

Enhancing EFL Learners' Writing Performance Through Project-Based Learning: Evidence from Moroccan Secondary Education

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Abstract

Writing is considered by a wide range of EFL learners to be the most difficult component to learn. Achievement on this component tends to be the lowest among the other language skills. Educators have been concerned with adopting the latest teaching strategies which could yield better results in students' writing. Interestingly, project-based learning (PjBL) seems to be an effective approach in improving learners' writing skills. The current quasi-experimental research seeks to examine the effectiveness of PjBL on students' writing in EFL classes. This study targeted common core students as its population. The sample involved an experimental group consisting of 34 participants and a control group consisting of 33 participants. The groups were randomly assigned to an experimental group undergoing the PjBL treatment or a control group with no treatment. Data was collected through a writing pretest and posttest, and was analyzed using the SPSS software. After establishing a normal distribution of the scores, an Independent Samples T-test was run. The pretest results show that both groups had an equal departure. The posttest results show a significant difference in the means of both groups, with the experimental group scoring significantly higher. The results confirm that PjBL is an efficient tool to promote the acquisition of writing skills in EFL classes. This is thanks to the nature of the approach, which involves learners in different engaging phases throughout the project. Therefore, and based on the results, this approach appears to deserve more attention and consideration from the part of curriculum designers.

Keywords: *EFL, Project-Based Learning, writing proficiency*

1. Introduction

Writing is a central component of second and foreign language learning, serving not only as a means of communication but also as a complex process through which learners construct, organize, and communicate meaning for particular audiences and purposes. Contemporary perspectives conceptualize writing as both a cognitive and socially situated activity, shaped by writers' linguistic resources, individual capabilities, communicative purposes, and participation in particular social and educational contexts (Graham, 2018; Hyland, 2019). For learners of English as a foreign language (EFL), developing writing proficiency can therefore be particularly demanding, as successful text production requires the simultaneous management of linguistic knowledge, rhetorical organization, audience awareness, and the processes involved in generating, developing, and revising ideas. These demands may become more challenging when learners experience affective barriers; empirical research has shown, for example, that higher writing anxiety is associated with poorer writing performance, whereas stronger writing self-efficacy and achievement motivation are associated with better performance among EFL learners (Sabti et al., 2019). Such challenges underscore the importance of providing sustained instructional opportunities in which learners can engage meaningfully with writing rather than encounter it primarily as an occasional classroom exercise. This concern is particularly relevant in the Moroccan secondary-school context, where writing receives relatively limited instructional attention and is commonly positioned toward the end of textbook units. Consequently, identifying instructional approaches that provide learners with more sustained, purposeful, and engaging opportunities to write constitutes an important pedagogical concern in Moroccan EFL education.

The difficulties which students encounter in writing comprise linguistic problems pertaining to aspects of vocabulary, grammar, spelling, punctuation, organization, syntax, lexis, etc. (Benzizoune, 2022; Aknouch & Bouthiche, 2022; Bakir et al., 2026). However, challenges associated with writing are not limited to linguistic issues but include affective and instructional factors. A study investigating the factors behind the issues Moroccan EFL learners face in writing revealed that 31% of those factors are psychological, manifested in anxiety, fear of making mistakes and low self-confidence; and 14% relate to teaching factors, which appear in insufficient feedback and exam-oriented instruction (Bakir et al., 2026). Research further demonstrated the role of affective factors on students' writing performance. Sabti et al. (2019) found that higher levels of writing anxiety were associated with poorer writing performance, while writing self-efficacy and achievement motivation were positively associated with writing performance. A different study used 15 semi-structured interviews with undergraduate English students to explore the factors which affect their interest and performance in writing. The study identified "the type of writing activity ..., relevance and clarity of a topic, teacher's support, constructive feedback and appreciation; and the learning environment in which the activities are incorporated" as the main factors behind students' performance and interest in such a skill (Bhutto et al., 2024, p. 472). These findings suggest that the issues learners face in writing may be attributed not only to linguistic factors but also to how writing is taught and the learning environment.

Given the circumstances of teaching the writing skill in Morocco, and the hindering factors in writing, adopting innovative approaches which can create a supportive learning environment conducive to risk-taking, and which can provide more meaningful and engaging opportunities to gain a good command of the writing skill, remains a must. Project-Based Learning seems to be a good fit for this purpose. This is attributed to its structured stages, which require engaging in writing tasks throughout the project duration. Such an approach is barely new. It has its roots in the early philosophy of Dewey (1938), who believed that learning takes place through experience, and that students should be put at the heart of the knowledge construction process. A meta-analysis study

examining the effectiveness of PjBL in EFL writing synthesized 11 studies published between 2013 and 2023 found that this instructional approach positively affected students' writing productions. The study showed that PjBL's students demonstrated better writing outcomes than those studying through comparison instruction (Cahyono et al., 2024). Similarly, further studies investigating PjBL reported its efficacy on the overall writing development of EFL learners (Alemneh & Gebrie, 2024; Arif & Sukarno, 2024; Hasani et al., 2017).

However, this approach is not widely common in the Moroccan EFL context. Although research conducted in other EFL contexts has provided evidence of the potential of PjBL to enhance learners' writing performance (Cahyono et al., 2024), and although previous research has documented difficulties in Moroccan learners' English writing (Aknouch & Bouthiche, 2022; Benzizoune, 2022), limited research appears to have specifically examined the use of PjBL to develop English writing among Moroccan high-school learners. Even the existing studies in this context on PjBL concern testing its effectiveness with regard to skills other than writing, such as speaking and reading skills.

Consequently, the writing component remains a skill which needs further investigation with regard to PjBL. This paper is an attempt to correspond to this research gap by investigating the influence of PjBL on Moroccan high school students' writing proficiency compared to the textbook-based instruction. Investigating this matter through introducing PjBL as an intervention to an experimental group while teaching a control group following the textbook-based instruction would put PjBL to the test to identify any impact on the writing skill development. Overall, this paper aims to contribute to the body of knowledge by providing an empirically tested experiment on the impact of PjBL in comparison with conventional teaching methods (textbook-based instruction) on students' writing proficiency.

2. Literature Review

One way to communicate is to write. According to Grabe & Kaplan (1996), writing allows for conveying information through constructing texts. Hedge (2005) sees writing as a means for achieving several purposes, such as pedagogical, humanistic, and creative purposes. While pedagogical purposes allow learning the system of language, humanistic ones allow quieter learners to manifest their ideas, and creative ones allow developing self-expression. Further, in EFL classes, writing is a means to assess students' progress in learning and get the instructor to diagnose and remedy the possible issues. Hyland (2019) states that the process of generating and organizing ideas needs to respect the rules and conventions of the language. Such conventions include mechanics like spelling, capitalization, punctuation, grammar, and organization of content (Hedge, 2005).

Various theories of teaching writing have been proposed. In their systematic review of the literature, Ugun & Abdul Aziz (2020) assembled five writing approaches: product-based, process-based, post-process, genre-based, and process-genre-based. While the first is based on the principle of mimicking a model text, the second sees writing as a series of steps going from brainstorming ideas, to organizing, drafting, and editing. The post-process approach argues that writing is beyond the individual cognitive and mental steps. It is rather a contextual, interactive, and collaborative activity. The genre-based approach focuses on the purpose of writing and teaches learners to respect the genre of the text they are writing so as to meet the expectations of its audience. Finally, the process-genre-based approach combines the strengths of the previous approaches, including the context, the linguistic features, and the writing steps.

Although these approaches attempt to reduce the challenges associated with writing, it is continuously reported that students face a great difficulty in writing. According to Benzizoune (2022), factors such as limited vocabulary, weak grammatical knowledge, spelling and punctuation

errors, and poor organization of ideas make the writing experience unsuccessful for many students. The difficulty in generating and developing ideas also plays a role in students' inadequate writing performance.

While the aforementioned writing approaches have shaped pedagogical practices through the years, they were criticized for limiting learner autonomy, isolating writing from real-world use, and neglecting collaboration. As a reaction to these limitations, educators have redirected their focus towards more holistic and experiential paradigms such as PjBL. The latter is rooted in the constructivist and social constructivist learning theories. Their underpinning philosophy revolves around building knowledge step by step through a process of questioning, collaborating, and finding solutions. Such learning happens in context with interaction with peers (Dewey, 1938; Vygotsky, 1978). PjBL has been defined differently by different applied linguists in the literature. However, all the definitions seem to agree that it is an instructional student-centered approach which organizes learning around projects. These projects start with a driving question that students try to answer through different investigative stages, leading to a final product to be shared, reflected upon, and assessed. The stages include developing and planning projects, designing tasks, collecting and organizing data, and producing a final artefact (Bell, 2010; Blumenfeld et al., 1999; Thomas, 2000). PjBL can be seen as a learning opportunity where learners collaborate with each other to attain knowledge with regard to a specific problem. They decide on the information needed, where to get it from, how to use it and assemble it into a final artefact, and how to present it (Fitria & Abidin, 2023).

According to Thomas (2000), there are some key features which distinguish project-based learning from project work or from other similar approaches. First, there is centrality, which means that projects are central to the curriculum rather than complementary. So, instead of using a lesson plan for each lesson to guide students towards a learning objective, students engage in constructing the lesson through different steps over an extended period of time. Second, there is the driving question, which serves as the point of departure for students' investigation. The latter is a further feature which stands as the core of the approach. Students go through different investigative steps to reach a conclusion. Next, there is ownership, which grants students some choice and voice over their learning. Finally, there is realism, which insists on the real-life relevance of the project (Thomas, 2000).

Different studies investigated PjBL regarding different skills. While some of them advocate for its use and implementation thanks to its effective results, others do not state a significant success in its favor. Alemneh & Gebrie (2024) conducted a quasi-experimental study to test the extent to which PjBL is effective in improving Amharic-speaking students' writing and sub-writing skills. The scores of the experimental group were significantly higher than those of the control group, indicating the approach's effectiveness with regard to writing skills. Similarly, a study conducted by Arif & Sukarno (2024) found a significant improvement in students' writing skills following PjBL implementation. All of the content, organization vocabulary, language use, and mechanics witnessed a significant improvement. However, while Thitivesa (2014) found that the approach improves students' performance in mechanics, no significant improvement was found in relation to sentence formation, suggesting that the approach may not be sufficient on its own to enhance sentence-level structures. While all of these studies investigated PjBL quantitatively, Hasani et al. (2017) explored the efficacy of the approach through qualitative means. PjBL was used to write educational articles suitable for publication in a local newspaper. Participants engaged in investigative tasks and wrote on different educational topics. The researchers found that such an authentic project involving a real-world audience boosted students' motivation, strengthened their reflective thinking, and enhanced their writing skills.

3. Research Methods

The current piece of research attempts to answer a single research question: Does PjBL improve learners' writing ability compared with textbook-based instruction? In other words, it investigates the effectiveness of PjBL as an instructional approach in developing high school students' writing performance compared with textbook-based instruction. The study hypothesizes that PjBL is significantly more effective than textbook-based instruction in improving this productive skill. To test the proposed hypothesis and answer the research question, a quasi-experimental case study design was adopted. The current section explains the methodological procedures employed, including the research design, participants, instruments, and data analysis procedures.

3.1 Research Design

This research adopts a pure quantitative design with an experimental and a control group. While the latter kept studying through the conventional way based on the textbook, the former received a PjBL intervention, which lasted eight weeks. The experimental group's students worked in groups of their choice and prepared artefacts that were assembled into their final products. Each project went through all the phases of PjBL, starting with the driving question and reflecting on the final product. The instructor served as a mentor, a monitor, and a scaffolder throughout the experiment. As for the control group's students, they were taught through textbook-based instruction, with no change other than taking the pretest and posttest.

3.2 Participants

This study targets common core high school students as its population. The sample was selected using a convenience sampling method, and it comprises two pre-existing groups that the researcher teaches in Al Mowahidine High School in Khemisset city. These two pre-existing groups were randomly assigned to a control and an experimental group using the coin toss technique. A total of 67 students participated in this study, 34 of whom belonged to the experimental group and 33 to the control group.

3.3 Instruments

Two writing tests served as the only data collection instruments for this study. While one was administered to the experimental group and the control group before the launch of the experiment, the other was administered to the same groups at the end of it. The first test was designed to record students' point of departure, while the second one was designed to trace students' change and development in their writing skills.

3.4 Validity and Reliability

The writing tests' (pre- and post) validity was addressed through content validity. The pretest was designed to elicit participants' writing ability by requiring them to produce a paragraph on a theme that had previously been covered in class. Similarly, the posttest further required them to write another paragraph to trace any development in their writing ability. The task was aligned with the instructional objectives and the writing skills targeted in the study. The writing tests were subjected to review by an experienced EFL instructor and were unified across both groups. They were administered in comparable conditions.

As for the analytical scoring rubric used to assess the tests, it was developed by adapting descriptors from the ESL Composition Profile (Jacobs et al., 1981), informed by contemporary principles of analytic writing assessment (Brown & Abeywickrama, 2019). The rubric was graded

out of ten and evaluated five dimensions: task achievement, organization, grammar, vocabulary, and mechanics.

The reliability of the writing assessment was addressed through an intra-rater consistency check. The same rater assessed the tests (pre and post) using the same assessment rubric. The rater rescored a random sample of data after two weeks of the initial scoring and compared the two sets of scores. The comparison showed a high level of consistency with a few minor differences, which did not affect the final scores. This procedure was intended to minimize inconsistencies in scoring and enhance the reliability of the results.

3.5 Intervention Procedures

The experiment lasted eight weeks and concerned teaching the experimental group through PjBL as an intervention while teaching the control group through the conventional textbook-based instruction as an alternative treatment. After administering the writing pretest to both groups under comparable conditions, the instructor briefed the experimental group on the new instructional approach through some pre-project activities. The latter included defining the approach, explaining its main principles and phases, and demonstrating how it is applied in practice. Tangible examples of final artefacts were introduced for the sake of exemplification. Afterwards, students formed groups of three or four students and started working together following the phases of PjBL. The latter was implemented throughout three units pertaining to the themes of sports, food, and shopping. Each of them constituted the topic for an end-of-project. Upon completion of each project, groups went on stage to introduce their final artefacts, which was followed by reflection and feedback. End projects took the form of a video, a PowerPoint presentation, a poster, a menu, a website, or a booklet, according to the choice of the group.

3.6 Ethics

The current paper abided by the ethical considerations of conducting research. Firstly, informed consent was ensured by informing participants of the objective of the research. Secondly, anonymity was ensured by asking participants to use pseudonyms instead of their full names. Thirdly, the intervention adopted and adapted the same units specified in the textbook to ensure that the experimental group's students did not fall behind with respect to the course content. That is, while the textbook-based instruction was replaced with PjBL, the thematic content covered during the intervention remained consistent with the textbook's unit.

3.7 Data Analysis

After the data was collected, organized, and scored, the scores were compiled in an Excel document and then imported to the SPSS software (version 20). To grant the use of parametric testing relevant to this piece of research, a Shapiro-Wilk Test of Normality was run. After establishing a normal distribution of the scores, an independent samples t-test was conducted to determine whether the experimental group and the control group were comparable at the pretest before the intervention. It was further used following the intervention to record any significant difference between the groups' scores in the posttest.

4. Results

The study aims to determine whether PjBL intervention had an effect on students' writing proficiency. The current section provides a detailed analysis of the data corresponding to this aim.

Table 1: Shapiro-Wilk Test of Normality for Writing Test Scores

<i>Testing occasion</i>	<i>Group</i>	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>
<i>Pretest</i>	Control	.981	33	.826
<i>Pretest</i>	Experimental	.963	34	.296
<i>Posttest</i>	Control	.947	33	.110
<i>Posttest</i>	Experimental	.948	34	.104

To determine whether the data satisfied the assumption of normality required for parametric tests, and given that the sample size is 33 (control) and 34 (experimental), the Shapiro-Wilk test of normality was run for both groups and time points (pre- and post-test). The results indicated that the distribution of scores did not significantly deviate from normality for either group at either testing occasion. As the table shows, the control group demonstrated normal distribution at both the pretest ($W = .981, p = .826$) and the posttest ($W = .947, p = .110$). Likewise, the experimental group exhibited normal distributions at the pretest ($W = .963, p = .296$) and the posttest ($W = .948, p = .104$). As all the values exceeded .05, the assumption of normality was satisfied. Therefore, the use of parametric tests is granted.

Table 2: Independent-samples t-test results comparing the experimental and control groups on the pretest and posttest writing scores

<i>Test</i>	<i>Group</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d</i>
<i>Pretest</i>	Experimental	34	4.53	2.26	0.730	65	.468	0.18
	Control	33	4.92	2.17				
<i>Posttest</i>	Experimental	34	7.29	1.48	-3.474	65	< .001	0.85
	Control	33	5.79	2.03				

An independent samples t-test was run to compare the writing performance of the experimental and the control group before the implementation of the intervention. The findings demonstrated no statistically significant difference between the groups on the pretest, $t(65) = 0.730, p = .468$, indicating that the groups were comparable in their writing proficiency at the outset of the study.

Following the intervention, an independent-samples t-test was conducted to compare the posttest writing scores of the two groups. The analysis revealed a statistically significant difference between the experimental and control groups, $t(65) = -3.474, p < .001$, with a large effect size ($d = 0.85$). As shown in Table 2, the experimental group achieved a higher mean posttest writing score ($M = 7.29, SD = 1.48$) than the control group ($M = 5.79, SD = 2.03$), indicating that students who participated in the PjBL intervention demonstrated a significantly better writing performance than those who received conventional textbook-based instruction.

5. Discussion

The results showed that both the control and the experimental groups were equivalent in their writing skill before the intervention, suggesting that they both had no pre-existing differences in their writing proficiency before the implementation. The statistically significant difference observed on the posttest indicates that the PjBL implementation had a positive influence on students' writing proficiency. The present findings align with some studies conducted in EFL contexts, reporting significant improvements in students' writing performance following PjBL implementation. Yusri et al. (2021) conducted a pre-experimental study with a one-group pretest-posttest design. The group underwent a PjBL intervention to trace participants' progress regarding report writing skills. The findings revealed significant improvement in students' writing performance. Yusri et al. (2021) attribute the positive findings to the student-centred nature of

PjBL, which asserts active collaboration. Similarly, using a mixed-methods case study design, Kilanava (2024) revealed that students demonstrated significant progress at the level of organization, coherence, and higher quality written performance. Consistent with these findings, Andargie et al. (2025) noted that students demonstrated remarkable progress in their writing performance. Their interview data explained that PjBL positively affected students' idea generation, organization, cooperation and general communication skills, leading to better compositions. In the same vein, Yuliana & Sahayu (2024) conducted a qualitative classroom action research design and found that students' writing scores in writing moved from 55 to 65. More importantly, the study revealed that prior to the implementation, students showed little interest in learning writing, which totally changed following the intervention. Features like increased participation, engagement, and enjoyment seemed more evident. Ardiana et al. (2023) also conducted action research over two cycles. Their PjBL intervention revolved around producing a brochure as a final artefact, with the aim of describing places. The study also reported students' behavior which showed active engagement, enthusiasm and collaboration during the project. The researchers attributed these positive changes in writing performance and students' behavior to the opportunities PjBL create for collaboration, exchanging ideas, and producing meaningful end projects.

Many factors pertaining to PjBL can account for this. First, this pedagogical approach provides learners with many authentic and purposeful writing opportunities throughout the project process. Its different stages involve students in writing directly and indirectly through planning, brainstorming, drafting, revising and assembling the final work. Further, group work can enhance the quality of students' writing productions through continuous support from peers. In addition, the instructor's ongoing scaffolding and monitoring can contribute to students' progress in such a productive skill. Interestingly, PjBL creates the perfect conditions for social interaction to appear, foregrounding the principles of constructivism and emphasizing learning through interaction. Throughout the project, students collaborated to reach the final artefacts. These interactions contributed to improvements in writing quality by enabling learners to co-construct knowledge and refine their written texts through conversation and feedback. This corresponds to the findings of Arochman et al. (2024), who explored EFL Indonesian students' perceptions of learning writing through PjBL. They revealed that participants favored this instructional approach, stating that it increased their motivation, promoted collaboration, and provided them with meaningful opportunities to practice writing through authentic projects.

Nevertheless, the evidence is not entirely consistent with the aforementioned studies. For instance, Collier (2017) investigated PjBL in two high school experimental groups and two control groups. No significant impact on students' writing proficiency was reported. Similarly, Rahmalia & Utari (2021) did not find a significant statistical difference in writing in favor of PjBL's students. Strikingly, a study conducted by Sari et al. (2021) found that both the experimental group and the control group had higher scores in essay writing, suggesting an equivalent improvement. Such divergent findings may be attributed to the fact that PjBL is not a standardized intervention across all contexts. Factors such as the duration of the intervention, the proficiency level of participants, and the degree of scaffolding may account for those findings. Overall, this piece of research supports findings in favor of PjBL and further indicates PjBL's potential and value in enhancing learning.

6. Conclusion

The present study sought to investigate the effect of project-based learning (PBL) on EFL students' writing performance. The findings revealed that while both groups had comparable writing proficiency prior to the intervention, the experimental group outperformed the control

group at the end of the intervention. Such significant progress in the experimental group's writing proficiency can be attributed to the efficacy of PjBL as a pedagogical approach. This piece of research is a further addition to the literature. It supports the efficacy of the approach in producing a healthy environment conducive to collaboration and risk-taking, and eventually leading to higher productivity and better achievement on the part of students. Overall, it can be said that this piece of research is further proof of PjBL's potential and value for enhancing learning. Thus, it is important to consider this approach when planning curricula. Moreover, given the difficulty that writing skills pose for students, educators are advised to integrate teaching them in more interesting and engaging approaches such as PjBL.

Despite efforts to ensure a rigorous piece of research, several limitations emerged. First, the duration of PjBL was relatively short for such a skill to be developed. Writing is a language component which needs sufficient time and practice to develop. A longer duration may have been more reliable. Second, the sample size is relatively small and belongs to only one educational setting, which affects the generalizability principle. Third, students' writing performance was assessed through a single writing test administered before and after the intervention. Writing is a multifaceted skill that may not be comprehensively assessed by a single test. Future studies may benefit from a bigger sample size and multiple writing tasks or complementary assessment methods to provide a more generalizable and comprehensive evaluation of writing development.

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