



PROJECT-BASED LEARNING TO DEVELOP TEAMWORK AND CRITICAL THINKING SKILLS IN THE EFL CLASSROOM

Hicham Rahate Ellahⁱ

Cadi Ayyad University,
Faculty of Letters and Human Sciences,
Marrakech, Morocco

Abstract:

Soft skills development is essential for 21st-century learners. These skills can be enhanced and nurtured in the EFL classroom. In this regard, this study examines the potential of Project-Based Learning (PBL) as an educational approach to foster critical thinking and teamwork skills among secondary education students. This approach, which emphasizes student-centered, real-life learning through projects, can significantly develop important soft skills, such as teamwork, problem-solving, communication, and critical thinking. This study employed a mixed-methods research approach to gather sufficient data. Based on an exhaustive review of the literature and the exploration of the techniques and methods used in high schools, this study aims to examine how EFL teachers can effectively use PBL to cultivate teamwork and critical thinking skills in EFL classrooms. The results obtained from this study indicate that the implementation of PBL in EFL classrooms enhances students' teamwork, critical thinking, and social development. Thus, this instructional approach proves its effectiveness in developing students' essential skills to face future challenges and responsibilities.

Keywords: Project-Based Learning, soft skills development, EFL classroom, critical thinking, teamwork

1. Introduction

Nowadays, soft skills are in high demand in the labor market. Students are expected to develop these skills before transitioning into higher education. Schools should play a vital role in equipping students with these skills. Despite their importance, the educational curriculum in Morocco emphasizes the development of hard skills more than soft ones (Rahateallah and Azmi, 2023). Therefore, fostering students' teamwork and critical thinking skills is necessary in middle and high schools. English language teachers are well-positioned to cultivate these skills through project-based learning (PBL). The traditional learning environment, which relies on drilling and memorization, does not

ⁱ Correspondence: email h.rahateallah.ced@uca.ac.ma

encourage students to develop essential soft skills. They do not provide opportunities for students to engage with real-world situations and practice using these skills in projects. To address this issue, researchers (Jones *et al.*, 2013; Thomas, 2000; Barneveld, 2011) suggested using Project-Based Learning (PBL), an inquiry-based approach that can help teachers enhance students' soft skills. PBL enables students to collaborate on real-life issues and develop teamwork and critical thinking skills. These skills are essential for students' success in both academic and professional settings. In this context, English language learners in middle and high schools in Morocco undertake a group project at the end of each unit. Consequently, this paper aims to examine how English language teachers can utilize PBL to foster these skills in the EFL classroom by exploring teachers' methodologies, gathering data from students' performances, and analyzing the results to provide practical implications for teachers. Additionally, this paper aims to investigate how Project-Based Learning influences students' ability to collaborate effectively and think critically within classroom boundaries and in real-life situations. It also aims to determine the challenges and obstacles that teachers face when implementing PBL in the EFL classroom and to explore the benefits of this approach.

2. Literature Review

Different researchers have defined project-based learning (PBL). According to Jones *et al.* (1997), PBL is a pedagogical approach based on projects. The defined projects are complex tasks in which students engage in solving problems or challenging issues, making decisions, and working collaboratively either inside or outside the classroom over extended periods. Moursund (1999) said that projects provide students with authentic content and assessment in which teachers are facilitators but not directors. He added that projects allow students to incorporate many skills like reflection, teamwork, and conflict resolution. Thus, the Project-Based Learning model encompasses many special characteristics that make it a useful approach for developing students' critical thinking and teamwork skills in the EFL classroom. Thomas (2000) illustrated five key elements that a project should have to be considered as an example of PBL. These criteria are centrality, driving question, constructive investigations, autonomy, and realism.

The PBL projects are the core of the curriculum and not peripheral. This criterion has two essential elements. First, students master and learn the content of any school subject through projects. In other words, projects are the central learning techniques for learning hard and soft skills. Projects are considered an additional activity for students that usually come at the end of a unit in middle and high schools in Morocco. They are used to give illustrations, further examples, or practical applications for the content being taught by other approaches and techniques. Nevertheless, these types of projects are not considered examples of PBL, according to this criterion. Second, the centrality criterion states that projects where students learn outside the curriculum, referred to as "enrichment" projects, do not qualify as PBL, regardless of how appealing or engaging they may be.

Besides the criterion of centrality, PBL projects are based on questions or problems that encourage students to face and try to solve or deal with the main issues covered in a school subject. According to this criterion, teachers must clearly explain to students what a project is to help them make connections between activities and the main goal they aim to achieve (Barron *et al.*, 1998, p. 274). Blumenfeld *et al.* (1991) stated that a "*driving question*" must be posed or an ill-defined problem (Stepien and Gallagher, 1993) must be addressed for students to address. PBL projects can be organized around thematic units or by integrating topics from two or more disciplines. However, a project does not simply need a theme. Teachers must carefully coordinate the questions students explore along with the activities, products, and performances they undertake to serve an important intellectual purpose (Blumenfeld *et al.*, 1991).

Third, projects enable students to engage in constructive investigation. This is a goal-oriented process that involves building knowledge, investigating, and finding solutions. When students engage in investigation, they develop soft skills such as decision-making, problem-finding, problem-solving, critical thinking, discovery, and teamwork. Additionally, the main activities and tasks of the projects should include transforming and constructing new skills in students for the project to exemplify PBL (Bereiter & Scardamalia, 1999). Moreover, the project's activities should present some difficulties and challenges for students.

Another important criterion of PBL projects is that they are student-driven to some extent. In other words, PBL projects should not be considered as teacher-led. Instead, students should initiate, describe, and set goals for their projects, and teachers are there to help and not to lead. PBL projects are not, in the main, teacher-led, scripted, or packaged. Accordingly, PBL projects do not take a predefined path or reach a predetermined result. PBL projects are student-centered and not teacher-centered. Projects allow students to be autonomous learners who can take care of their learning time, pace, and choice (Thomas, 2000).

Finally, PBL projects are realistic, not school-like. These projects represent students' authentic work and endeavor to learn and discover. In other words, carrying out a project with classmates represents characteristics that give students a feeling of authenticity. Students have the chance to select their topic of interest, and divide the tasks and roles among them, the context, the partners, and the criteria and characteristics of assessment (Thomas, 2000).

Numerous studies have demonstrated the advantages of Project-Based Learning (PBL) in enhancing critical thinking and teamwork skills. Thomas (2000) points out that PBL fosters active participation, encourages higher-order thinking, and allows students to collaboratively address real-world problems. This cooperative aspect of PBL helps students learn effective communication, delegating tasks, and resolving conflicts—fundamental constituents of successful collaboration. Moreover, by confronting complex challenges within genuine contexts, students are driven to think critically and engage in profound learning experiences (Bell, 2010).

In critical thinking, PBL motivates students to evaluate information, integrate ideas, and make evidence-based decisions. Research by Darling-Hammond *et al.* (2008) shows that PBL enhances reflective thinking and problem-solving skills by requiring students to critically review both their work and that of their peers. Additionally, findings by Strobel and van Barneveld (2009) suggest that the interactive, project-based format of PBL strengthens students' analytical skills, preparing them to better address challenges beyond the classroom boundaries.

However, numerous constraints and challenges hinder the right implementation of PBL in Moroccan EFL classrooms, such as time limitations, assessment difficulties, and the necessity for teacher training to support project-based environments. Nevertheless, the advantages of PBL in promoting collaboration and critical thinking are well-documented, contributing to its growing popularity in schools, as confirmed by the researchers mentioned above.

3. Material and Methods

The purpose of this paper is to examine how the use of the PBL approach in the EFL classroom develops and enhances students' teamwork and critical thinking skills. This study was limited to a middle school and a high school with approximately 1960 students. It used a mixed methods approach, combining both qualitative and quantitative data, to assess the impact of Project-Based Learning on these soft skills. Two public schools were selected as samples. Additionally, about eight English language teachers from four schools participated in a focus group discussion. These teachers were chosen because they assign projects that involve teamwork and critical thinking skills through PBL. Data were collected through students' surveys and a focus group with English language teachers.

3.1 Data Collection and Instruments

Data were collected over two months, during which students completed various projects using the PBL approach. Students were required to undertake a project at the end of each unit of the English language textbook. They worked in groups of four and were given one week to prepare their projects and 20 minutes to present them to the whole class. The survey questionnaires were administered after the projects, and the focus group discussion was conducted at the end of the study. The students' questionnaires consisted of multiple-choice, open-ended, and closed-ended questions. These questionnaires aimed to assess students' teamwork skills and critical thinking after two months of study, during which the PBL approach was used for instruction. A focus group was employed to explore teachers' perceptions and experiences with PBL and its impact on students' teamwork and critical thinking skills. It also aimed to identify the obstacles that teachers and students face when using this approach.

3.2 Main Sections of the Questionnaire

Table 1: A detailed description of the main sections of the questionnaire

Section	Title of section	Type of information required	No. of Items
1	Demographics of participant students	• Age group	3
		• Gender composition	
		• School grade	
2	Students' experiences with PBL	• Students' interest in projects	3
		• Obstacles faced during project work	1
		• Ability to present	1
3	Teamwork skills	• Students' development of teamwork skills.	5
	Critical thinking skills	• Students' development of critical thinking skills.	5

3.3 Main Sections of the Focus Group

Table 2: A detailed description of the main sections of the focus group

Number of participants	8 teachers
Total focus group time	90 minutes
Break	10 minutes
Objective	To explore teachers' perceptions and experiences with PBL and its impact on students' teamwork and critical thinking skills. It also aimed to identify the obstacles that teachers and students face when using this approach.
Focus group questions	<ol style="list-style-type: none"> 1. Do students like to do projects? And why? 2. Do you assign group members, or do you let students decide? 3. Do you choose PBL topics or allow students to choose their topics? 4. What challenges do you face when you implement PBL in the EFL classroom? 5. How do you assess students' performance in PBL? 6. To what extent does PBL develop students' teamwork skills? 7. To what extent does PBL develop students' critical thinking skills? 8. Do inspectors emphasize using PBL in the EFL classroom?

4. Results and Discussion

The results of this study are presented in two main sections. Section 1 discusses the primary findings from students' questionnaires, which explore their experiences and improvements in teamwork and critical thinking skills through PBL. Section 2 examines the main outcomes from the focus group discussion, aiming to capture teachers' perceptions and experiences regarding the use of PBL to develop students' soft skills in the EFL classroom.

4.1 Section 1: The impact of PBL on students' development of teamwork and critical thinking skills in the EFL classroom

Quantitative data from the students' questionnaires were analyzed using descriptive statistics to identify changes in students' perceptions of their teamwork and critical thinking skills. The study includes 146 students from middle and high schools in an urban area, consisting of 3rd-grade middle school students and 1st, 2nd, and 3rd-grade high school students. These students learn English at least twice a week and are experienced in completing class projects. Table 3 below displays the demographics of the participating students.

Table 3: Participants' demographics

Demographic variables	Type of information requested	Percent (%)
Age	Below 16 years	38.2%
	Above 16 years	61.8%
Gender	Male	48.4%
	Female	51.6%
School grade	3 rd year middle school	28%
	Common core	26%
	1st-year baccalaureate	24%
	2 nd year baccalaureate	22%

Based on the outcomes of the participants' demographics, it can be noted that about 38% of participants are below 16 years old, while about 61.8% are above 16 years old. As for gender, approximately 51.6% are female students, and 48.4% are male students. Regarding the participants' school grade, around 28% are in the 3rd year of middle school, followed by 26% in the common core, 24% in the 1st year of baccalaureate, and 22% in the 2nd year of baccalaureate. The statistics indicate that middle school students tend to engage in projects more than high school students do. Additionally, female students participate in projects more than their male counterparts do.

The fourth question of the first section of the questionnaire explores whether students enjoy doing class projects. In other words, do students like to work in groups to conduct a project both in and outside the classroom? Figure 1 below displays the findings.

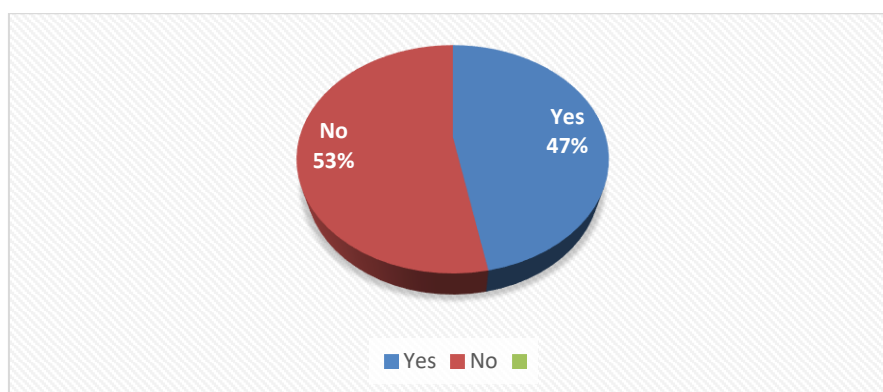


Figure 1: Students' interest in classroom projects

Based on the outcomes presented in Figure 1 above, about 53% indicated that they do not enjoy doing projects, while around 47% reported that they do like to work on projects. It is observed that the majority of students do not prefer class projects.

The fifth question of the questionnaire aims to identify the challenges that students face when collaborating with classmates on a project, either in or outside the classroom. Figure 2 below presents the main findings.



Figure 2: Challenges to classroom projects

It appears from Figure 2 above that students face many challenges while working with their classmates on a project. The most challenging obstacle for students is delegating tasks among them. About 28 % reported they find it difficult to divide roles among team members, and mostly, they resort to their teachers to solve this problem. Second, time management (27%) is another serious problem that students face when they want to do a project. Third, about 23 % reported that they could not solve conflicts that arise within their teams. Fourth, about 12% reported finding it difficult to make decisions. Finally, yet importantly, about 12% said that they find it hard to communicate with their team members, mainly for outside-classroom projects.

The last question in this section seeks to identify whether students feel confident when presenting the outcomes of their projects to an audience. Figure 3 below presents the findings. About 60% do not feel confident presenting the outcomes of their projects to an audience, and only 40% said they feel confident presenting their projects in front of an audience.

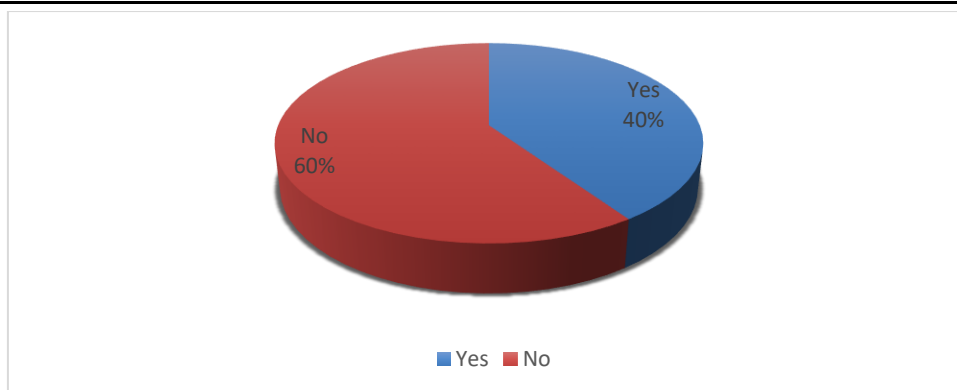


Figure 3: Students' confidence while presenting their projects

4.1.1 Students' development of teamwork skills through PBL

The first five questions of the questionnaire aim to examine whether students manage to develop their teamwork skills through project-based learning. Figure 4 below displays the findings. Based on the students' answers, the majority of students said that PBL helps them develop their ability to communicate effectively in a team setting. About 71 % strongly agree that their communication skills were improved because of their participation in class projects. Only 4% said that they did not develop these skills.

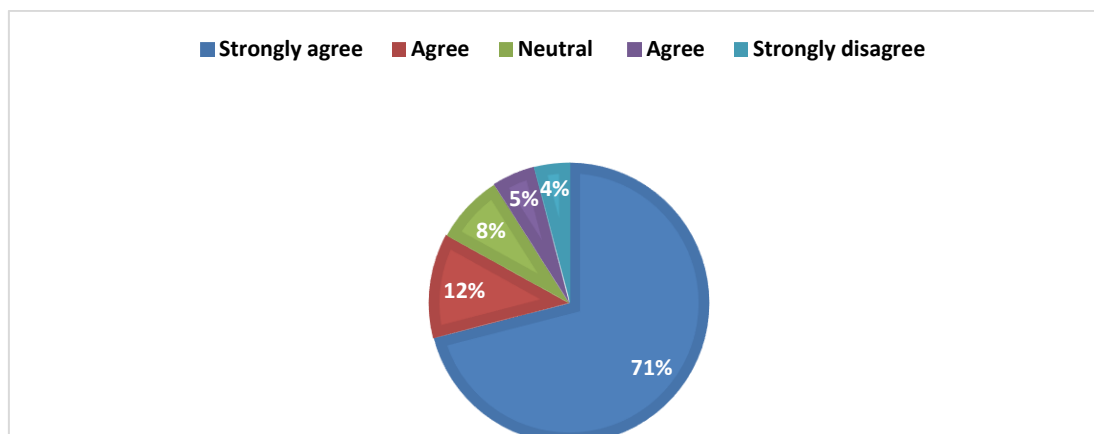


Figure 4: Communicating effectively in a team setting

Second, Figure 5 below presents the findings concerning students' development of conflict resolution in a team setting. About 71% of students said that they learned how to manage conflicts within a group after participating in PBL. Only 4% of the participants reported that their conflict resolution skills were not enhanced by PBL.

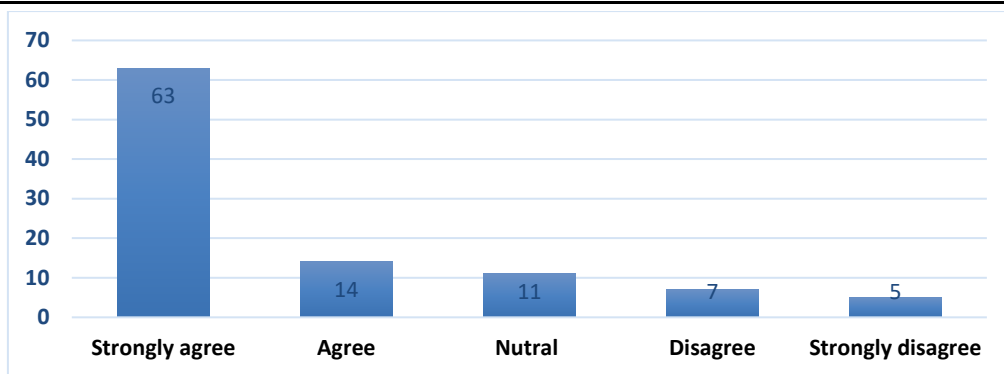


Figure 5: Managing conflicts effectively in a team setting

Third, students were asked whether their ability to delegate tasks and responsibilities in my team had improved after participating in PBL. Figure 6 below presents the main outcomes. It is noted that only 22% developed their skill of delegating tasks within a class project. About 28% of the participants did not know whether they had enhanced this skill. It can be concluded that students were not able to improve this skill during the class project. Students mostly do not agree on how to divide roles between them. They often resort to their teacher to solve the problem.

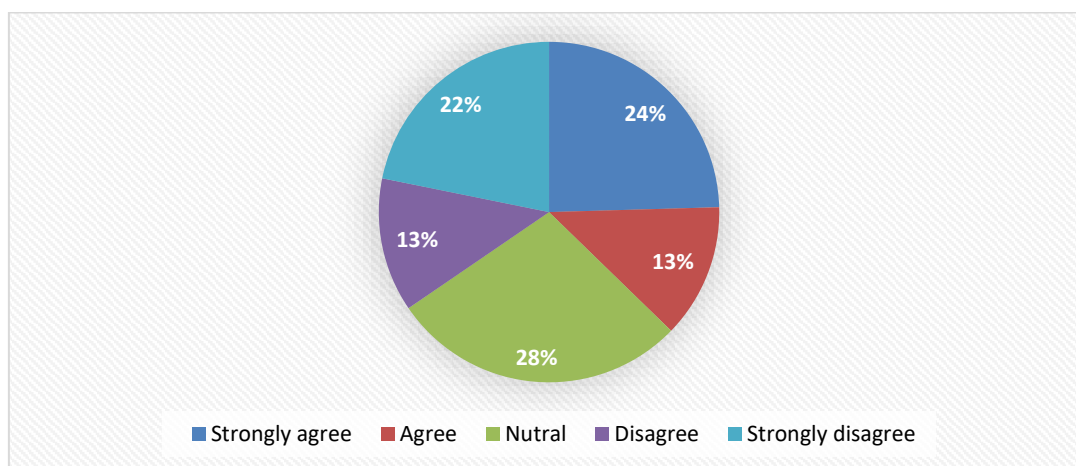


Figure 6: Delegating tasks and responsibilities in a team setting

Fourth, students were asked whether they developed a sense of respect for others' emotions and feelings during a class project. Figure 7 below presents the findings. Approximately 35 students strongly agreed, and 19 agreed that their emotional intelligence has improved while participating in the class project. Around 16% held a neutral opinion. Fifteen percent strongly disagreed, and another 15% disagreed that they did not develop their emotional intelligence skills because of PBL. Therefore, it can be concluded that students learn how to respect their team members' feelings, which can lead to the desired objectives.

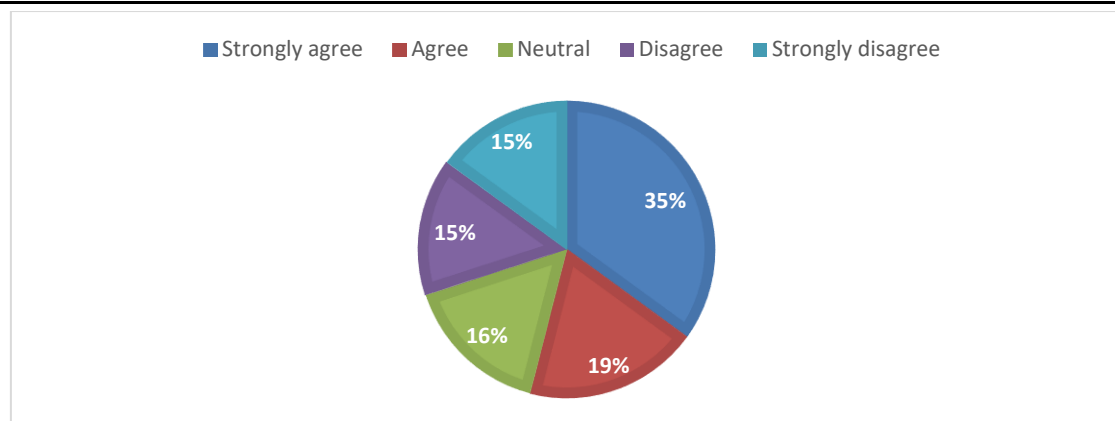


Figure 7: Respecting team members' emotions and feelings

The last sub-skill of teamwork that students were examined on regarding their development due to PBL is time management. About 55% reported learning how to organize their time and study outside the classroom with their classmates, either in person or online. Additionally, about 21% were unsure whether they had enhanced their time management skills. Only 24% have not improved this skill through PBL.

In conclusion, the majority of students developed their teamwork sub-skills due to TBL to some extent. In other words, they improved sub-skills of teamwork like communication, conflict resolution, emotional intelligence, and time management. However, they did not learn to delegate tasks and responsibilities among themselves.

4.1.3 Students' development of critical thinking skills through PBL

The second skill that students developed through PBL is critical thinking. Five questions were used to determine if students managed to enhance this skill. First, students were asked whether they were able to analyze and evaluate different solutions before making decisions. Figure 8 below displays the findings. About 45% strongly agreed, and 25% agreed that during PBL activities, they discussed various solutions and choices prior to making a decision. Only 15% have not improved these skills while working on a class project.

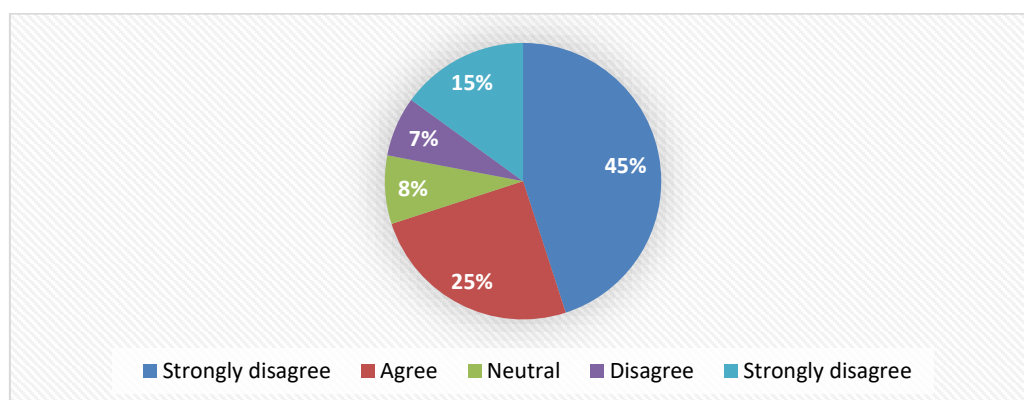


Figure 8: Analyzing and evaluating different solutions before making decisions

Another key ability students were expected to develop through PBL activities is their ability to find new information or resources they had not encountered in class. As shown in Figure 9, most students (75%) have significantly improved this skill thanks to PBL. Only a small percentage (10%) said PBL did not help them search for information beyond the classroom.

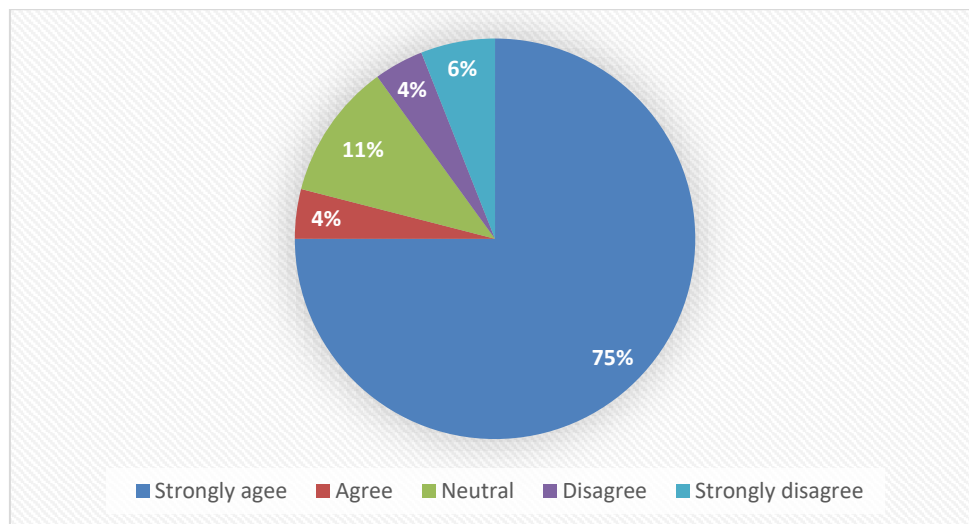


Figure 9: Looking for new information outside the classroom

One key skill of critical thinking that students were expected to develop through PBL is questioning and thinking creatively. The results, shown in Figure 10 below, reveal that a significant number of students (56%) reported gaining this skill. By working on projects and seeking out new information, students learn to ask questions and come up with innovative solutions. On the other hand, about 31% of students did not see an improvement in this skill while working on projects with their classmates.

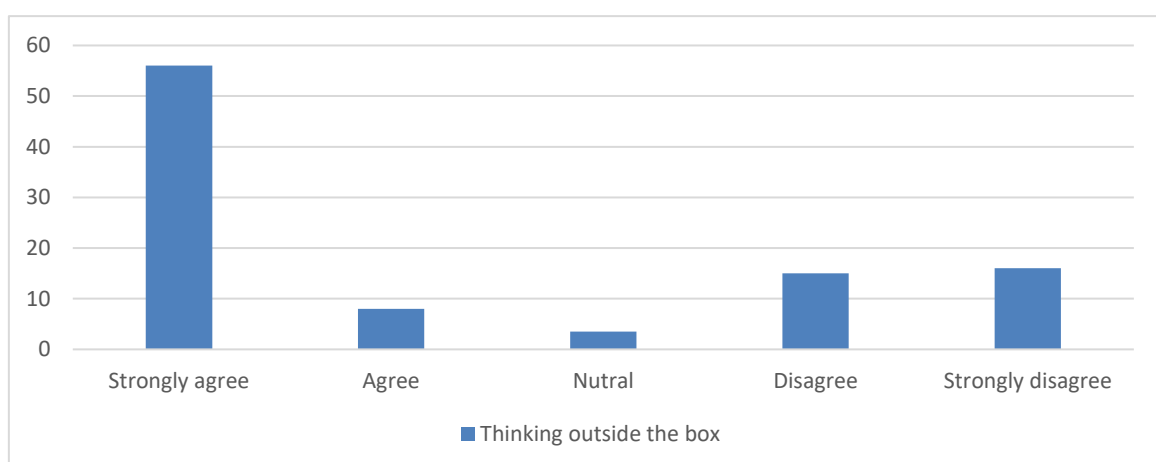


Figure 10: Thinking outside the box

The fourth skill students were expected to develop as a result of their participation in PBL is the ability to think critically and solve problems creatively within their team.

Figure 11 below demonstrates the findings. Around 38% reportedly indicated that they have enhanced their creativity and problem-solving skills through PBL. About 40% denied any improvement in these skills. Approximately 22% were uncertain whether these skills had improved. It appears that higher-order skills were not developed in PBL activities.

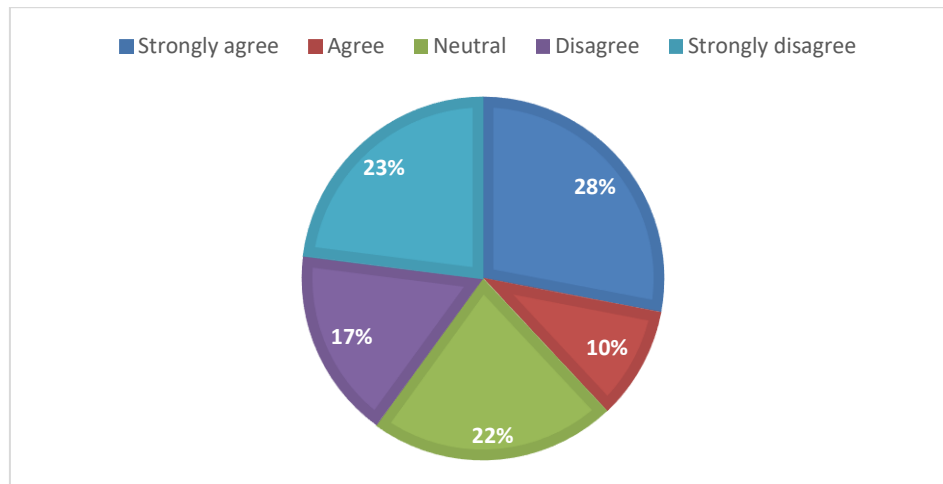


Figure 11: Improving problem-solving and creativity skills

Finally, it is important to note that students were asked whether they had developed the skill of confidently presenting project findings to an audience. Figure 12 below displays students' answers. About 64% indicated that they have become confident and were able to present their project findings to a large audience. Around 14% held a neutral opinion, while about 22% believed that this skill had not significantly improved due to PBL.

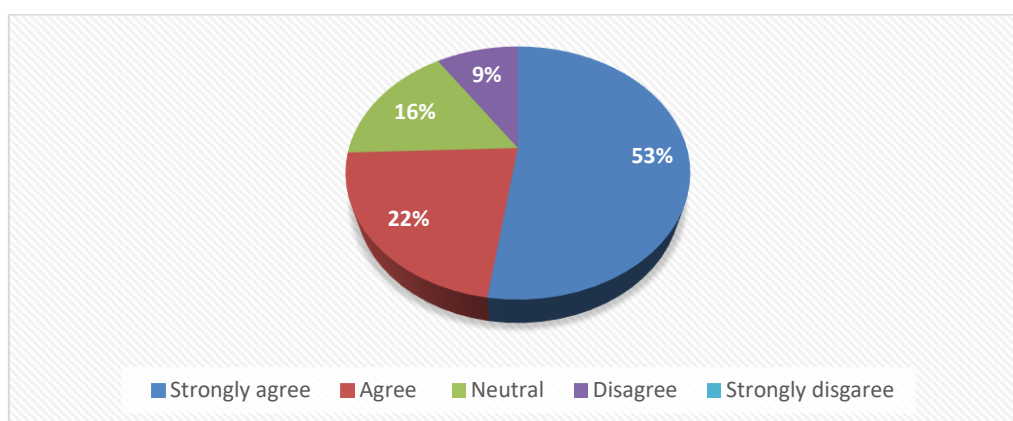


Figure 12: Presenting project findings confidently to the audience

4.2 Section 2: Teachers' perceptions and experiences with PBL and its impact on students' teamwork and critical thinking skills.

Section 2 presents and discusses the emerging themes from the focus group discussion. It begins with a detailed description of the participants' demographics, followed by an

analysis of the session's notes and transcripts. This analysis uses a content coding method, involving a review of the transcripts to create a list of key ideas for each question. Participants' quotes are included to illustrate each theme. Qualitative data from the focus group discussion were analyzed using thematic analysis. Themes related to the implementation of PBL were identified, and the responses were coded accordingly to reveal patterns and insights.

4.3 Participants' Demographics

Table 4: Participants' demographics

Demographic variables	Type of information requested	Percent (%)
Gender	Male	70%
	Female	30%
Teaching Subjects	English Language	100%
School Type	Middle School	40%
	High School	60%

Question 1: Do students like to do projects? And why?

The first question seeks to explore, through the experiences of English language teachers, whether students enjoy doing class projects. Most teachers acknowledged that not all students enjoy participating in projects, whether inside or outside the classroom. They mentioned that students encounter various challenges while collaborating on projects as a team. Primarily, they struggle to respect project deadlines and find it difficult to delegate tasks among themselves. One teacher noted that female students tend to engage in projects more than their male peers do.

Question 2: Do you assign group members, or do you let students decide?

The second question aims to identify whether teachers assign members to different groups or allow students to choose for themselves. Most respondents indicated that they assign students to groups because students typically prefer to select their friends, which often results in groups made up of the same friends or exhibiting similar learning abilities. Consequently, teachers prefer to form groups with balanced learning abilities and mixed genders. One participant mentioned that when she permitted students to choose their group members, they generally selected their friends or more industrious classmates. This frequently leads to one or two students doing the entire work.

Question 3: Do you choose PBL topics or allow students to choose their topics?

Approximately 70% of the respondents indicated that they select topics for student projects. The topics are generally tied to course content, requiring students to conduct in-depth research outside of class. About 30% of the participants stated they allow students to choose their research topics. One participant observed that grade level influences whether teachers assign topics or permit students to choose. She noted that teachers are more inclined to assign specific topics to provide guidance and maintain manageability

in middle school. In contrast, students in high school are often granted more freedom to select their topics within a broader theme or subject. Another teacher said that the choice of the project topic depends on the learning objectives. In other words, teachers may assign a topic to focus on particular skills. If students are doing exploratory projects, students may be encouraged to pick their topic to nurture engagement and ownership.

Question 4: What challenges do you face when you implement PBL in the EFL classroom?

The fourth question aims to identify the challenges that teachers face when implementing PBL in the EFL classroom. To begin with, all the respondents said that students' limited English language proficiency could hinder communication and participation. Secondly, all the teachers reported that time constraints make it hard to fit projects into a rigid curriculum that focuses on equipping students with technical skills. Additionally, teachers often struggle with assessing both language skills and project outcomes objectively, while also managing varying levels of student motivation, readiness for group work, and classroom dynamics. Furthermore, limited access to resources and insufficient teacher training in PBL methods can further complicate implementation. Despite these obstacles, all the respondents confirm that PBL has many benefits.

Question 5: How do you assess students' performance in PBL?

Teachers assess students' performance in Project-Based Learning (PBL) through a combination of different methods and techniques that evaluate both the process and the final product. Five teachers reported that they frequently use rubrics with clear criteria, encompassing content understanding, language use, teamwork, and presentation skills. Another teacher uses formative assessment throughout the project to monitor students' progress and provide them with constructive feedback. Another teacher said that self- and peer assessments encourage reflection and collaboration. It helps students take ownership of their learning. Finally, all the respondents reportedly said that the final product and presentation are evaluated for clarity and language proficiency, allowing for a comprehensive assessment of both academic and communicative skills. The participants mentioned that they ask all the members of the team to present part of the project to ensure that all students participate in the final product. All the participants admit that assessing projects is a little bit challenging.

Question 6: To what extent does PBL develop students' teamwork skills?

Teachers' answers correlate with students' answers concerning developing teamwork skills because of PBL. Project-Based Learning significantly contributes to students' development of teamwork skills by requiring them to collaborate closely throughout the learning process, either in class or in the real world. Most teachers said that in PBL, students learn how to plan, research, solve problems, delegate tasks, and create a final product, which fosters communication, negotiation, and shared responsibility. All the participants confirmed that students learn the most important key elements of teamwork,

like managing roles, resolving conflicts, and supporting one another's ideas. According to the focus group teachers, the extent to which PBL develops students' teamwork depends on how well the teacher structures the group work, assigns roles, and supports collaboration. They all assured that teachers should offer proper guidance and reflection; PBL can be a powerful tool for building strong, real-world teamwork skills.

Question 7: To what extent does PBL develop students' critical thinking skills?

Project-Based Learning (PBL) significantly supports the development of students' critical thinking skills by engaging them in real-world problems that require analysis, evaluation, and decision-making. According to students' answers in the previous section, it is noted that most students have improved their critical thinking skills to some extent. However, it is concluded that high-order thinking skills were the least developed in PBL. Based on the outcomes of the focus group discussion, the majority of teachers agreed that PBL helps students enhance their analytical skills to a lesser extent. They said that during a project, students must ask questions, search for new information, evaluate ideas, compare different options, and justify their choices. These steps allow students to build higher-order thinking skills. One teacher said that PBL encourages learners to think independently, reflect on their ideas, and revise their work based on feedback. Accordingly, the extent of this development depends on the complexity of the project and the level of support and challenge provided by the teacher, and students' engagement and involvement in projects.

Question 8: Do inspectors emphasize using PBL in the EFL classroom?

The last question seeks to explore whether inspectors emphasize the importance of workshops on the implementation of PBL in the EFL classroom. Based on teachers' responses, they all confirmed that inspectors encourage teachers to utilize PBL. Teachers indicated that implementing project work is a common aspect of the English textbooks used in Moroccan schools. This approach aligns with broader educational reforms aimed at promoting learner-centered methodologies and enhancing students' language proficiency and soft skills. However, the implementation of PBL varies across schools and depends on teachers' readiness and students' engagement. About 60% of the participants expressed positive attitudes toward project work, although they have limited access to technology and a lack of professional development opportunities.

5. Conclusion

In short, the examination of results from the questionnaire and focus group discussions has revealed several interesting and relevant findings. The Likert scale responses provide numerical insights into students' perceptions of how Project-Based Learning (PBL) has influenced their teamwork and critical thinking skills. To begin with, the results from this study indicate that PBL is highly effective in developing students' teamwork and critical thinking abilities. They also show significant improvements in students' ability to work

collaboratively, communicate, delegate tasks, manage time both inside and outside the classroom, and resolve conflicts within the group. Additionally, students' responses reveal enhancements in critical thinking skills, including better problem-solving, seeking new information, thinking creatively, questioning, analyzing, confidently presenting project findings, and making decisions. It can be concluded that PBL encourages open discussions, active listening, and information sharing within groups. Furthermore, students feel comfortable expressing and sharing their ideas in a group setting, knowing their contributions are valued. Moreover, many students reported positive changes in task delegation, indicating that PBL encourages recognition of each other's strengths and the distribution of work accordingly. This is especially important for developing leadership and teamwork skills. A smaller portion of students also reported improvements in conflict resolution skills; some students still struggle with handling disagreements among group members, suggesting that while PBL fosters teamwork skills in the EFL classroom, there is room for improvement in this area.

The analysis of quantitative data shows that approximately 70% of students report significant improvement in their problem-solving skills, suggesting that PBL presents real-world problems requiring innovative thinking. PBL offers scenarios where students question, analyze, and make decisions. Additionally, about 65% of students indicate improvements in their ability to evaluate different solutions. These students are tasked with assessing the advantages and disadvantages of various options, which sharpens their evaluative and argumentative skills. Lastly, many students expressed increased confidence in presenting their project outcomes to an audience. To conclude, the development of students' soft skills varies: while teamwork skills have significantly improved, analytical skills have developed to a lesser extent. In other words, high-order thinking skills were not highly enhanced through PBL.

Regarding the main findings from focus group discussions, teachers reported that although implementing PBL posed challenges—such as the need for extensive planning and the complexity of assessing group work—the overall benefits in fostering essential skills outweighed these difficulties. Teachers mentioned that most male students do not enjoy project work, unlike female students, who do. Additionally, students face many obstacles during project work, leading teachers to assign students to different groups and roles. Teachers often select project topics, but their interference can undermine the core principles of PBL, which advocate for students to form groups and delegate tasks themselves, with teachers assisting only when necessary. Furthermore, all teachers reported encountering obstacles, including time constraints, insufficient training, challenges in objectively assessing language skills and project outcomes, and managing diverse learning styles, student willingness, and classroom dynamics. Finally, all participants confirmed that PBL significantly helps students develop their teamwork and critical thinking skills and that inspectors encourage teachers to adopt PBL in the EFL classroom.

6. Recommendations

The analysis indicates that project-based learning (PBL) is highly effective in promoting teamwork and critical thinking skills among middle and high school students. Many students report improvements in these areas. However, challenges remain, especially concerning conflict resolution and unequal contributions within teams. These results suggest that while PBL is a powerful educational tool, additional structure and support may be necessary to help all students reach their full potential in both collaboration and critical thinking. Based on this analysis, several recommendations can be made for teachers and education policymakers. Teachers should be encouraged to incorporate PBL into their curricula to enhance teamwork and critical thinking. They should also provide clear instructions for task division and role assignment within teams to ensure fair participation. Regular check-ins during projects can help monitor group dynamics and address conflicts early. Moreover, they can introduce more structured activities or workshops focused on developing conflict-resolution skills, task delegation, and meeting deadlines. For education policymakers, it is important to offer teachers adequate training and guidelines for effective PBL implementation in EFL classrooms. Sufficient time should be allocated for projects within English courses, along with reflection sessions where students can discuss how they are critically engaging with the project and connecting it to their coursework. By addressing these recommendations, teachers can further improve the learning experience and make sure that PBL effectively prepares students for real-world challenges, both individually and in teams. Finally, future research should aim to refine assessment methods and explore strategies to adapt PBL across diverse educational settings to enhance its effectiveness.

Conflict of Interest Statement

The author declares no conflicts of interest.

About the Author

Hicham Rahate Ellah holds a PhD in Integrating Soft Skills Teaching and Learning in the EdTech-Enabled EFL Classroom from the Faculty of Letters and Human Sciences, Cadi Ayyad University, Marrakech, Morocco. He has been a teacher of the English language for more than 18 years. He is also a Fulbright Alumnus. He worked as a teaching assistant at the University of Nebraska, Lincoln, USA. He has participated in national and international conferences about integrating EdTech in English language teaching and learning. He published four articles related to soft skills learning and development.

References

- Barron, B. J., Schwartz, D. L., Vye, N. J., Moore, A., Petrosino, A., Zech, L., & Bransford, J. D. (1998). The Cognition and Technology Group at Vanderbilt. (1998). Doing with understanding: Lessons from research on problem-and project-based learning. *The Journal of the Learning Sciences*, 7(3/4), 271-311. Retrieved from https://web.mit.edu/monicar/Public/old%20stuff/For%20Dava/Grad%20Library/Data/PDF/Brigid_1998DoingwithUnderstanding-LessonsfromResearchonProblem-andProject-BasedLearning-1896588801/Brigid_1998DoingwithUnderstanding-LessonsfromResearchonProblem-andProject-BasedLearning.pdf
- Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The clearing house*, 83(2), 39-43. <https://doi.org/10.1080/00098650903505415>
- Bereiter, C., & Scardamalia, M. (1999). Process and product in PBL research. *Toronto: Ontario Institute for Studies in Education/University of Toronto*. Retrieved from <https://ikit.org/fulltext/2000Process.pdf>
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational psychologist*, 26(3-4), 369-398. <https://doi.org/10.1080/00461520.1991.9653139>
- Darling-Hammond, L., Ancess, J., & Falk, B. (2008). Authentic Assessment: The Key to Unlocking the Promise of Project-Based Learning. *American Educational Research Journal*, 45(4), 1232-1249.
- Ellah, H. R., & Azmi, N. (2023). High school students' perception and development of soft skills. *International Journal of Language and Literary Studies*, 5(2), 192-208. <https://doi.org/10.36892/ijlls.v5i2.1283>
- Jones, et al., (2013). The effects of a collaborative problem-based learning experience on students' motivation in engineering capstone courses. *Interdisciplinary Journal of Problem-Based Learning*, 7(2), 2. <http://dx.doi.org/10.7771/1541-5015.1344>
- Moursund, D. (1999). *Project-based learning using information technology*. Retrieved from https://www.researchgate.net/publication/247276594_Project-based_learning_using_information_technology
- Stepien, W., & Gallagher, S. (1993). Problem-based learning: As authentic as it gets. *Educational leadership*, 50, 25-25. Retrieved from https://www.academia.edu/2170347/Problem_based_learning_As_authentic_as_it_gets
- Strobel, J., & Van Barneveld, A. (2009). When is PBL more effective? A meta-synthesis of meta-analyses comparing PBL to conventional classrooms. *Interdisciplinary journal of problem-based learning*, 3(1), 44-58. <http://dx.doi.org/10.7771/1541-5015.1046>
- Thomas, J. W. (2000). A Review of Research on Project-Based Learning. *The Autodesk Foundation*. Retrieved from http://www.bobpearlman.org/BestPractices/PBL_Research.pdf

van Barneveld, A., & Strobel, J. (2011). 0B Reports from teaching practice: experiences and management of tensions encountered with PBL implementations in the early years of undergraduate engineering education. Retrieved from https://www.researchgate.net/publication/286179547_Reports_from_teaching_practice_Experiences_and_management_of_tensions_encountered_with_PBL_implementations_in_the_early_years_of_undergraduate_engineering_education

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions, and conclusions expressed in this research article are views, opinions, and conclusions of the author(s). Open Access Publishing Group and European Journal of Foreign Language Teaching shall not be responsible or answerable for any loss, damage, or liability caused in relation to/arising out of conflicts of interest, copyright violations, and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed, and used in educational, commercial, and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).