The Impact of Portfolio Assessment on The Moroccan EFL Student's Writing Skills

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ABSTRACT: The purpose of this study is to examine whether or not the integration of portfolio assessment as a part of the assessment practices in the Moroccan EFL context can have any significant impact on the Moroccan EFL students' writing skills. Accordingly, the study adopted a quasi-experimental design with a sample of two separate groups with a total number of 48 common core students (24 students in each group). The two groups were randomly assigned into experimental and control groups. The experimental group benefited from ongoing portfolio-based writing assessment activities with various reflection and assessment techniques (i.e. self-and peer-assessment and teacher-student conferences) while the control group was tested using the regular summative writing achievement tests. The two groups were pre- and post-tested to determine the possible impact of the treatment. The experimental group students were also invited to share their views about portfolio assessment using written reflections. The results of the study showed that the students in the experimental group outperformed the students in the control group in their overall writing achievement as well as in their achievement at the level of various writing sub-skills. Additionally, the students' reactions to the treatment show that the majority of the students had highly positive attitudes toward it in spite of the few reservations they raised.

KEYWORDS: Traditional Assessment, Alternative Assessment, Portfolio Assessment, Summative Writing Achievement Tests, Students' Attitudes.

1. INTRODUCTION

The significant place that writing enjoys as one of the major productive skills that learners need to meet various academic and professional requirements has triggered interesting questions about how it should be instructed and, accordingly, assessed. Traditional summative writing achievement tests that have been adhered to for several decades proved their inability to fully account for the complexity of the writing skill and the objectives set for it. Writing, as recognized in several educational publications, remains among the most problematic language skills, especially for foreign language learners (Al-Qadi, 2014; Brown & Lee, 1994; Elbow, 2000; Nezakatgoo, 2011; Tabatabaei & Assefi, 2012; Raimes, 1983).

Moroccan EFL students, as many other EFL and/or ESL students, find it hard to clearly and accurately express themselves through writing not only in English, but also in French and Arabic languages (The Supreme Council for Education, Training, and Scientific Research, 2009). Poor students' performance in various writing sub-skills and strategies persists among the major issues still reported in the Moroccan EFL literature (Abouabdelkader, 2018; Bouziane, 1999; Fati, 2013; Haoucha, 2005; Hiddas, 1996; Nemassi, 1991). This state led to embracing new process-oriented assessment alternatives like portfolio assessment, self-assessment, peer assessment, etc. in an effort to compensate for the limitations of the summative-product approaches to writing assessment and, hence, promote the overall writing performance of the students. Clearly underscored in the *pedagogical guidelines for TEFL* and other similar ministerial documents is the fact that the new curriculum is deeply influenced by and highly requires the principles of performance assessment (Ministry of National Education (MEN), 2007; Ministerial Circular N° 142 – 07).

Nevertheless, these pedagogical and assessment alterations, according to the researcher's knowledge, have not been coupled with any empirical evidence to be signaled neither with a view to their actual implementation nor with a view to their expected outcomes in relation to students' learning and achievement. Albeit much has been articulated in the *Official Pedagogical Guidelines* on the implementation of the new alternative modes of assessment like portfolio assessment and their pedagogical merits, many teachers and students might still question their pedagogical significance and relevance, particularly under the existing measurement-driven restrictions. The purpose of this study is to address such concerns by providing sound empirical evidence about whether or not portfolio-based writing assessment practices can lead to any significant impact on the Moroccan EFL students' writing skills. Additionally, the study casts light on how the students perceive portfolio as an alternative mode of assessment within the Moroccan EFL writing classes.

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2.   LITERATURE REVIEW
2.1 Portfolio assessment

Although portfolios have widely been used since a long time ago, their exploitation for assessment purposes in education is still relatively new at least in measurement-driven systems like the Moroccan one. As described by Brown and Hudson (1998), portfolios are "a fairly new type of assessment" (p. 664). The interest in their use, as assessment devices, has initially emerged in the literature in the field of composition before their widespread dissemination in other disciplines (Terwilliger, 1997). The notion of portfolio has often been segmented into two parts: port which means "to carry" and folio which refers to a large collection of materials such as documents, papers, pictures, etc., (Sandford & Hsu, 2013).

When passed to education, there seems to be a wide variety of views and interpretations as to what the concept implies and how it should be developed and put into practice. In one of the well-cited definitions, Arter and Spandel (1992) describe portfolio as
 "a purposeful collection of student work that tells the story of the student's efforts, progress, or achievement in (a) given area (s). The collection must include student participation in the selection of portfolio contents, the guidelines for selection, the criteria for judging merits, and evidence of student self-reflection" (p.36).

Lam (2018a), with a more specific focus on writing instruction and assessment, equates writing portfolios to "student dossiers which store their coursework in a systematic and purposeful way. For instance, students are encouraged to keep their notes, quizzes, homework assignments, and examination papers for review and reflection throughout the study period" (p.3). In the same way, Weigle (2002) describes portfolios as "a classroom-based tool which facilitates students to regularly compile and reflect upon works-in-progress in order to enhance their writing experiences and academic achievements" (cited in Lam, 2018b, p.25).

According to these definitions, it becomes clear that portfolio is neither just a way to fold up students' work nor only a means to show off what is already completed (Brown, 2004; Lam, 2018a; Paulson et al., 1991; Weigle, 2002). It is, rather, as most views agree, a well-planned, systematic, and ongoing process wherein students are deeply engaged in managing and assessing their learning; carefully planning, selecting, and compiling the appropriate evidence for subsequent reflection and evaluation.

Hamp-Lyons and Condon (2000) identified nine key characteristics that well-designed portfolio assessment projects should include:

1.   Collection: portfolios should include several writing performances developed in the regular learning circumstances.
2.   Range: collection should include a wide range of performances in various topics in various genres, for a variety of purposes and a variety of audiences.
3.   Context richness: portfolio assessment should encourage students'/writers to bring their experiences in the form of their writing in the usual learning circumstances where instruction and assessment are intertwined.
4.   Delayed evaluation: even in traditional testing contexts where grading is the sole purpose, portfolio provides students with more chances and time for revision before final evaluation.
5.   Selection: portfolios give students the opportunity to select the best works to include in the portfolio and/or the best works within the portfolio to be evaluated.
6.   Student's centered control: portfolio assessment gives students the opportunity to take control over their learning by creating, revising, reflecting upon their work, and select the best works that represent them.
7.   Reflection and assessment: students have opportunities to self-reflect upon their work, gain feedback from their peers and teachers before and even after developing their final drafts.
8.   Growth along specific parameters: portfolio might be designed to track students' writing growth overtime.
9.   Improvement overtime: portfolio can help readers whether or not the writer improved from one draft to another and from the first draft to the final one.

2.2 Previous research on the impact of portfolio assessment on writing skills

When implemented according to the principles above, portfolio assessment is expected to bring fundamental changes to the learning atmosphere and, therefore, engender positive impacts on students' writing skills. Studies by Lucas (2008) and Kathpalia and Heah (2008) have arrived at interesting findings that highly support this contention. Lucas (2008) and Kathpalia and Heah (2008) investigated how portfolio assessment as an evaluation scheme could serve undergraduate students' communicative competencies. Through analyzing collections of students' reflective essays and their comments regarding their improvements, the researchers in both studies found out that the participants effectively identified and addressed the various linguistic problems affecting their writing performance and realized substantial improvement not only at the linguistic level, but also at the cognitive, affective, and social aspects of learning.

Using experimental designs, Ghoorchaei, Tavakoli, and Ansari (2010) compared the impact of portfolio assessment and the conventional ways of assessment on sixty-one Iranian EFL students' writing skills. The students were randomly put into the experimental group, which received portfolio assessment, and the control group, which underwent the traditional assessment. The analysis of the collected data revealed that the experimental group students outperformed the control group ones in their overall writing ability and in the sub-skills of focus, elaboration, organization, and vocabulary. Furthermore, the investigated students

exhibited positive attitudes toward portfolio assessment as a means for improving their confidence, writing sub-skills, and reflection skills. Nezakatgoo (2011) arrived at similar findings with a sample of 40 Iranian university students. After implementing portfolio assessment and traditional testing with two groups of students over the entire semester, the researcher remarked a more significant improvement in the experimental group students' grades and writing skills than their counterpart students in the control group.

Moradan and Hedayati (2012) conducted a similar study with a broader perspective in which they compared portfolio assessment, student-teacher conferences, and the traditional approach in terms of their impact on the writing performance of two experimental groups (N=30) and a control group (N=32) in Iran. The results of the study indicated that the experimental groups outperformed the control group on the post-test while there was no significant difference between the performance of the two experimental groups at the end of the study. Chelli (2013) analyzed the writing scores of 30 high school Algerian students before and after being exposed to self-assessment through portfolio assessment. The results of this analysis showed that the participants not only significantly improved their writing abilities in terms of accuracy, grammatical complexity, and organization but also improved their attitudes and metacognitive skills necessary for effective writing.

Along the same lines, Boumediene, Berrahal, and Harji (2016) examined the effectiveness of portfolio assessment in enhancing the Algerian students' writing ability and writing strategies and processes. Analyzing the data collected via Pre-test/Post-test, English Writing Evaluation Exam, Self-Reporting Questionnaire, and Analytic Scoring Rubric, it was noticed that there was a notable improvement in the writing performance of the participants and their writing product skills. It was further remarked that there was a significant increase in the participants' use of writing processes as a result of portfolio assessment. Farahian and Avarzamani (2018) reached the same conclusions in their examination of the effect of portfolio assessment on developing Iranian EFL writers' metacognition and writing skills. The analysis of the differences between the experimental group students (N=38) and the control group students (N=31) at the beginning and the end of the study revealed that the portfolio assessment group outperformed the control group in both metacognition and writing proficiency. Also, the findings demonstrated that the experimental group students held a positive view of formative assessment and teacher/peer feedback.

These studies all show promising results regarding the utility of portfolio assessment as a means for enhancing students' writing skills. However, there also exist numerous studies that did not arrive at similar conclusions. To begin with, Song and August (2002) led an experimental study in which they examined the writing performance of two groups of advanced ESL university students. One group was examined using the traditional writing test (WAT) while the other group was assessed using the WAT along with portfolio assessment. The results of the study showed that there were no significant differences between the two groups in terms of their writing ability. In the same vein, Aliweh (2011) examined the differences between an experimental group and a control one of 30 college students each in terms of their writing competence in the Egyptian context. Whereas the control group students kept traditional paper portfolios, the experimental group students developed their essay portfolios using various online resources and reflection and revision techniques. Notwithstanding that, the results of the study revealed that e-portfolios did not yield any significant effects on students' writing competence compared to the control group students.

In another empirical attempt, Nosratinia and Abdi (2017) carried out a study in which they compared the effect of portfolio assessment and summative assessment on the Iranian EFL learners' writing ability, anxiety, and autonomy. The study involved 70 intermediate-level learners who were randomly assigned into a portfolio assessment group (N=35) and a summative assessment one. The analysis of the pre- and post-test results indicated that the portfolio assessment group maintained a reasonable level of anxiety and achieved a higher level of autonomy than the summative assessment group. However, the results did not exhibit any significant differences between the two groups in what concerns writing scores when controlling for the impact of the pre-test. Following a quite similar methodology, Arshya et al., (2019) reported there were no significant differences between the performance of an experimental group and a control one of 16 intermediate students each in IELTS writing though there were significant differences between them in grammar.

Taking all the aforementioned studies together, it appears that most studies shared highly ambitious results regarding the effectiveness of portfolio assessment as a means for overcoming various linguistic and strategic difficulties that usually encounter EFL learners while writing. Still, other studies, though few in number, did not yield any significant differences in the students' writing performance after exposing them to portfolio-based writing assessment practices. This might raise questions about the effectiveness of the tool itself and/or the way it is put into practice and the factors related to its implementation. As recommended by Herman, Aschbacher, and Winters (1992) and Tsagari (2004), alternative assessments should be developed and piloted in context with students and teachers before any definite conclusions about its positive effects on teaching and learning are drawn. The purpose of this study is to pilot and examine the potential of portfolio as an alternative mode of assessment within the Moroccan EFL writing classes.

3. RESEARCH QUESTIONS
To achieve the objectives of the study, two major research questions were formulated:
1. Does portfolio assessment have any significant impact on the Moroccan EFL students' writing skills?

2. How do the Moroccan EFL students perceive portfolio assessment to impact their writing skills?

4. RESEARCH DESIGN & METHODOLOGY

To address the research questions above, the study relied on a quasi-experimental design with two separate classes of students. The two classes were randomly assigned into experimental and control groups. The two groups were pretested before exposing them to the treatment, then, post-tested again to determine whether there were any significant differences between them concerning the investigated variables or not. The experimental group benefited from ongoing portfolio-based assessment activities accompanied by various reflection activities (self- and peer-assessment, and student-teacher conferences) while the control group was tested using the regular summative writing achievement tests. Additionally, the researcher examined the differences between the pre-test and the post-test results for each group so as to determine whether there were any significant improvements between the two stages of study or not. Figure 1 below summarizes the design of the study.

Figure 1: Research design
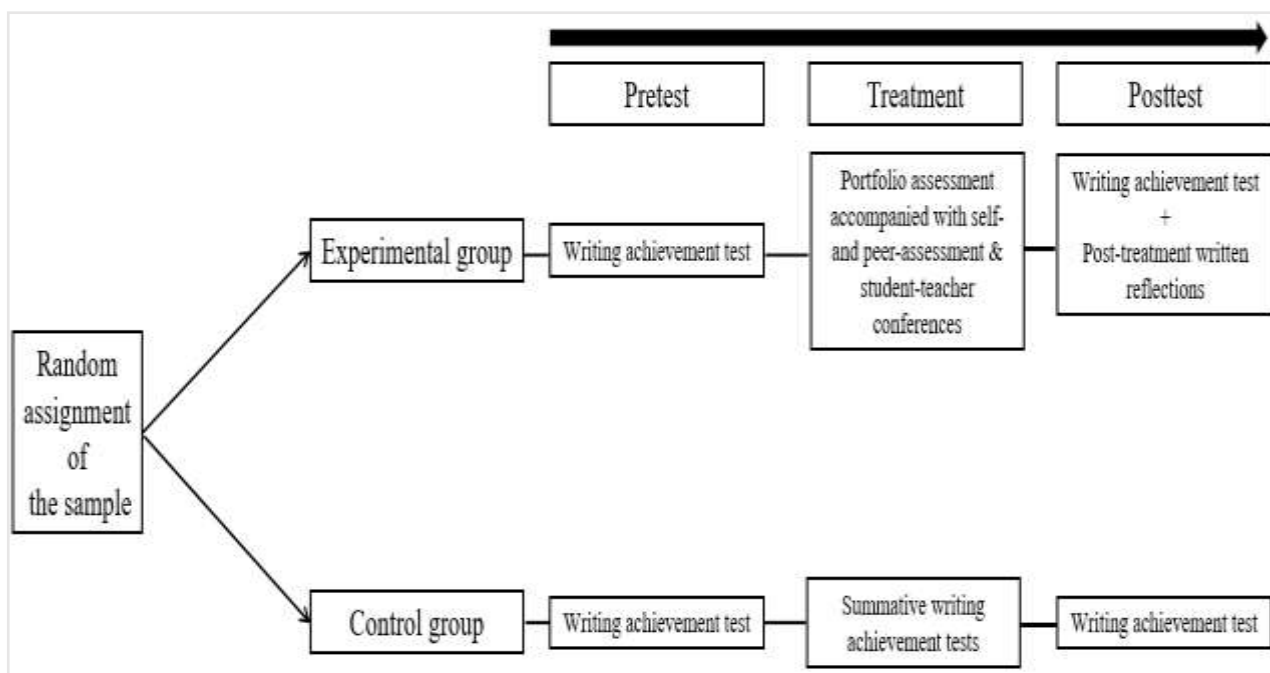
5. PARTICIPANTS

The sample of the current study consisted of two independent groups with a total number of 48 common core students from Elmansour Edahbi High School, Morocco. They were studying English as a foreign language as a part of the high school program. The sample comprised 21 male students and 27 female students. They were attending two separate classes. Their age ranges between 15 and 17 years old and the vast majority of them belong to the 'same' social and economic category, ranging between middle and low-class families according to the available data. They speak either Tamazight or Arabic language as their mother tongue and they were all exposed to English as a foreign language only for one academic year in the 9th grade.

6. INSTRUMENTS

Although the current study falls within the scope of quasi-experimental research, it also made use of students' written reflections to obtain additional insights into the students' experiences with the treatment and its impact on their writing skills.

a. Writing Achievement Test

The pre-post writing achievement test was developed exclusively for the purpose of the current study. It was constructed in line with the course objectives and topics outlined in the *Pedagogical Guidelines* for TEFL and the textbooks in use along with the needs of the students in mind. It consisted of two semi-guided writing activities that elicited the students' familiarity with the format and layout of two specific writing genres (email and letter writing) and their ability to use these genres to serve different communicative purposes, making use of various writing sub-skills recommended in the Moroccan *Pedagogical Guidelines* for TEFL and the *Assessment Orientations*: relevant and adequate content, appropriate structure and layout of the target writing genres, accurate use of mechanics, appropriate and variety of vocabulary, accurate grammar (MNE, 2007a & 2014).

To check the validity of the test, it was shared with many instructors and experts in the field for proofreading and analysis before they were pilot-tested with a group of students similar to the ones involved in the study. Generally, it was confirmed that the

writing genres selected, the prompts, and the instructions provided are clear and appropriate enough to the students' needs, level, and the purpose of the study. The students' writing performance was scored following the Analytic Rating Scale which specifies a set of criteria that are most desired in a writing product. The maximum possible score of the test was 20 points, 10 points for each writing assignment. This score is distributed among the different writing criteria above in the same way recommended in the baccalaureate exam specifications which is a major reference for writing assessment at all high school levels in Morocco: 3 points for the relevance and appropriateness of the content, 2 points for organization, 1 point for mechanics, 2 points for appropriateness and variety of vocabulary, and 2 points for accuracy of grammar. The students' final products in both the pre- and the post-stages of the study were scored by two trained judges who are familiar with the writing skill and the assessment criteria adopted in the study. The inter-rater reliability results reached .96 in the piloting stage and .98 in both the pre- and the post-stages of the study. Still, the sum of scores obtained from the two raters was divided by two to attain the average scores before analyzing the data.

b. Post-Treatment Written Reflections

In order to enrich the quantitative data put forth by the pre-post tests, the researcher included a post-study reflection question at the end of the portfolio model implemented. The question is "How did you find the experience of portfolio assessment in writing?" It prompted the participants to openly discuss their experiences with the treatment provided and express their views about it, highlighting its pluses and minuses, and identifying any further issues that should be accounted for when putting it into practice. To avoid any kind of confusion and elicit the maximum data possible from the students, the question was translated into the Arabic language and the participants were encouraged to respond using the Arabic language. The students were also informed that their views and reflections had nothing to do with the course requirements and, hence, they would not in any way affect them or their final achievement in the course. Rather, they were encouraged to express themselves as honestly and objectively as possible, underlying both the pros and the cons of the treatment, and raising any other possible remarks or concerns they see relevant to their experiences with it.

7. PROCEDURE

The experiment was implemented as a part of the ordinary classroom practices throughout the academic year. Before the beginning of the treatment, the students were provided with a portfolio template to use. The template includes the main objectives of the portfolio, the key writing tasks to be completed, and the accompanying reflection and assessment activities. The study was implemented according to Hamp-Lyons and Condon's model (2000). In each writing session, students were required to write their first drafts on a specific theme, self-assess them and exchange them for peer assessment using the pre-established checklists. Then, sit for a short individual conference with the instructor before producing their final drafts. At the end of each semester, students were asked to reflect upon all the accumulated final products and select the best products to be summatively graded. As for the control group, it was introduced to the same skills, contents, and language points, following the same order and methodology as the experimental group. However, the control group students were not required to compile any product or perform any sort of revision or reflection activities other than the feedback they received from the instructor.

8. DATA ANALYSIS

As already stated above, the current study employed both quantitative and qualitative methods of data collection. The quantitative data was gathered via the pre- post-writing achievement test whereas the qualitative data was collected by means of students' written reflections. The quantitative data was analyzed using independent samples *t*-test with both descriptive and inferential statistics through SPSS software. The qualitative data, on the other hand, was analyzed using content analysis or more precisely what is referred to as thematic analysis, also known as conceptual analysis (Wilkinson & Birmingham, 2003). Thematic analysis, as explained by Braun and Clarke (2006), involves "identifying, analyzing, and reporting patterns (themes) within the data" (p.6). In the present study, the focus was mainly geared toward the key phrases and statements related to the major research questions under investigation. The analysis was carried out by carefully reading and identifying the students' views around the major recurring statements relevant to the effectiveness/ineffectiveness of the treatment provided in relation to the enhancement of the writing skills. These statements were counted and classified according to the different writing sub-skills relevant to the main interest of the study.

9. FINDINGS
9.1   pre- Post Writing Achievement Results

The first major research question investigated whether or not portfolio assessment has any significant positive impact on the on the overall writing performance of the Moroccan EFL students. To answer this question, the control and the experimental groups' means and standard deviations in both the pre-test and post-test were computed. Furthermore, Independent Samples *t*-Test was used to measure the significance of the differences between the two groups. Tables 1 and 2 depict the obtained results.

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Table 1. Independent Samples t-Test of the Differences in Writing Achievement Between the Experimental Group and the Control Group in the Pre-Test and the Post-Test

Groups	Number	Test	Mean	Standard deviation	t- value	Sig. Value	Sig. level
Experimental	24	Pre-test	10,0781	3,76479	,068	,946	Not sig.
Control	24		10,1635	4,85200			
Experimental	24	Post-test	14,7604	2,65317	-3,332	,002	Sig.
Control	24		11,0052	4,84116			

Table 1 describes the mean scores and standard deviations of the experimental and control groups in the pre- and post-writing achievement tests. A quick look at the table shows that the total mean scores and standard deviations of the two groups were so close to each other that there was not a statistically significant difference at the 0.5 level between them at the very beginning of the study (p=.946). The total mean score of the control group in the pre-test was 10.1635 with a standard deviation of 4.85200. Likewise, the total mean score of the experimental group was 10.0781 with a standard deviation of 3.76479. These results imply that both groups started the study with an average writing achievement level that is slightly beyond the average score of the test which is 10.

The results of the post-test, on the other hand, reveal that there was a statistically significant difference between the control group and the experimental group in their overall writing achievement in favor of the latter group. The p-value, as shown in the table above, is below the specified level of significance .05 (p=.002), indicating that there was a statistically significant difference between the two groups in favor of the experimental group. The control group achieved a total mean score of 11.0052 with a standard deviation of 4.84116 whereas the experimental group obtained a total mean score of 14.7604 with a standard deviation of 2.65317. These results entail that the two groups were about 4 points apart. Accordingly, the experimental group seems to have ended up the study with a better writing achievement level than the control group.

To further detail on the results related to writing achievement, the two groups' results at different writing sub-skills (relevance and adequacy of the content, appropriateness of layout and organization, mechanics, appropriateness and variety of vocabulary, and grammar) were also computed and analyzed. The results are presented in the Table 2.

Table 2. Independent Samples t-Test Results of the Differences in Writing Sub-Skills Achievement Between the Experimental Group and the Control Group in the Pre-Test and the Post-Test

Writing Sub-Skills	Groups	N.	Test	Mean	Standard Deviation	t-value	Sig. value	Sig. level
Relevance & Adequacy of the Content	Experimental	24	Pre-test	3,2448	1,41252	,220	,827	Not sig.
	Control	24		3,3438	1,69408			
	Experimental	24	Post-test	4,4323	1,05035	-2,178	,036	Sig.
	Control	24		3,4688	1,89617			
Layout & Organization	Experimental	24	Pre-test	2,2500	,75542	-,098	,922	Not sig.
	Control	24		2,2240	1,05229			
	Experimental	24	Post-test	3,7656	,31127	-5,895	,000	Sig.
	Control	24		2,6250	,89534			
Mechanics	Experimental	24	Pre-test	,7135	,24024	,559	,579	Not sig.
	Control	24		,7604	,33362			
	Experimental	24	Post-test	1,1927	,29941	-3,431	,001	Sig.
	Control	24		,8698	,35062			
Appropriateness & Variety of Vocabulary	Experimental	24	Pre-test	2,0833	,87358	-,516	,608	Not sig.
	Control	24		1,9479	,94259			
	Experimental	24	Post-test	2,8125	,56386	-2,892	,006	Sig.
	Control	24		2,1667	,93735			
Grammar Accuracy	Experimental	24	Pre-test	1,7865	,72745	,398	,693	Not sig.
	Control	24		1,8875	1,01052			
	Experimental	24	Post-test	2,5573	,68165	-2,777	,008	Sig.
	Control	24		1,8750	,99181			

Table 2 displays the mean scores obtained in different writing sub-skills, namely relevance and adequacy of the content, appropriateness of layout and organization, mechanics, appropriateness and variety of vocabulary, and grammar accuracy on the

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pre-test and the post-test. As already detailed before, there was not a statistically significant difference at the 0.5 level between the control and the experimental groups' overall writing achievement in the pre-stage of the study (*p*=.946). This result is evidenced in the results relevant to different writing sub-skills. The mean scores of the control group in the writing sub-skills were: 3.3438 in content relevance and adequacy, 2.2240 in appropriateness of layout and organization, .7604 in mechanics, 1.9479 in vocabulary, and 1.8875 in grammar and the mean scores of the experimental group were: 3.2448 in content relevance and adequacy, 2.2500 in appropriateness of layout and organization, .7135 in mechanics, 2.0833 in vocabulary, and 1.7865 in grammar. Hence, there were no statistically significant differences at the 0.5 level between the two groups' achievement at these levels despite the small exposed differences among them in various components. The students in both groups appeared to begin the study from approximately the 'same' point with an average achievement level in different writing sub-skills.

In contrast to the results of the pre-test, the results of the post-test show that there was a statistically significant difference at the 0.5 level (*p*=.002) between the control group and the experimental group in their overall writing achievement in favor of the experimental group. This difference, as displayed in the table above, is reflected in the results related to different writing sub-skills with mean scores of 3.4688 in content relevance and adequacy, 2.6250 in appropriateness of layout and organization, .8698 in mechanics, 2.1667 in vocabulary, and 1.8750 in grammar for the control group and mean scores of 4.4323 in content relevance and adequacy, 3.7656 in appropriateness of layout and organization, 1.1927 in mechanics, 2.8125 in vocabulary, and 2.5573 in grammar for the experimental group. Thus, the experimental group appeared to have ended up the study with a better writing achievement level in different writing sub-skills compared to the control group.

To test the significance of the differences between the pre- and post-test results for both groups in both their overall writing achievement and the achievement at the level of different writing sub-skills, Independent *t*-Test was used. The results of this analysis are summarized in Table 3 below.

Table 3. Independent Samples t-Test Results of the Differences in Writing Sub-Skills Achievement Between the Pre-Test and the Post-Test for Each Group

Scope	Groups	N.	Test	Mean	Standard Deviation	*t*-Value	Sig. Value	Sig. Level
Relevance & Adequacy of the Content	Experimental	24	Pre-test	3,2448	1,41252	-3,305	,002	Sig.
		24	Post-test	4,4323	1,05035			
	Control	24	Pre-test	3,3438	1,69408	-,241	,811	Not Sig.
		24	Post-test	3,4688	1,89617			
Layout & Organization	Experimental	24	Pre-test	2,2500	,75542	-9,088	,000	Sig.
		24	Post-test	3,7656	,31127			
	Control	24	Pre-test	2,2240	1,05229	-1,422	,162	Not Sig.
		24	Post-test	2,6250	,89534			
Mechanics	Experimental	24	Pre-test	,7135	,24024	-6,115	,000	Sig.
		24	Post-test	1,1927	,29941			
	Control	24	Pre-test	,7604	,33362	-1,107	,274	Not sig.
		24	Post-test	,8698	,35062			
Appropriateness and Variety of Vocabulary	Experimental	24	Pre-test	2,0833	,87358	-3,436	,001	Sig.
		24	Post-test	2,8125	,56386			
	Control	24	Pre-test	1,9479	,94259	-,806	,424	Not Sig.
		24	Post-test	2,1667	,93735			
Grammar Accuracy	Experimental	24	Pre-test	1,7865	,72745	-3,788	,000	Sig.
		24	Post-test	2,5573	,68165			
	Control	24	Pre-test	1,8875	1,01052	,043	,966	Not sig.
		24	Post-test	1,8750	,99181			
Total	Experimental	24	Pre-test	10,0781	3,76479	-3,740	,001	Sig.
		24	Post-test	14,7604	4,84116			
	Control	24	Pre-test	10,1635	4,85200	-,602	,550	Not sig.
		24	Post-test	11,0052	4,84116			

Table 3 demonstrates that there are remarkable differences between the results obtained in the pre-test and the results achieved in the post-test in favor of the post-test, especially for the experimental group. The latter scored higher in different writing sub-skills and, hence, marked a remarkable improvement in the overall writing achievement. The control group, on the contrary, marked a

slight, but statistically insignificant, improvement in the various sub-skills and, therefore, realized a small improvement in the overall writing achievement. The results of the *t*-Test analysis confirm that there are highly significant differences between the results obtained by the experimental group in all the five writing sub-skills on the pre-test and those obtained on the post-test in favor of the post-test which is not actually the case for the control group.

9.2 Written Reflections Results

The second main research question was interested in tapping the experimental students' perceptions of the usefulness of portfolio as an alternative mode of assessment within the Moroccan EFL writing classes. The students' qualitative reactions were carefully read and analyzed in an attempt to complement the quantitative data that has been put forward by the pre-post writing achievement tests. Generally, the students' written responses included several different themes that go beyond the scope of the formulated research questions. Therefore, the focus, as already stated, was restricted to the themes that are of direct relevance to the interest of the current study. Three major themes were generated, including writing skill improvement, portfolio assessment challenges, and future portfolio assessment prospects. Each theme is presented in an independent section with its supporting qualitative evidence. The qualitative evidence is presented in form of tables with frequencies and percentages to have an idea about the general tendencies among the learners. In this light, it is worth stating that 3 out of 24 students did not provide any written reflections on their assessment experience.

9.2.1 Students' reflections in relation to writing skills improvement
Table 4. The Coded Comments Related to Writing Skills improvement

Comments	Frequency	Percentage
The portfolio helped me to improve my overall writing ability.	15	35%
Portfolio helped me improve my ideas.	2	5%
Portfolio assessment helped me learn how to order different ideas appropriately.	1	2%
I learned how to structure my writing.	2	5%
I learned how to spell some words correctly.	4	9%
I learned how to write phrases correctly.	2	5%
Portfolio assessment helped me expand my vocabulary.	8	19%
Portfolio assessment helped me acquire new information about writing and know the components of writing in English.	2	5%
I learned how to link different ideas and paragraphs.	2	5%
. Portfolio assessment helped me develop my writing style.	2	5%
. Portfolio assessment helped me express myself better.	2	5%
Total	42	100%

Data from Table 4 provide ample evidence on how students perceived portfolio assessment to affect their overall writing ability as well as its related sub-skills. A look through the statements in the table and their corresponding frequencies indicates that most of the students were highly positive about the impact of portfolio assessment on their general writing ability and its sub-skills. As displayed in the table, a rather significant number of the students (35%) perceived portfolio assessment as being highly instrumental in developing their overall writing ability. Another considerable proportion of the students touched upon the various writing areas with which, they thought, portfolio assessment assisted them, including ideas (5%), organization (5%), spelling (9%), vocabulary (19%), etc.

9.2.2 Students' Reflections in Relation to Portfolio Assessment Challenges
Table 5. The coded comments related to Portfolio Assessment Challenges

Comments	Frequency	Percentage
Portfolio assessment takes much time and efforts and it needs a lot of patience.	1	20%
I do not understand the instructor's comments and feedback.	1	20%
Too many topics to write about.	1	20%
Too many frequent examinations.	1	20%
Implementing portfolio assessment only in writing classes makes students care only about writing at the expense of other language skills.	1	20%
Total	5	100%

Concerning the challenges that students thought to have impeded the implementation of portfolio assessment, only five comments were identified in the students' reflections. One student pointed to the great amount of time, efforts, and patience it demands. Another student underlined his/her inability to figure out the instructor's written feedback. The third and the fourth students highlighted the work and the assessment load associated with portfolio assessment. The fifth student pointed out that portfolio-based writing assessment directs students to care only about the writing skill at the expense of the other language skills.

9.2.3 Students' reflections in relation to the future prospects of PA
Table 6. The Coded Comments Related to the Future Prospects of PA

Comments	Frequency	Percentage
I hope that we will have a writing portfolio in the coming academic years so that we can improve our writing skills better.	3	75%
It is necessary to expand portfolio assessment practices in all possible ways at different school levels.	1	25%
Total	4	100%

As regards the comments related to the future prospects of portfolio assessment within the Moroccan EFL writing classes, the students' written reflections included two basic points. The first one is shared by three students and it explicitly calls for the integration of portfolio assessment in writing classes while the second one recommended the generalization of this tool to other educational levels.

10. DISCUSSION

The present study was intended to investigate whether or not portfolio assessment and the techniques it incorporates have any significant impact on the Moroccan EFL students' writing skills compared to the regular traditional summative writing achievement tests. Comparing the pre- and the post writing achievement test results of the experimental and control groups shows that there was a statistically difference between the two groups in favor of the experimental group. Also, the analysis of the differences between the pre- and the post stages of the study for each group reveals that the experimental group realized a statistically significant improvement between these two stages. This improvement was not the case for the control group whose writing achievement level slightly, but nonsignificantly increased. This finding is true for the various writing sub-skills focused upon in the present study, including relevance and adequacy of the content, paragraph organization, appropriateness and variety of vocabulary, accuracy of grammar, and mechanics (see Tables 1, 2, 3, & 4). The realized improvement on part of the experimental group is further corroborated with the qualitative evidence from the students' written reflections which comprised a number of comments that depict the different ways in which portfolio assessment assisted them with writing.

These findings are consistent with those of numerous studies reviewed here and elsewhere. For example, they are consistent with the findings reached by Lucas (2008) and Kathpalia and Heah (2008) who found out, through the analysis of the students' reflective writings, how portfolio assessment served students not only from the linguistic point of view, but from the cognitive, affective, and social perspectives as well. Using experimental designs, Ghoorchaei et al. (2010), Nezakatgoo (2011), Moradan and Hedayati (2012), Chelli (2013), Boumediene et al. (2016), and Farahian and Avarzamani (2018) also affirmed that portfolio-based writing assessment groups outperformed the traditional summative writing assessment groups in both their overall writing ability as well as in the writing sub-skills of content/focus, elaboration, organization, vocabulary, and mechanics. Nevertheless, the above findings are not in agreement with other studies like Song and August's study (2002), Aliweh's study (2011), and Arshya et al.'s study (2019). Nonetheless, these studies all still advocate the utilization of portfolio-based assessment practices for addressing EFL and ESL learners' needs. This advocation might be attributed to the pedagogical benefits experienced in each of these studies during and at the end of the treatment period. Although Song and August (2002) did not report any significant differences in the experimental group students' writing performance compared to the control group students, the researchers remarked that the portfolio assessment group students were twice likely to pass than those examined using only traditional writing test. Also, the researchers noticed that portfolio assessment was able to identify more than twice the number of ESL students who proved successful in the next English course. Such remarks might have interesting implications regarding the potential of portfolio as an alternative mode of assessment in EFL and ESL settings. Similarly, Aliweh (2011) and Arshya et al. (2019) detected no significant differences in the students' overall writing competence after developing portfolios. Nonetheless, both studies underscored the fundamental role of portfolio assessment in modifying the students' roles in assessment, creating authentic opportunities for self- and peer assessment, and encouraging collaborative work among students and teachers.

The difference between these results and the ones obtained in this study can be explained in several different ways. To start with, portfolio assessment, as explicated before, is characterized by great variety and flexibility and there is no single right or perfect way of putting it into work (Gottlieb, 1995; Klenowski, 2002). This renders its implementation quite bewildering for many novice

researchers and instructors. In the present study, portfolio assessment was operationalized as a purposeful and systematic process wherein different writing assignments are completed, accumulated, and reflected upon using the specified checklists, primarily for formative assessment purposes. In light of this, it is worth stating that the participants were instructed on the importance of portfolio development and trained on how to use the various techniques it incorporates (self- and peer assessment checklists) for generating the desired writing improvements. Furthermore, all the writing assignments and reflection activities that were designed as a part of the portfolio assessment project were, unlike the studies above, completed inside the classroom, making it possible for the researcher to ensure that the assigned work is completed by the participants themselves and that the appropriate guidance and support is provided to them whenever necessary. Such factors might explain the significant results obtained at the end of the study. Closely related to operationalization factors is the level and the quality of students' engagement in the writing processes throughout the treatment period. Instead of sitting for a one-shot summative writing examination that often lasts for 30-40 minutes, which was the case for the control group students, the experimental group students were involved in a set of recursive writing processes, multi-drafting, revising, editing, and rewriting before realizing their final products. This process-oriented view to writing assessment goes hand in hand with the process approach to writing instruction which views writing as a non-linear and generative process whereby meaning is constructed (MEN, 2007). However, the added value of portfolio assessment is that it expects students "to collect, reflect, and select works in progress in support of learning" (Lam, 2018a, p.14). Likewise, portfolio assessment does not only care about the strategic side of writing, as the process approach to writing does, but it does also give equal importance to the rhetorical and linguistic aspects of writing. This interpretation is well-supported by the students' written reflections and most of the studies reviewed earlier which cast light on how portfolio assessment assisted the students with both lower-level writing skills such as spelling, mechanics, and grammar and higher-level writing skills such as organization, development of ideas, ordering events, etc. (see Table 4).

Another noteworthy factor that might have contributed to the results reached in the present study is the rich and systematic feedback that the experimental group students benefited from throughout the treatment period. Feedback, as emphasized in numerous educational sources, is at the very heart of the new assessment culture (Black & Wiliam, 1998; Lam, 2018a; Hattie & Timperley, 2007) and it proved to be highly effective in the enhancement of students' writing skills (Farahian & Avarzamani, 2018; Lucas, 2008; Kathpalia & Heah, 2008; Moradan & Hedayati, 2012; Nezakatgoo, 2011; Ozer & Tanrıseven, 2016). Researchers generally differentiate between two basic forms of feedback, namely intrinsic feedback which is directly related to students' involvement in a task, and extrinsic feedback which takes the form of an external comment on an action and it has formally been provided by the instructor (Slowey & Watson, 2003). The present study combined both types of feedback, gradually proceeding from the internally generated feedback to the externally formed one. This varied and gradual use of feedback might have allowed students to learn at their own pace and maximize their benefits from this process. Additionally, the researcher's insistence on the application of the diverse feedback suggestions from each writing draft to another and from each writing assignment to another might have rendered this process more productive for all.

A further factor that deserves special attention in relation to the obtained writing achievement results is the students' engagement in various reflective processes throughout the treatment period. Reflection, as put by Kathpalia and Heah (2008), "happens when students examine their work against established criteria, analyze the effectiveness of their efforts, and plan for improvement" (p.300). This is exactly what happened in the current study. After each writing draft, students were invited to use the specified checklists to self- and peer assess their work before discussing it with the instructor. In doing so, students could have become much more attentive to the most critical assessment criteria and gain control over the various linguistic problems usually concentrated on in summative writing examinations. This is in line with Andrade and Wang's (2008) study, which reported a positive relationship between the (elementary) students' involvement in the process of generating criteria for writing assessment and their increased writing achievement. In the present study, the participants did not actually take part in generating the writing assessment criteria given their limited linguistic and educational background. However, they were made aware of these criteria and required to apply them for the improvement of their writings.

CONCLUSIONS

The current study aimed at examining if portfolio assessment has any significant positive impact on the Moroccan EFL students' writing skills. Based on the analysis of the differences between the experimental group and the control group and the improvement made by each group between the pre- and the post stages of the study, it becomes crystally clear that the experimental group students outperformed the control group ones in both their overall writing performance as well as in the sub-skills of content relevance and adequacy, organization and layout, mechanics, grammar, and vocabulary. Hence, lending further support to the most prevalent educational and assessment theories and the relevant studies, which strongly recommend the use of portfolio as a supplementary learning and assessment device that can help address the multifarious linguistic and non-linguistic complexities associated with the writing and other language skills. Nevertheless, the present study is not without limitations. The study, as stated before, was conducted in a formal educational context which made it impossible for the researcher to opt for a true experimental research design with a more representative sample that better reflects the characteristics of the target educational

setting. Correspondingly, it is highly recommended to involve larger and more randomized samples of participants with diverse educational and socio-economic characteristics. Also, the current study was limited to the pre-test-treatment-post test design while it would be equally, if not more important, to opt for more complex, process-oriented research designs that track participants' writing development along the treatment period. Finally, the current study focussed only on the impact of portfolio-based assessment practices on students' writing skills. Therefore, the impact of portfolio assessment on other language skills like reading, listening, and speaking should also be investigated.

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