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**RESEARCH ARTICLE**

## The Development of Soft Skills via In-person Training in Secondary Education: A Case Study in Oujda-Angad Directorate, Morocco

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**ABSTRACT**

The digital revolution has brought about colossal changes in many social aspects. Thanks to the emergence of new digital technologies, many jobs have been executed by machines. Thus, employers are seeking different skills; they are known as soft skills. These skills are currently required for integrating the workforce. This article provides conceptual and empirical information related to employability skills development. It aims to explore the effect of soft skills training on the development of this skill among secondary school students. It is preliminary research to check students' knowledge of three skills: Critical thinking, Collaboration and Communication. The theoretical frameworks mobilized for this study are the project-based learning theory and the experiential learning theory (Kolb, 2005). A mixed approach is adopted to examine the development of these skills via a one-month in-person training for students of Oued Eddahab high school. Quantitative data were collected via two web-based questionnaires: a pre-training and a post-training to compare students' perceptions regarding the soft skills training. Qualitative data were collected by recording two focus groups. The quantitative results have revealed that there are many effective strategies to apply in order to enhance soft skills in high school. The qualitative results revealed that there is a positive relationship between the training workshops and the improvement of those skills. The majority of the students have expressed their satisfaction with the different workshops and stressed the importance of these skills for their academic and professional careers and for the improvement of their communicative capacities.

**KEYWORDS**

Soft skills, Critical thinking, Problem solving, Collaboration, Communication, Employability.

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### 1. Introduction

The ability to think critically, to work collaboratively and to communicate effectively has become the trend in the era we are living in. The 21<sup>st</sup> century job market seeks employees with distinct profiles. Profiles that are characterized by the mastery of both technical and non-technical skills. Employers are seeking young graduates who are ready for the workforce in terms of their psychosocial abilities, communication and interpersonal skills. Such abilities are vital in order to develop learners with critical minds and to enhance their collaborative and communicative capacities. Those skills, among others, are referred to nowadays as soft skills.

### **1.1 Background of the Study**

The integration of critical thinking, collaboration and communication in education becomes of paramount importance at national and international levels. In Morocco, the case of our study, the importance of soft skills integration is very remarkable in today's economy. Given the importance of education in the development of nations, the Moroccan education system has been reinforcing the quality of both teaching methods and learners' academic performances. The enhancement of the Moroccan nation depends on the improvement of its educational system in terms of 'performance and teaching quality' (Moustadraf, 2021). Therefore, the integration of soft skills in Moroccan education has become a necessity. Due to the important role soft skills play progressively in employment, this article revolves around a case study about training on soft skills for the benefit of high school students in Oujda.

In recent years, the Moroccan Ministry of Education has highlighted the important role those skills are playing in today's economy, and it has already started reforms in this regard, mainly in higher education. The strategic vision for 2015-2030 has shed light on the importance of acquiring new skills and capacities. The Moroccan school has already started the journey of change, a change that puts the learner at the center of the learning process by developing skills related to the learner's expertise and personality. It is all about acquiring personal, technical, professional, athletic and artistic skills (The National Charter for Education and Training, 1999) at all levels, starting from primary school until university. The Ministry of Education derives the importance of integrating soft skills from the goals of sustainable development, the 21st century skills and the UNICEF initiative regarding teaching soft skills in the Middle East and North Africa. The overall aim behind such reforms is to prepare learners from an early age to face all life issues and to cope with all the current changes in science and technology. It also aims at responding to the job market needs and meeting the requirements of the 21st century era by developing not only hard skills but also, most importantly, soft skills.

### **1.2 Problem statement**

Recently, there has been more stress on integrating soft skills in education and implementing them in the curriculum by having teachers refer to them in their courses, given their importance for Moroccan students. Previous studies, namely, related to the targeted population, have revealed that students of Oued Eddahab high school expressed their need for critical thinking, collaboration and communication to ensure pedagogical continuity during the Covid-19 pandemic (Zouali, 2020). Furthermore, meeting the opportunities of the 21st century job market necessitates much focus on teaching soft skills to high school students nowadays. The extent to which integrating those skills through extra-curricular activities and their impact on their academic performance remains a controversial issue within the educational field, a problem that we tend to find answers to in the current study.

### **1.3 The Purpose, Significance, and Scope of the Study**

The current study aims to investigate the importance of developing learners' critical thinking skills and their significance in the improvement of their academic performance. Besides, the research aims to determine the role of collaboration in the creation of a socio-cultural link among learners and the achievement of common goals. In addition to that, we aim also to examine the importance of acquiring communicative skills in enhancing learners' interpersonal relationships in school. The current research is a study conducted at a local level. Our potential is to explore and inform the field about its significance, as there is still an urge to better understand and support soft skills in the Moroccan educational system. Therefore, the present study tends to explore the impact of teaching soft skills to Oued Eddahab high school students. The method is to provide a group of high school students with a one-month training through weekly workshops. Each workshop revolves around one of the selected skills in this research: critical thinking, collaboration and communication. The theoretical frameworks mobilized for this study are the project based learning theory and the experiential learning theory (A. Y. Kolb & Kolb, 2005). The aim of this case study is to draw high school students' attention to soft skills that are highly demanded by employers and to determine their perceptions regarding learning such skills and the impact they might have on their academic performance.

### **1.4 The Research Questions and Hypotheses**

The present article tends to find answers to the following research questions:

- To what extent can participating in soft skills training affect students' knowledge about soft skills and their ability to use them in the classroom?
- How can soft skills like critical thinking, collaboration and communication be improved in high school classes?  
We assume that:

Training students on soft skills has a positive impact on their knowledge and ability to use them appropriately in their classes.

Problem solving activities are the most effective strategies for developing learners' soft skills in high school.

This article intends to find answers to the aforementioned questions by conducting exploratory research, which will direct us towards tackling the following sections: the first part revolves around a general theoretical framework, which focuses on the

definition of soft skills and the theoretical framework under which lies our study. The second part addresses the methodology followed. We highlight the fact that we opted for a mixed approach to research, and the third part is devoted to analyse and discuss the findings of our study.

## **2. Literature review and Theoretical Framework**

### **2.1 Defining Soft Skills**

The broadest definition of soft skills can be all the attributes related to people skills (Robles, 2012). They are non-technical skills related to personality and character traits that improve the employees' performance. They are defined by Robles as "Character traits, attitudes, and behaviours rather than technical aptitude or knowledge. Soft skills are the intangible, nontechnical, personality-specific skills that determine one's strengths as a leader, facilitator, mediator, and negotiator" (Robles, 2012). Furthermore, the Collins English Dictionary defines the term soft skills as "desirable qualities for certain forms of employment that do not depend on acquired knowledge: they include common sense, the ability to deal with people, and a positive, flexible attitude". ('Collins English Dictionary', n.d.)

Defining soft skills is not as easy as it seems to be. Definitions vary in the literature along with the name itself. They are referred to as life skills (WHO, 1994) first, century skills (Moore & Morton, 2017), employability skills (The Conference Board of Canada, 2022), transversal skills, soft skills (Davis and Woodward, as cited in Moustadraf 2020) Generic competences (IOECD 2011), lifelong learning competencies (European Commission, 2019). Despite the fact of having multiple denominations, their importance is a shared point among authors and researchers who claim the necessity of acquiring such skills. The employers are rather seeking profiles with soft skills over technical skills. On the other hand, hard skills or technical skills have to do with expertise and technical competencies in the field of work as they differ from one type of work to another. Nevertheless, we cannot deny the importance of both soft and hard skills in the work field as they complement and support each other (Roger, as cited in Moustadraf, 2021). In brief, hard skills are job-specific (Hind Moustadraf, 2021); they are linked to the use of equipment and tools, while soft skills are non-technical (Nasir, Ali, Noordin, & Nordin, 2011). Such soft skills constitute shared features among all jobs (Straub, 1990). Many soft skills are required for the 21st century job market. For instance, critical thinking, communication, collaboration, leadership... Such skills, among many others, are supporting education and becoming a key to lifelong learning and success in professional careers.

Many researchers have suggested lists of soft skills needed for integrating the workforce successfully. The model created by Mayer 1992, puts forward different elements constituting the generic skills among which we can cite: collect, analyse and organize information; communicate ideas and information; plan and organize information; and work with others and in teams (Clayton et al. 2003). As for Lankard, he identified skills such as personality, interpersonal skills, attitudes and good behaviour (Lankard, 1990). Other researchers included skills such as communication, problem solving, team working, an ability to improve personal learning and performance (Grugulis & Vincent, 2009). Diane H. Parente, John D. Stephan Randy C. Brown (2012) have proposed "clear communication and meaningful feedback, resolving and/or managing conflicts, and understanding human behaviour in group settings." (Parente, Stephan, & Brown, 2012). Binkley, on his side, classified the soft skills into a model named 'KSAVE', which stands for Knowledge, Skills, Attitudes, Values and Ethics. For him, those skills are highly needed in 21st century life. He categorized soft skills into four categories: way of thinking, ways of working, information literacy and living in the world (Binkley et al., 2012). In fact, the current study tackles three skills: critical thinking (way of thinking), collaboration, and communication (way of working). Those lists, among others, are non-exhaustive as understood from the literature. However, the common point among all of these suggestions and others is the fact that the mastery of both soft skills and hard skills has become a necessity for integrating the job market and for enhancing employees' productivity.

### **2.2 Theoretical background**

The theoretical frameworks mobilized for this study are the project-based learning theory and the experiential learning theory (Kolb, 2001) in order to understand well the incorporation and improvement of soft skills in education. Project based learning (PBL) is one of the approaches used to teach soft skills as well as hard skills. Students participate in authentic situations that help them construct a meaningful learning outcome and enhance soft skills such as critical thinking, collaboration and communication (Musa, Mufti, Latiff, & Amin, 2012). Through projects, learners are able to identify necessary skills mobilized and acquired while working on projects. In the current study, learners were asked to work on a final project and to mobilize the taught soft skills to see to what extent PBL can facilitate the acquisition of the three mentioned skills. Kloppenborg and Baucus state that PBL help students learn skills that are highly demanded by today's employers, such as the ability to work well with others and handle interpersonal conflicts, make thoughtful decisions, practice and solve complex problems (Kloppenborg & Baucus, 2004). By engaging learners in projects, they become more exposed to meaningful learning. Thus, they are aware of real life problems and issues that they try to solve and overcome while completing their projects. Therefore, what soft skills needed to solve those life problems is what matters the most. As cited in Grant (2002), according to Piaget, Perkins and Vygotsky, PBL derives its principles from the constructivist theory that sees learning as a construction of knowledge through interaction with the environment. Therefore, learners construct new

knowledge by building on their current knowledge (Grant, 2002). Hence, through the construction of collaborative projects, learners are able to represent what they have learned and what soft skills they need while completing their projects. (Harel & Papert, 1991; Kafai & Resnick, 2012). Consequently, learning becomes more student centered, and learners become more autonomous, interested, responsible and motivated (Gopinath, 2015).

Another approach by which soft skills can be taught or enhanced is the experiential learning theory (ELT). Naufalin, Dinanti and Krisnaresanti used the ELT model to develop soft skills for economic students (Naufalin, Dinanti, & Krisnaresanti, 2016). The result of the study was positive since the economic learners could increase abilities such as leadership, courage, risk taking and confidence. The experiential model includes new experiences, reflection, learning from new experiences, and generating new knowledge (D. Kolb, Boyatzis, & Mainemelis, 2001). By following this process, learners reach a state where they feel that their goals are accomplished and that their soft skills are well mastered. In other words, learners reach a stage of self-efficacy (Bandura, 1977). In our research, learners have had the opportunity to practise the soft skills during the one-month training with all the scaffolding needed on the part of the teacher trainer. Hence, learning about these skills happens through experience; that is the core issue in ELT. According to Kolb, experiential learning is a learning process in which knowledge is created through the experience transformation. The importance of this model lies in the fact that learners change their cognitive structure and attitudes through experience and reflective observation and then expand their pre-existing skills or knowledge (abstract conceptualization) to be able to try out the new experience in other contexts (Active experimentation) (D. Kolb et al., 2001). Thus, in the experiential learning model, new experiences are used to understand knowledge and then to transfer it along with skills and attitudes (Naufalin et al., 2016).

### **3. Method**

#### **3.1 Sample / Participants**

The purpose of this study is to identify the impact of training students on the core soft skills on students' development. The skills that are tackled in this study are the ones that students thought were important to successfully maintain educational continuity during the COVID-19 pandemic (Zouali, 2020). We hypothesize that training students on the most in-demand soft skills help them improve these personal traits, mainly critical thinking, collaboration, and communication. To test our hypothesis, we organized training on soft skills for the benefit of Oued Eddahab high school students in Oujda-Angad Directorate, the Oriental Academy of Education and Training, Morocco. The target population is made up of 979 students belonging to different streams. 33 participants took part in the study: 17 females and 16 males. For the sampling, we opted for a stratified sampling because participants share one or more characteristics; they are all students of the same school. Besides, they have different educational levels: The first and second years of the Bacalalaureate cycle. Furthermore, the participants belong to different streams of general education, scientific and literary streams, which means that they are grouped in different strata or subdivisions. This probability sampling technique helps the researchers get big improvements in the accuracy of the parameters and allows them to quickly get a sample that best represents the whole population being studied (Glasgow, 2005).

#### **3.2 Instruments**

The questionnaire consisted of three parts. The first section was devoted to socio-demographic information: gender, stream and educational level. The second section was devoted to students' general background knowledge regarding soft skills in education. The third section was devoted to the perceptions of the importance of the different selected soft skills in which six questions about critical thinking, collaboration and communication were organized on a Likert scale of five levels: strongly agree, agree, neutral, disagree, strongly disagree in addition to three questions related to the frequency of use of these skills. In order to compare students' perceptions towards soft skills before and after the training, this questionnaire was administered twice via Google form.

#### **3.3 Data collection and analysis**

In order to collect data for our research, students were exposed to situations to foster the development of the mentioned core skills throughout the training, which lasted for one month, starting from 9th March 2022 (See Table 1). Students had a three-hour session each week. They were provided with handbooks that were prepared for the training. Before taking part in the training, students participated in a pre-training web-based questionnaire to check their perceptions towards these skills. The same students were asked to take part in a post-training questionnaire for the purpose of comparing the results. Quantitative data analysis was conducted automatically via Google Forms. Whereas qualitative data analysis was done via QDA Miner Software. Qualitative results were generated by applying the content analysis method to determine the frequency of the different occurrences. The results of this study provide teachers and educators with an idea about the effectiveness of training on soft skills in the development of core skills among learners.

weeks	Focus	steps
Week 1	Critical thinking	<ul style="list-style-type: none"> <li>- Pre-test</li> <li>- Introduction to the training+ handbooks distribution</li> <li>- Critical thinking activities</li> </ul>
Week 2	Collaboration	<ul style="list-style-type: none"> <li>- Warm up activities</li> <li>- Collaborative activities</li> </ul>
Week 3	Communication	<ul style="list-style-type: none"> <li>- Communicative activities</li> <li>- Discussion about the final project</li> </ul>
Week 4	Final project	<ul style="list-style-type: none"> <li>- Students' presentations</li> <li>- Distribution of certificates and best project idea award</li> </ul>

Table 1. The training schedule and content

**4. Results**

To investigate the importance of developing learners' critical thinking skills and their significance in the improvement of their academic performance, the following research question is formulated:

Q1: To what extent can participating in soft skills training affect students' knowledge about soft skills and their ability to use such skills in the classroom?

H1: Training students on soft skills has a positive impact on their knowledge and ability to use them appropriately in their classes.

To determine the role of collaboration in the creation of a socio-cultural link among learners and to examine the importance of acquiring communicative skills in enhancing learners' interpersonal relationships at school, we have formulated the following questions:

Q2: How can soft skills like 'critical thinking, collaboration and communication' be improved in high school classes?

H2: Problem-solving activities are the most effective strategies to develop learners' soft skills in high school.

The following chart summarizes the overall quantitative results of the study:

Questions and hypotheses	Quantitative results
<p>Q1: To what extent can participating in soft skills training affect students' knowledge about soft skills and their ability to use them in the classroom?</p> <p>H1: Training students on soft skills has a positive impact on their knowledge and ability to use them appropriately in their classes.</p>	<ul style="list-style-type: none"> <li>- The majority of learners recognize the three soft skills: Communication, collaboration and critical thinking before and after the training.</li> <li>- The percentage of learners who desire to improve the three skills decreased in the post training answers.</li> <li>- Some learners have modified their opinions regarding the positive impact of soft skills.</li> <li>- No significant distinction is found between learners' pre and post answers about their level of critical thinking.</li> </ul>
<p>Q2: How can soft skills like 'critical thinking, collaboration and communication' be improved in high school classes?</p> <p>H2: Problem solving activities are the most effective strategies to develop learners' soft skills in high school</p>	<ul style="list-style-type: none"> <li>- Learners are aware of the shared responsibility among learners, teachers, and schools in improving the three skills.</li> <li>- According to the respondents, the most effective ways to promote soft skills is group work and problem solving activities.</li> <li>- The most effective measures for improving soft skills are outside school activities, workshops, integrating the skills in the curriculum, roundtables...</li> </ul>

	<ul style="list-style-type: none"> <li>- The participants who were neutral before about The utility of the provided school curriculum have modified their position after the training.</li> <li>- In both pre-training and post-training answers, participants classify listening and accepting different opinions, defining the problem and making decisions at the top of the list of ways to improve critical thinking.</li> <li>- In both the pre-training and post-training survey answers, respondents prioritize honest and open communication, good work environment and encouragement of team members over other strategies, such as discussing predictions clearly and providing autonomy for team members.</li> </ul>
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Table 2. Quantitative results summary

As for the qualitative part of the study, 12 learners took part in focus groups, six students in each group. Questions were related to the importance of the three skills for learners, their benefits and the strategies that can help them improve those skills in and outside school. Students expressed different opinions regarding the strategies adopted to improve their critical thinking skills. According to the participants in the focus groups, the most efficient strategies to develop critical thinking is accepting others' opinions and considering different perspectives with a rate of 54,5%, followed by problem-solving with 27,3%. Participants suggested other strategies to develop critical thinking, such as teamwork, dealing with people in a strategic way and analyzing the strengths and weaknesses of situations (see Figure 1).

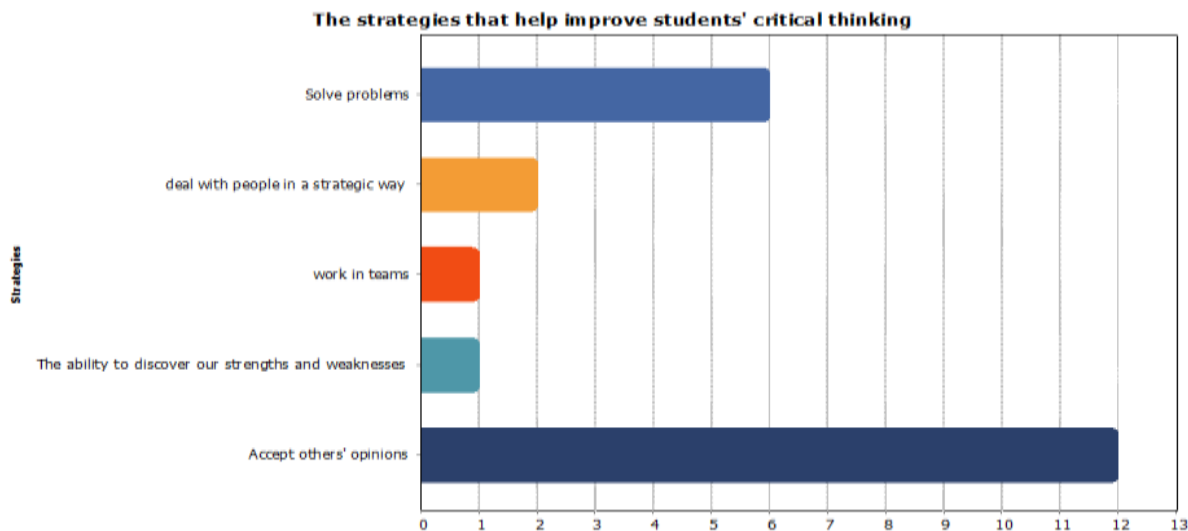


Figure 1. Critical thinking strategies

Concerning learners' perceptions regarding the importance of collaboration in schooling, participants shared different thoughts on the benefits of collaboration in the learning context. The frequently shared occurrences were related to critical thinking, as students believe that collaboration helps them understand others by evaluating their opinions and knowing their views and mindsets through discussion. Some participants think that collaboration is important in the way that it helps them be social and able to integrate different working groups, which enables them to get out of their comfort zone. In addition, collaborative learning enhances their ability to learn by creating relationships. Thus, they become extroverts and willing to improve their solidarity towards each other (see Figure 2)

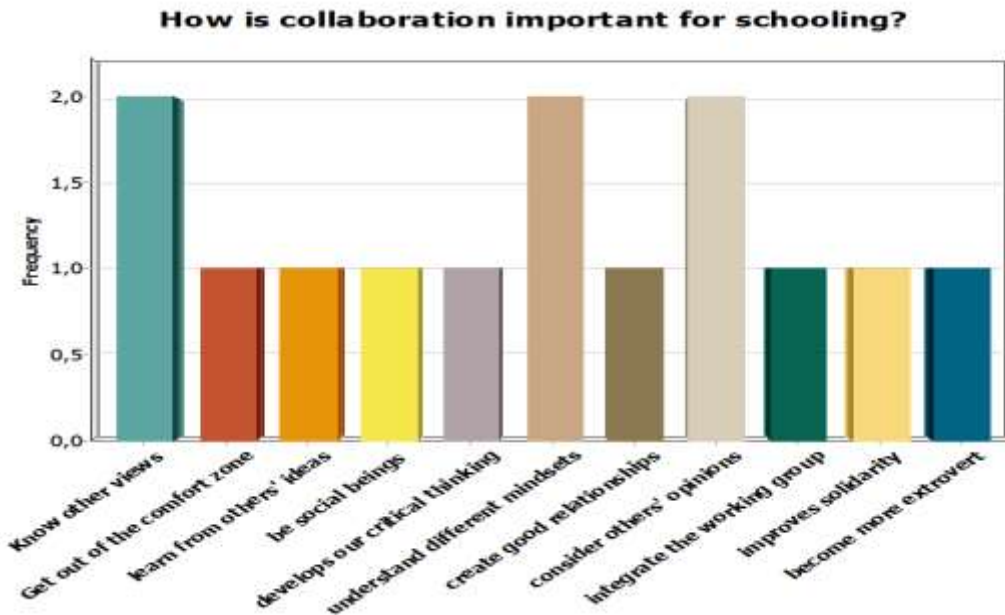


Figure 2. The importance of collaboration for schooling

As for the importance of communication according to students' perceptions, most of the participants felt that communication helps them solve problems related to lack of understanding. In addition, acquiring good communicative skills is essential in conveying messages clearly. A couple of participants commented that communication helps them avoid being introvert and overcome their shyness. Other participants mentioned other benefits of communication, such as avoiding misunderstanding by receiving others' ideas clearly in addition to building knowledge of different personalities and ways of thinking. Some participants thought that having good communication skills is beneficial for communicating in an efficient and strategic way. The participants agreed that effective communication that promotes active listening and constructive feedback is beneficial for resolving issues, which helps them create a positive learning environment. Hence, effective communication is crucial to having positive attitudes and doing better at school, in addition to communicating effectively in different cultural contexts (see Figure 3).

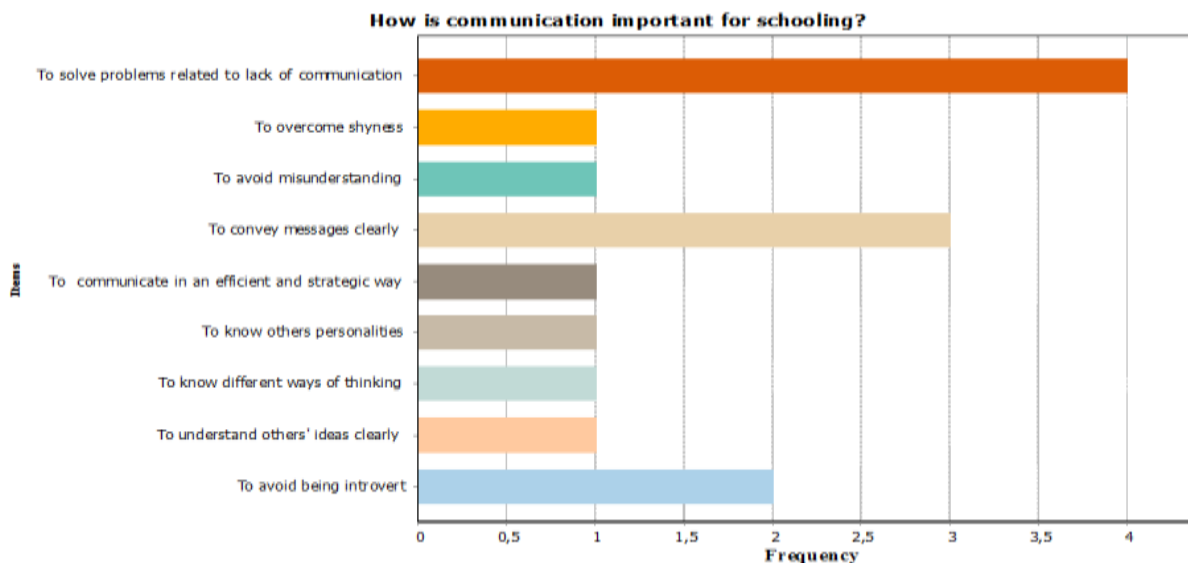


Figure 3. The importance of communication for schooling

Students were also asked about their perceptions regarding the most important soft skills to integrate into the workforce. Their answers revealed that the most needed soft skill for integrating the job market is collaboration, with a rate of 29,7%, followed by communication with 25,7%. Critical thinking was ranked third among the above-mentioned skills, with a rate of 18,9%. Participants felt that self-confidence is quite important as well for the workforce (See Figure 4).

What are the skills that you think you will need the most for integrating the workforce?

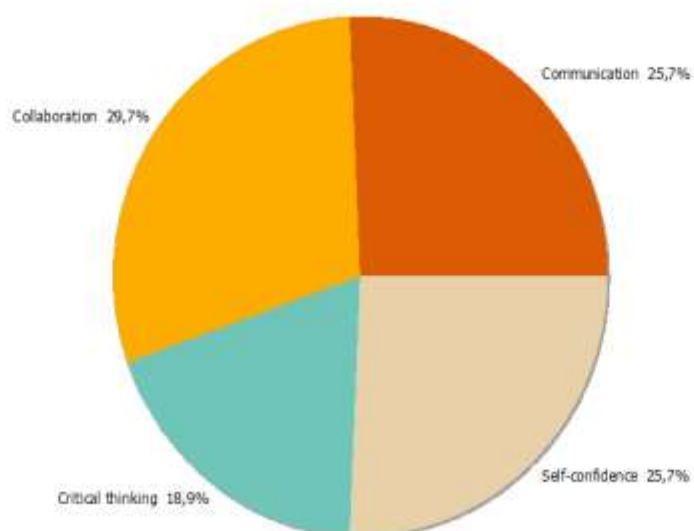


Figure 4. The most needed employability skills

## 5. Discussion

The data collected from the soft skills pre and post questionnaires provide useful insights into the effect of the training on students' knowledge about soft skills and their ability to use them in the classroom, as well as the effective strategies to develop learners' soft skills in high schools. The results obtained are partially in line with the formulated hypotheses that soft skills training positively impacts students' knowledge and that problem solving activities are the most effective strategies for developing learners' soft skills in high schools.

Concerning the first hypothesis, quantitative results have revealed that the training has influenced certain aspects of soft skills either for their attitudes towards soft skills or for ways and measures that are perceived necessary to improve the three skills: Communication, collaboration and critical thinking. However, the training shows also that no clear impact is noticed for other aspects of the three skills. The majority of learners recognize the three soft skills: critical thinking, collaboration and communication even before the training. Learners may have resorted to other sources of information (consciousness raising integrated into school subjects, media...) other than the training to answer the questions since they have already been aware of the importance of the three skills even before starting the training. Moreover, confusion between some soft and hard skills remains the same even after the workshops, which indicates no clear impact of the training at this level.

Furthermore, the study shows differences in participants' answers in terms of some other aspects. The percentage of those who desire to improve the three skills (Communication, collaboration and critical thinking) decreased in the post-training questionnaire. This may be because participants developed knowledge about the skills, and their desire to improve them is fulfilled thanks to the workshops. Hence, they do not occupy the same space of importance anymore. Besides, the changes in percentages show that some learners modified their stands relatively regarding the positive impact of soft skills at the level of boosting their capacity to adapt to difficulties, increasing their capacity to influence others, and boosting their self-esteem. This indicates that for some, the utility of soft skills is more apparent after the training, even if the difference between percentages is not huge.

Concerning critical thinking, no significant distinction is made concerning the answers related to the participants' judgment about their own skills. It is noticeable that although the percentage of participants giving positive answers about themselves (they can think critically and reasonably when they face an issue, they can find out the problem, explain it, and solve it, and they have the capacity to deduce and evaluate their deduction) in the post-training survey is different from the pre-training questionnaire answers. Still, the rate of those giving positive responses is high in both pre-training and post-training questionnaires. This does not indicate a great change in their description of themselves. The difference in the height of percentages between the pre-training and post-training survey answers may be because of their better understanding of the issues thanks to the training, their fear of being judged or their desire to show appreciation for the training, which is an uncontrolled variable even if the questionnaire is anonymous.



Regarding collaboration, most of the learners think of collaboration as an already acquired skill even if they did not have training about it. Still, they have changed their stands towards their collaborative capacities after the training. This may be read as an outcome of working together in groups during the training, which may have refreshed their minds about their capacity to alter their ideas and their ability to work together on a project. This signifies also that learners have potential that should be worked on.

As for communication, respondents prioritize some strategies and ways to improve communication over others. In both the pre-training and post-training survey answers, respondents prioritize honest and open communication, a good work environment and encouragement of team members over other strategies, such as discussing predictions clearly and providing autonomy for team members. Generally, percentages of participants attributing positive characteristics (making sure that the message is heard and understood, listening when discussing an issue, discussing the issue when arguing with friends and being able to express needs) to themselves is high most of the time in both pre-training and post-training answers. This shows no clear effect of training at this level.

Concerning the second hypothesis, it is related to effective strategies. According to the majority of participants, the most effective ways to improve communication in the given list are asking questions, using different listening techniques and using eye contact while communicating. Other ways, like good control of emotions and improving non-verbal communication skills, are also good, but they are not as effective as the previously mentioned ones.

According to the respondents, the most effective ways to promote soft skills are group work and problem-solving activities. The same order of priority in terms of effectiveness is kept in both the pre-training and the post-training questionnaire answers; however, the percentages have increased relatively. It is clear that the training affects the answers of the participants concerning the effectiveness of those strategies. Possibly, the training helps them to take a position and clear their foggy attitude by agreeing or disagreeing with the advanced idea. This could be due to the fact that they understand the topic better after the training, and they have a clear image of what soft skills are.

The qualitative results of the study through the focus group show that learners give great importance to collaboration in schooling. The importance of collaboration lies in the fact that it helps them share thoughts and opinions. Johnson and Johnson (1986) stated that collaborative groups achieve higher levels of thought and recall information for a longer time compared to the students who work alone (Johnson & Johnson, 1986). Furthermore, regarding learners' knowledge about the importance of soft skills to integrate the workforce, the qualitative results match with the quantitative ones. Critical thinking, collaboration and communication are considered the most needed ones in the job market. The order of importance of soft skills, as expressed by the participants, matches the results of several studies (Majid, Liming, Tong, & Raihana, 2012). Furthermore, the completion of the projects by the end of the training has demonstrated students' level of self-efficacy, as learners have been exposed to a new experience (training), which has led them to reflect on their pre-existing knowledge. Learning soft skills from this new experience has allowed them to generate new knowledge that they have put into practice while completing their projects.

Both qualitative and quantitative data have revealed that the students who participated in the training expressed their satisfaction regarding the training experience. Concerning our first hypothesis and according to students' perceptions, taking part in training on soft skills has helped them discover and improve some of their personal traits, mainly critical thinking, collaboration and communication. Working in teams for a shared goal, exploiting critical thinking skills, and collaborating to solve problems made students develop a certain autonomy that favored the development of these core skills and expanded their learning experience throughout the training period. Given the fact that these skills require a long-term process to be developed, a one-month training seemed insufficient for having a clear vision towards the impact of training on the development of these skills and on students' academic performance. Empirical evidence supports the effectiveness of training students on soft skills to help them improve these skills and be able to monitor their own ways of learning as there is a high degree of correlation between the learning skills, including critical thinking, collaboration and communication, and students' achievement. As for our second hypothesis, which assumes problem-solving is the most effective strategy for developing critical thinking, This skill is an analytical and conscious thinking process which is executed to solve problems in a rational way (Butterworth & Thwaites, 2013). Consequently, exposure to problems and solving them are beneficial for the development of learners' critical thinking. Unlike quantitative data, the qualitative results of this study have shown that considering different perspectives and accepting opinions are more efficient in the development of this cognitive skill. The data generated from the empirical study do not contradict the literature since solving problems remains unachievable without accepting others' views, analyzing arguments and judging the relevance and significance of opinions in order to take well-reasoned decisions (Black, 2012).

## 6. Implications, recommendations and conclusions

The main purpose of this study was to investigate the extent to which training students on soft skills influences the development of these skills and how it affects their academic achievement. Perceptions of participants were investigated and analysed in order to have an in-depth view of their attitudes towards this learning experience. In this regard, a mixed-method approach was adopted. This paper reviewed some concepts and theories related to the field of education, in addition to some models that emphasize the different soft skills and their importance for learning, employability and self-empowerment. The findings have partially approved the hypotheses that training on soft skills has a positive impact on students' knowledge and their ability to use these skills in the classroom, in addition to the idea that the most effective strategy to improve soft skills is solving-problems.

The information gained in this study may prove useful for Moroccan teachers who would like to equip their students with core twenty-first century skills and prepare them for the job market. The findings indicate that training students on critical thinking, collaboration and communication via workshops had a positive impact on their learning experience. Despite the minor significance of results generated from quantitative data regarding students' perceptions of the impact of soft skills on their academic achievements, the findings of the qualitative analysis have clearly stated the importance of such activities on students' personal development.

The core skills studied in this research have a significant role in developing an effective learning experience. They need to be enhanced among high school learners. Teachers should include lessons with a specific focus on critical thinking, collaboration and communication, as they are the key to helping students develop their analytical abilities, work effectively in teams and acquire effective communication skills. In addition, there should be room for training students on soft skills along with hard skills in secondary education. Scheduling in-person training for the benefit of all high school students would help them easily integrate into the workforce after graduation. The results show that there is a need to strengthen the use of critical thinking, collaboration and communication strategies for better development of these skills. For this reason, an overall change of the curricula is encouraged in an attempt to update the course design of the different school subjects and include activities that target these skills. Moreover, providing teachers with a specific guide for teaching and assessing the core soft skills would be an added-value to better the quality of the teaching-learning process. Overall, a holistic and transformative vision that defines goals, strategies, and decisions about soft skills should be implemented on local, regional and national levels to maximize the potential of learners in our country.

## 7. Limitations

Despite the substantive findings mentioned here, there were some constraints that may have influenced the results of this study. The first limitation is related to the response rate. Only 33 students took part in this study. The small size of the sample does not allow the generalization of the results. Moreover, comparing the participants' perceptions before and after the training is not very effective in determining the impact of teaching soft skills on students' academic achievement. The second constraint is related to the duration of the study. A one-month training on soft skills is not enough to have a clear understanding regarding the development of these personal traits among learners. The third constraint has to do with participants' attendance during the training. It was noticed that during the two first sessions, new participants joined the training, which probably influenced the results obtained via the online survey. Sticking firmly to the first list of attendees and not allowing other students to join the training would be a solution for getting consistent results. Accordingly, carrying on further comparative studies on the impact of training on soft skills on students' performance involving a control group and a bigger sample would help gain better insight into the topic under study.

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