hands-on experience and apply theoretical knowledge to real-world engineering problems. Through this robust curriculum, the Moroccan engineering schools aim at developing different types of skills and knowledge, such as communication skills, analytical, critical and problem solving skills, lifelong learning ability, entrepreneurship and management, stress management, leadership, team work, negotiation and conflict management. This goal can be achieved by introducing these skills in course objectives, learning outcomes and teaching strategies when conducting either core subjects or co-curriculum and extra-curriculum activities.

In a project supported by the Re-Engineering Higher Education through Active Learning for Growth (HERA) and funded by the Erasmus+ program under Project 2019, an analysis was conducted on the personal characteristics required in engineers in contemporary times. This process led to select 44 general characteristics or abilities, from which 18 were considered as fundamental: • Formal, basic knowledge in their field. • Ability to integrate knowledge from diverse thematic areas. • Collaboration, sometimes in multidisciplinary teams. • Open-mindedness. • High-level thinking. • Critical, analytical and innovative thinking. • Independent and autonomous learning. • Problem-solving. • Ability to prioritize. • Ability to assess information, particularly when coming from diverse sources. • Ability to follow systemic design processes. • Implementation and validation of solutions from the perspective of end-users. • Ability to analyze the factors that contribute to an undesired situation. • Design and evaluation of alternative interventions towards solving a problem. • Implementation and assessment of the effectiveness of a solution. • Integrate and transfer knowledge to the real world. • Work with limited resources. • Presentation skills. To exemplify, (Gillard, 2009) states that Soft skills are important for Information Technology graduates as they are, most of the time, given the task of project management due to their expertise in the development and installation of information systems. Also Bolton's (1986) asserts that 80 percent of the people who fail at work do not fail because of their lack of technical skills but rather because of their inability to get along well with others. In another study carried out by The Protocol School of Washington, and conducted by Harvard University, the Carnegie Foundation, and the Stanford Research Institute, proved that technical skills and knowledge are considered about only 15 percent of the reason an individual holds a job, keeps the job and promotes in that job (Crosbie, 2005), the 85 percent left of job success is based on one's soft skills. This provides evidence

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that in the 21st century what is fundamental seems to be soft skills rather than technical skills or what is named by researchers "brainpower" (Brainpower is often associated with intelligence, expertise, and proficiency in specific domains, and it plays a crucial role in academic, professional, and personal success).

The mastery of soft skills combined with an ability to innovate will also add sufficient value to engineering graduates, especially that employers are highly recommending for a strong and successful technical capabilities. In addition to this, communication skills and persuasion together with the ability to lead and work effectively as a team member are all among the criteria that affect engineering decisions. It should be stated that the rapidly changing technology, particularly information technologies, corporate downsizing, outsourcing, and globalization provided the impetus for the soft skills to be even more critical today (Shuman, 2005). In the contemporary era of globalization, it is no longer enough for Moroccan engineering graduates to be academically strong. They must also be able to work comfortably with people from other cultures, solve problems creatively, write and speak fluently and think and evaluate information critically (Gewertz, 2007).

On the other hand, Moroccan professors in engineering schools, today, seem to be confronted with the issue of how best to ensure that engineering graduates will continue to be relevant and bring value to the job market. In other words, it is the responsibility of the engineering schools to guarantee that graduates have relevant skills to gain employment. This can be achieved by combining hard skills and soft skills in the syllabus to produce confident students with a sense of balance and proportion. Of course, this task is not very easy, because allowing students to solve real problems, collaborate with others, and create presentations to demonstrate their learning, while at the same time covering the content materials is really very challenging.

Regrettably, Moroccan young students were led to take essentially theoretical courses, which is certainly beneficial for them to improve their technical skills. However, having just hard skills might not be sufficient to apply for jobs; students need to learn the art of communication and teamwork, as well as many other qualities required for the betterment of their professional and personal profiles.

Dr. Abdesselam Ferrati, one of the Moroccan university professors point out that "Graduates who lack soft skills feel more uncomfortable and usually give a discouraging impression about them. A lack of soft skills limits their potential and may even jeopardize their recruitment opportunities." In Morocco, many unemployed graduates have remarkable degrees and diplomas, but unfortunately still fight hard to get a job. This is due to the fact that most Moroccan schools and universities focus on teaching hard skills, testing the students on their technical competencies without giving much importance to the development of their soft and interpersonal skills.

Fortunately, with soft skills' rising importance, Morocco' institutions have started new student-centered approaches rather than just focusing on the curriculum. Professors at engineering schools give much more time and energy to soft skills training, introducing outstanding changes to the teaching methodologies. Soft skills have become a part of the curricula, taking into consideration the new needs of the job markets and the challenges at work environments. More importantly, interactive teaching methods based on group work, internship or problem solving projects are highly performed in order to encourage future engineers to play an active role in teaching process. These learning methods have developed critical thinking, analytical skills, social intelligence and communicative skills of students. The following are some learning methods that have already been incorporated in the pedagogical curriculum in order to encourage future engineers become active members:

- Student-Centered Learning: Shift the focus from passive learning to student-centered approaches that emphasize active engagement, collaboration, and problem-solving. Encourage students to take ownership of their learning and participate actively in discussions, group activities, and hands-on projects.
- Peer Teaching and Mentoring: Provide opportunities for students to teach and mentor their peers, such as leading study groups, facilitating discussions, or tutoring younger students. Peer teaching not only reinforces students' understanding of concepts but also fosters leadership skills and teamwork.
- Project-Based Learning: Incorporate project-based learning (PBL) into the curriculum, where students work on real-world engineering projects that require them to apply their knowledge and skills to solve practical problems. PBL promotes active learning, critical thinking, and collaboration while preparing students for the challenges of professional practice.
- Flipped Classroom: Implement a flipped classroom model, where students learn foundational concepts through pre-recorded lectures or readings outside of class and engage in active learning activities, discussions, and problem-solving exercises during class time. This approach allows for more interactive and personalized learning experiences.
- Technology Integration: Use technology tools and platforms to facilitate active learning and collaboration, such as online discussion forums, virtual labs, interactive simulations, and collaborative project management software. Technology can enhance engagement, accessibility, and flexibility in the teaching and learning process.
- Role of Faculty: Engage faculty members as facilitators, mentors, and coaches rather than just lecturers. Encourage faculty to adopt student-centered teaching approaches, provide opportunities for student input and feedback, and create a supportive learning environment where students feel empowered to take risks and explore new ideas.
- Recognition and Celebration: Recognize and celebrate students' contributions to the teaching and learning process through awards, certificates, and public recognition. Acknowledge the value of active participation and encourage a culture of continuous improvement and excellence in teaching and learning.
- MOOCs: it is the abbreviation of Massive open online courses. This technique is also used to support the development of soft skills. MOOCs are mainly based on the release of video content and on the performance of

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continuous assessment activities (Mullen, 2017). The courses consist of traditional class materials made accessible online, which may include the following filmed or recorded video lectures, readings, problem sets, online quizzes and examinations, interactive learning modules, and interaction with other students via forums.

By implementing these strategies, educators can empower future engineers to play an active role in the teaching and learning process, fostering a culture of engagement, collaboration, and lifelong learning that prepares students for success in their academic studies and professional careers.

However, it remains undeniable that despite all the efforts produced by professors, Moroccan universities still need to reconsider ways of teaching with regard to the work environment. The education sector must take into account the context of globalization where soft skills, openness and tolerance play a determining competitive advantage for students. This will, certainly, enable them to participate effectively in economic, social and environmental growth?

3. Conclusion

The integration of soft skills within the educational framework of engineering schools stands as an essential endeavor with far-reaching implications for the holistic development and professional preparedness of future engineers. Through a comprehensive exploration of soft skills ranging from effective communication and teamwork to problem-solving and adaptability, Moroccan engineering institutions will have the opportunity to nurture well-rounded individuals, who are capable of navigating the complexities of the modern world.

More significantly, adopting student-centered pedagogical approaches that prioritize active learning, collaboration, and experiential opportunities, engineering schools will effectively instill soft skills within their curriculum. These approaches not only enhance students' academic engagement and retention, but also equipe them with the interpersonal competencies and resilience needed to thrive in diverse professional settings.

Engineering schools must recognize the evolving demands of the global workforce and the increasing emphasis placed on soft skills by employers across various industries. By integrating soft skills education into the teaching and learning process, engineering institutions can bridge the gap between academic theory and real-world application thereby enhancing graduates' employability and competitiveness in the job market.

The cultivation of soft skills within engineering education fosters a culture of lifelong learning and continuous professional development. By encouraging students to take an active role in their own learning journey, engineering schools can empower them to adapt to new challenges, embrace innovation and pursue personal and professional growth throughout their careers. In essence, the integration of soft skills through education in engineering schools serves as a stimulus for transformative change, driving the next generation of engineers towards success. Through a collective resolve to holistic education and the cultivation of soft skills, Moroccan engineering institutions can fulfill their mission of shaping ethical, innovative, and socially responsible leaders, who are ready to make meaningful contributions to society.

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