

The Effects of Electronic Portfolio Assessment and Dynamic Assessment on Writing Performance

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Abstract

The present study set out to investigate the effects of electronic portfolio assessment and dynamic assessment on Iranian EFL learners' writing performance. The participants of the study included 97 Iranian female EFL learners at the intermediate level who were selected based on convenience sampling. The participants were divided into three groups: two experimental and one control. Before the treatment, they were given Preliminary English Test (PET) to assure that they were not significantly different in terms of overall language proficiency. Following that, the three groups received a writing pretest. As for treatment, the first experimental group received e-portfolio assessment and the second group was exposed to dynamic assessment while the third group served as the control group. The whole treatment lasted 20 sessions. Upon finishing the treatment, the three groups received a writing posttest. The results of ANCOVA indicated that both electronic portfolio assessment and dynamic assessment significantly improved Iranian EFL learners' writing performance. However, there was not any statistically significant difference between the effects of electronic portfolio assessment and dynamic assessment on improving Iranian EFL learners' writing performance. Based on the results of the present study, EFL teachers can use electronic portfolio assessment and dynamic assessment to improve learners' writing performance.

Keywords: Assessment, Portfolio, E-portfolio assessment, Dynamic assessment, Writing

Introduction

Writing is considered as an important language skill since it assists individuals in communicating their ideas in everyday life settings (Bangert-Drowns, Hurley, & Wilkinson, 2004). Writing is also a crucial skill in the world of business as it is employed for correspondence. Moreover, writing assists university students and scholars in writing scientific reports and communicating research findings (Graham & Perin, 2007).

Consequently, mastery of writing can contribute to the success of individuals in business, academic contexts, and daily life tasks which entail writing (Alexander, 2008). Highlighting the importance of writing, Bangert-Drowns et. al., (2004) maintain that writing can be considered a form of learning in itself as so much learning transpires when learners make efforts to write. Writing, however, is regarded as a challenging skill to master for many English as a Foreign Language (EFL) learners (Mohammadi, 2016). Writing is viewed challenging since during the writing process individuals have to work with various aspects of the language including spelling, vocabulary, grammar, semantic, discourse, and pragmatics (Stevenson, 2016). As Storch (2005) holds, the challenge of writing gets even harder to manage when it comes to EFL learners since EFL learners not only have to struggle to learn the skill but also have to gain mastery of another language concerning syntax, semantics, discourse, etc.

In the Iranian context of language learning, recent research findings (e.g., Borjjan, 2013; Ketabi & Torabi, 2015; Koosha & Yakhabi, 2012; Mohammadi, 2016) reveal that the progress in Iranian EFL learners' writing is not satisfactory. As Borjjan (2013) maintains, in the Iranian EFL context, writing receives the least attention in language classes. Ketabi and Torabi (2015) raise the same concern asserting that writing is the last skill which is attended to in Iranian EFL classes. As Mohammadi (2016) notes, many Iranian EFL learners obtain low scores on writing tests and consequently, the overall satisfaction of both teachers and learners with the writing test results is low. Meanwhile, many Iranian EFL learners' perceptions towards their writing skills are negative and they do not consider themselves successful when it comes to EFL writing (Amirian, 2016). As Mohammadi (2016) and Amirian (2016) hold, Iranian EFL learners lack sufficient knowledge for writing regarding grammatical accuracy, cohesion, coherence, choice of words, and organization of the text.

One of the ways which is likely to offer contributions to the enhancement of writing is the use of appropriate assessment types including portfolio assessment (Farahian, & Avarzamani, 2018) and electronic portfolio assessment. As Kılıç (2009) maintains, portfolios were created as assessment tools for writing performance. According to Barrett (2006), a portfolio refers to "a collection of work that a learner has selected, organized, reflected upon, and presented to show understanding and growth over time" (p. 1). As Prop et al. (2007) maintain, the portfolio is employed to help learners become more reflective of their achievements. Similarly, Van Wesel and Prop (2008, p. 73) mention that "support for self-reflection" is the main tenet of e-portfolios which leads to learners' progress. Donkers et al. (2008) hold that "despite variations in content and format, portfolios report on work done, feedback received, progress made, and plans for improving competence" (p. 81).

With the advent of technology, e-portfolios emerged as an offshoot of conventional portfolios in the realm of education (Willis & Wilkie, 2009). Barrett (2000) defines e-portfolios as the simultaneous application of technology and portfolios to provide more learning and assessment opportunities for learners compared to conventional portfolios. As Barrett (2000) notes, an e-portfolio should be an organized collection of homework in a digital format that can reflect learner's improvement along the course and is not a collection of homework that has been put together haphazardly. Barrett (2000) lists videos, audio tracks, graphics, and texts as the contents which can constitute e-portfolios. Highlighting

the advantages of e-portfolios, Driessen et al. (2007) concluded that e-portfolios improve student motivation, and are more user-friendly compared to paper-based portfolios. As Willis and Wilkie (2009) note, conventional paper-based portfolios constitute the foundation for the development of e-portfolios. Accordingly, the same principles underpinning the implementation of conventional portfolios should be observed in implementing e-portfolios. Therefore, an e-portfolio, in the context of the present study, refers to a collection of learner's writing assignments in a digital format that is selected, organized, and reflected upon by the learner.

A review of previous studies indicates that e-portfolios are effective in improving writing performance. For instance, Meshkat and Goli (2012) investigated the impact of electronic portfolio assessment on Iranian EFL learners' writing. The findings revealed that the use of e-portfolios led to the improvement of learners' writing performance. Similarly, Masaeli and Chalak (2016) sought to explore the effect of using electronic portfolios on students' writing skills. The findings of their study showed that the learners who received e-portfolio assessment obtained better scores on the writing posttest compared to the control group. Khodashenas and Rakhshi (2017) investigated the effect of electronic portfolio assessment on the writing performance of Iranian EFL learners. Their findings demonstrated that electronic portfolio assessment improved the writing performance of the participants in the experimental group. Likewise, the findings of Karami et al.'s (2018) study on the effect of electronic portfolios on Iranian EFL learners revealed that e-portfolios improved their participants' writing performance.

Apart from e-portfolios, dynamic assessment can also offer contributions to the development of writing. According to Lidz (1987), dynamic assessment refers to the "interaction between an examiner-as-intervener and a learner-as-active participant, which seeks to estimate the degree of modifiability of the learner and how positive changes in cognitive functioning can be induced and maintained" (p. 4). As Oskoz (2005) maintains, dynamic assessment is mainly rooted in the theory of the Zone of Proximal Development (ZPD) proposed by Vygotsky (1987). According to Vygotsky (1978), ZPD refers to "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86). According to Poehner and Van Compernelle (2011), mediation lies at the heart of dynamic assessment as it is through mediation that learners can be assisted from where they are to fully accomplish the learning goals which can potentially be realized. Crick and Yu (2008) define dynamic assessment as a form of alternative assessment that is process-oriented and mediation-based. As Aljaafreh and Lantolf (1994) maintain, mediation in dynamic assessment should be provided within the ZPD and "the idea is to offer just enough assistance to encourage and guide the learner to participate in the activity and to assume increased responsibility for arriving at the appropriate performance" (p. 469). Thus it can be inferred that if assistance is provided in a step-wise manner from the most implicit form of feedback to the most explicit form, not only an appropriate level of assistance is provided but also maximum participation and responsibility on the learner's part are assured. Put it another way, with step-wise mediation the learner receives feedback within its ZPD and thus step-wise mediation has the highest potential for progress (Aljaafreh & Lantolf, 1994). Accordingly,

in the context of the current study, a dynamic assessment was implemented via offering mediation in a step-wise manner from the most implicit form of feedback to the most explicit type.

A review of previous empirical investigations reveals that dynamic assessment is effective in improving EFL learners' writing performance. Antón (2003) reported that the inclusion of mediation via dynamic assessment procedures improved the participants' speaking and writing skills. Xiaoxiao and Yan's (2010) findings revealed that the use of dynamic assessment led to better writing performance. Shrestha and Coffin's (2012) findings demonstrated that teacher mediation via dynamic assessment led to the improvement of writing performance among undergraduate business students. The findings of an investigation by Alemi (2015) indicated that dynamic assessment can help Iranian EFL learners gain more awareness regarding the criteria for writing evaluation. As Alemi notes, the dynamic assessment assists learners in becoming more accurate in assessing their writing ability which can consequently improve their writing performance.

Although the results of previous studies have revealed the effectiveness of both electronic portfolio assessment and dynamic assessment on writing improvement, none of these studies, to the researchers' best knowledge, has compared the effects of electronic-portfolio assessment and dynamic assessment on enhancing EFL learners' writing performance. Thus, the present study aims to compare the effects of these two types of assessment on Iranian EFL learners' writing performance. Moreover, the study is also an attempt in replicating the previous studies to cross-validate the extant research findings and enrich the literature concerning the effects of electronic portfolio assessment and dynamic assessment on Iranian EFL learners' writing performance. Therefore, the following research questions are formulated:

- RQ1: Does the electronic portfolio assessment improve Iranian EFL learners' writing performance?
- RQ2: Does dynamic assessment improve Iranian EFL learners' writing performance?
- RQ3: Is there any statistically significant difference between the effects of electronic portfolio assessment and dynamic assessment on improving Iranian EFL learners' writing performance?

Method

Participants

The participants of the present study included nine intact classes at the intermediate level of proficiency at the Safir Language Institute in Tehran, Iran. They were all female learners within the age range of 30 to 42 ($M=35.5$). Persian was the mother tongue of the learners and they were studying English as a Foreign Language (EFL). The nine classes were divided into three groups. These classes were selected as they were already at the intermediate level of language proficiency as the learners had all taken the placement test of

the institute and passed the previous terms before studying the intermediate level based on the syllabus of the institute. To make sure that the three groups were not significantly different in terms of language proficiency, a One-Way ANOVA was run on the scores of the three groups on PET. The total number of participants in the nine classes was 97. Three of the classes consisting of 31 learners served as the experimental group which received electronic portfolio assessment. Another three classes including 34 learners served as the second experimental group and received dynamic assessment as treatment. The remaining three classes which contained 32 learners were considered as the control group. These classes were selected based on convenience sampling procedures as it was not possible to select classes randomly from among all the classes at the Language Institute. The researchers obtained consent from the students in all nine classes. It should be noted that although the classes were selected based on convenience sampling procedure, the assignment of the classes to the three groups was random.

Instruments

Three instruments were used in the present study which are explained below:

Preliminary English Test (PET). First of all, the Preliminary English Test (PET) was administered to ensure the homogeneity of the participants in terms of language proficiency. This test consisted of 35 reading and 7 writing questions (90 minutes), 25 listening questions (30 minutes), and the speaking section (10 minutes). As reliability is sample dependent, the test was piloted on 30 participants having similar characteristics to the main participants, and Cronbach's Alpha was run on the scores. The reliability index turned out to be .78 which is considered acceptable.

Writing Pretest and Posttest. Two writing tasks (See Appendix A) extracted from two other PET versions served as writing pretest and posttest. The participants were asked to write texts consisting of 100 words for each given task. Thus, the writing pretest and posttest topics were different from the writing part in the complete PET given to the learners to assure homogeneity in terms of language proficiency.

Writing Scoring Scheme. Cambridge General Mark Schemes for writing (Appendix B) was used as the rating scale to rate the participants' pretest and posttest. The criterion on each band included the use of language, use of structures, use of vocabulary, organization, and coherence. It should be mentioned that the rating scale is based on the criteria ranging from 0-5 for each criterion which was then converted to 15. Thus each criterion (e.g., use of vocabulary) is assigned a score from 1 to 5 based on the band descriptors in the General Mark Scheme. The 5 scores are added up and divided by 5 to produce a single final score. To assure the reliability of this scoring scheme for this study, inter-rater reliability was established. To this end, two writing instructors including two colleagues with MA degrees in TEFL with more than 10 years of teaching experience, rated the writing for the pretest and posttest. Then, the Pearson correlation was run on the writing pretest scores and writing posttest scores assigned by the two raters. According to the reliability analysis, the values of correlation for the pretest and posttest were 0.74 and 0.76, respectively which are considered acceptable indices of reliability.

Procedure

Initially, the researchers obtained consent from the 97 learners to take part in the present study. Then, the participants were given a PET to make sure that they were at the intermediate level of language proficiency. The three groups of the study consisted of three classes each. The first experimental group received e-portfolio assessment while the second group was exposed to dynamic assessment and the third group was considered as the control group. Then the three groups of the study received a writing pretest. Next, the treatment began. E-portfolio was carried out in the current study in line with Barrett (2000). Barrett (2000) considers the following features for e-portfolios:

- An e-portfolio is in a digital format
- The files relevant to the learning for inclusion in the portfolio are selected by the learner
- The content of the portfolio is organized by the learner
- The learner should reflect upon the portfolio content

To implement e-portfolios in the e-portfolio assessment group, the learners were initially introduced to e-portfolio assessment. To this end, the instructor showed a sample of e-portfolio to learners and asked them to look through it and ask any questions they might have. The sample of e-portfolio consisted of a folder on the teacher's laptop which included writing assignments collected by a student from the previous semester. The folder consisted of three sub-folders. The first sub-folder contained 10 writing samples that the portfolio owner had selected and included in the portfolio. The second folder contained 20 files which were the corresponding corrected writing samples. In this sub-folder for each writing assignment in the first sub-folder, there were two files. These two files contained the teacher's comments in the margins and learner's modifications to the manuscript. Learners were instructed that for each writing assignment they would receive feedback twice. The first time, feedback would be given on grammar, vocabulary, and word choice and for the second time, the feedback would target organization and coherence. The third sub-folder contained 10 files showing self-reflection. Learners were informed that this file should be written after they receive comments on each writing assignment twice. In each self-reflection file, they should include information on what things they learnt during each writing assignment, what things they would like to know more about, the things they found enjoyable or boring concerning the comments, or the whole experience, whether the experience was contributing to their writing in general or not, and whether they would like to receive the same treatment for their future English courses. The participants were also informed that these are just some instances they can include in their reflection files and they could write about anything else which they found worth mentioning. Moreover, the learners were also informed that they were free to include anything related to their writings (e.g., video clips explaining relevant grammatical points, links related to vocabulary exercises, and so on) in their folders. They were also told that this was only a sample of an e-portfolio

and they did not have to organize the folder content and follow the same format i.e. number of subfolders strictly.

The learners were then instructed on how to collect and organize their writing in the folders. They were told that it was important to complete the writing assignment for each session and put it in their folders. Every two sessions a writing task was given to the learners to complete at home. Learners were instructed to write a text consisting of 100 words on each topic. They were required to submit their writing to the instructor and the instructor provided them with feedback. The learners were then asked to address the instructor's comments and resubmit their revised drafts. They were given feedback once more and after revising their writings for the second time, they were required to write their self-reflection. The learners were then asked to decide whether they wanted to include the four files (i.e., the initial writing assignment, two corrected files with comments, and the related self-reflection file) in their folder or not. Overall, during the treatment, 10 writing assignments were done by the learners and the number of writing sample files and their corresponding files selected and included by learners in their e-portfolios were between four and nine.

As for the dynamic assessment group, the learners were initially introduced to the type of assessment they would receive during the course for their writing. They were told that the assessment would be provided in a stepwise manner and indirect hints and no direct feedback would be given. Following that, in each session learners were given a topic to write about. They were required to submit their writing to the instructor for the following session. The learners were then provided with dynamic assessment for the grammar and vocabulary in their writings. To do so, the instructor read through the writings, and upon spotting a grammar or vocabulary error, she read the sentence aloud to the writer. If the writer was able to find the error in the sentence and/or the phrase and correct it, the instructor provided no hints or mediation. However, if the learner was not able to identify the error and correct it, the instructor provided mediation and hints in a step-wise manner in line with Aljaafreh and Lantolf (1994). To do so, the following forms of mediation were provided:

- The teacher read the erroneous sentence and/or phrase and paused when right before the error
- The teacher repeated the whole phrase or sentence while reading the erroneous part questioningly
- The teacher repeated just and only the part of the sentence with the error
- The teacher brought the error to the learners' attention and asked what was wrong with that grammar or vocabulary used
- The teacher wrote out the incorrect word or grammar on the board and underlined the error while giving time to the learner to correct it
- The teacher asked either-or questions assisting the learner to come up with the correct grammar or vocabulary
- The teacher provided the correct answer and asked the learner to give a reason as to why it was correct

- The teacher explained why the grammar or the vocabulary provided in the previous step was correct.

As can be seen, step 1 is the most implicit type of mediation while step 8 is the most explicit mediation.

As for the control group, the participants received neither e-portfolios nor dynamic assessment procedures. The learners in this group were given a writing assignment every two sessions. Therefore, they submitted a writing assignment for every other session and received direct feedback. During the next session, they submitted their corrected draft and received direct feedback concerning the parts, content, or language they had difficulty with. During the same session, they revised their writing once more. Finally, their assignments were checked by the instructor again and a writing topic was given to them for the next session. The whole treatment lasted 23 sessions (11 weeks) for the three groups. During the first session, learners received the PET. The second session was devoted to the writing pretest. 20 sessions were allocated to treatment and the 23rd session was devoted to the writing posttest. Overall, 10 writing assignments were done in each group and two sessions were spent on each writing assignment. After the treatment, the learners in the three groups received the writing posttest. To analyze the writing pretest and posttest scores for addressing the research questions, the scores of the pretest were considered as covariates and the researchers used ANCOVA.

Results

As it was already mentioned, to make sure that the three groups of the study were not significantly different in terms of overall language proficiency, a PET was administered to the three groups and a One-Way ANOVA was run. Table 1 displays the results of One-way ANOVA on the scores of the three groups.

Table 1

Results of One-way ANOVA on PET Scores for the Three Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2250.671	2	1125.335	81.078	.114
Within Groups	1304.690	94	13.880		
Total	3555.361	96			

The significance level of .114 is higher than 0.05 indicating that the three groups were not statistically different in terms of overall language proficiency.

ANCOVA was used to answer the research questions. In the ANCOVA analysis for the present study, writing pretest scores of the three groups served as the covariates, while e-portfolio assessment and dynamic assessment served as the independent variables. To run ANCOVA, a number of assumptions had to be checked. These assumptions included the

normal distribution of the data, the linearity of relationships, homogeneity of variances, and homogeneity of slopes of regression (Pallant, 2010). To check the normality of the data sets, Skewness and Kurtosis values were checked. Table 2 presents the descriptive statistics and Skewness and Kurtosis values for the pretest and posttest scores of the three groups.

Table 2

The Descriptive Statistics and Skewness and Kurtosis Values for the Pretest and Posttest Scores

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis		
								Statistic	Std. Error	Statistic
E-portfolio Pretest	31	5.00	14.00	8.90	2.32	5.42	-.411	.421	-.589	.521
Dynamic Assessment Pretest	34	6.00	14.00	9.17	2.12	4.51	.540	.503	-.516	.588
Control Pretest	32	6.00	14.00	8.78	1.94	3.789	.944	.914	.816	.809
E-portfolio Posttest	31	10.00	15.00	12.45	1.52	2.323	.407	.421	-.878	.821
Dynamic Assessment Posttest	34	11.00	15.00	12.85	1.07	1.160	.409	.403	-.785	.788
Control Posttest	32	7.00	15.00	9.34	1.85	3.459	.433	.414	.875	.809
Valid N (listwise)	31									

As evident in Table 2, all the Skewness and Ratio values for the data sets are within the range of +/- 1.96 which indicates that the normality assumption is not violated (Pallant, 2010).

The linearity of relationships assumption was checked using the scatterplot. Figure 1 displays the scatterplot for the pretest and posttest of the three groups.

Figure 1

The Scatterplot for the Pretest and Posttest of the Three Groups

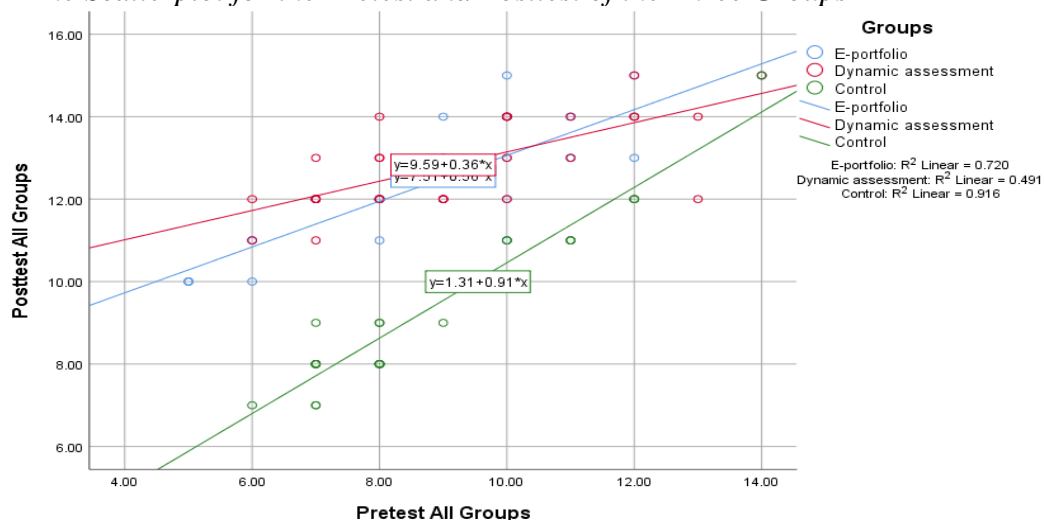


Figure 1 indicates that the relationships between covariates (pretests) and dependent variables (posttests) are linear. Thus the linearity assumption is met. To check the homogeneity of variances, Levene's test of variances was used. Table 3 presents the results of Levene's test of variances.

Table 3

Levene's Test of Equality of Error Variances

Dependent Variable: Posttest All Groups			
F	df1	df2	Sig.
.693	2	94	.502

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Groups + Pretest all + Groups * Pretest all

As indicated in Table 3, the significance value is .50 which is higher than the critical value of .05. Thus it can be inferred that the variances are homogenized, hence the homogeneity of variances assumption is met. The assumption of homogeneity of slopes of regression was checked via consulting the Tests of Between Subjects Effects. The respective results are presented in Table 4.

Table 4

Tests of Between-Subjects Effects for Checking the Homogeneity of Slopes of Regression

Tests of Between-Subjects Effects						
Dependent Variable: Posttest All Groups						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	405.811a	5	81.162	153.858	.000	.894
Intercept	188.239	1	188.239	356.841	.321	.797
Groups	57.124	2	28.562	54.145	.402	.543
Pretestall	155.784	1	155.784	295.318	.002	.764
Groups * Pretestall	20.759	2	10.380	19.677	.582	.302
Error	48.004	91	.528			
Total	13432.000	97				
Corrected Total	453.814	96				

a. R Squared = .894 (Adjusted R Squared = .888)

As presented in Table 4, the significant value ($p = .582$) for the interaction of grouping and covariate exceeds the significant value of .05. Thus, the conclusion can be drawn that the assumption of homogeneity for slopes of regression is met.

Addressing the Research Questions

Having established the prerequisite assumptions, the researchers ran ANCOVA to address the research questions. Table 5 displays the results of ANCOVA.

Table 5
ANCOVA Test Results

Tests of Between-Subjects Effects						
Dependent Variable: Posttest All Groups						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	385.051 ^a	3	128.350	173.590	.000	.848
Intercept	202.587	1	202.587	273.993	.000	.747
Pretestall	146.398	1	146.398	197.998	.321	.680
Groups	214.647	2	107.324	145.152	.000	.757
Error	68.763	93	.739			
Total	13432.000	97				
Corrected Total	453.814	96				

a. R Squared = .848 (Adjusted R Squared = .844)

As noticed in Table 5, the significant value corresponding to the Groups turned out to be lower than the critical value of .05 and the partial eta squared equals 0.757. Therefore, it can be concluded that the three groups were significantly different in their performance on the posttest. To find which one of the groups outperformed the others, the posttest score means were compared. Table 6 displays the pairwise comparison results of the posttest mean scores for the three groups.

Table 6
Pairwise Comparison for the Three Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig. b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
E-portfolio	Dynamic Assessment	0.40	.891	.871	2.21	6.40
	Control Group	3.11*	.921	.003	7.41	11.21
Dynamic Assessment	E-portfolio	-.40	.940	.871	-6.20	-2.44
	Control Group	3.51*	.770	.002	2.30	5.63
Control Group	E-portfolio	-3.11*	.840	.003	-11.84	-7.81
	Dynamic Assessment	-3.51*	.650	.002	-5.69	-2.30

As indicated in Table 6, there is a significant difference between the score means of the e-portfolio group and the control group ($P=.003<0.05$). Thus it can be inferred that electronic portfolio assessment significantly improved Iranian EFL learners' writing performance. Moreover, as displayed in Table 6, there is a significant difference between the score means of the dynamic assessment group and the control group ($P=.002<0.05$). Therefore, it can be inferred that dynamic assessment significantly improved Iranian EFL learners' writing performance. However, as seen in Table 6, the difference between the

score means of the e-portfolio group and dynamic assessment group is not statistically significant ($p=.871>0.05$). Therefore, it can be inferred that there is not any statistically significant difference between the effects of electronic portfolio assessment and dynamic assessment on improving Iranian EFL learners' writing performance.

Discussion

The present study set out to explore the effects of electronic portfolio assessment and dynamic assessment on Iranian EFL learners' writing performance. Additionally, the study aimed to probe any statistically significant difference between the effects of electronic portfolio assessment and dynamic assessment on improving Iranian EFL learners' writing performance. The results of ANCOVA indicated that both electronic portfolio assessment and dynamic assessment significantly improved Iranian EFL learners' writing performance. However, there was not any statistically significant difference between the effects of electronic portfolio assessment and dynamic assessment on improving Iranian EFL learners' writing performance.

The findings of the present study concerning the positive effect of e-portfolio assessment on writing performance are in line with Meshkat and Goli's (2012) results. They explored the effect of electronic portfolio assessment on Iranian EFL learners' writing and concluded that the use of e-portfolio led to the improvement of learners' writing performance. The findings of the current study are also in congruence with Masaeli and Chalak's (2016) results. They sought to examine the impact of using electronic portfolios on students' writing skills and discovered that the learners who received e-portfolio assessment obtained better scores on the writing posttest compared to the control group. The results of the present study corroborate the findings of Khodashenas and Rakhshi's (2017) investigation. In their research, Khodashenas and Rakhshi (2017) explored the impact of electronic portfolio assessment on the writing performance of Iranian EFL learners. Their findings indicated that electronic portfolio assessment improved the writing performance of Iranian EFL learners. Likewise, the findings of the present study confirm the results of Karami et al.'s (2018) investigation in which they concluded that e-portfolios improved their participants' writing performance.

The results of the current study, however, are not in congruence with the findings of Van Wesel and Prop (2008). In their study, Van Wesel and Prop concluded that learners did not perceive any difference in the usefulness of compiling paper-based and e-portfolios in contributing to their performance. Moreover, they reported that learners' perceptions about the support for self-reflection using an electronic portfolio did not differ significantly from those of users of the paper-based portfolio. It seems that the salient reasons behind the difference in results of the current study and those of Van Wesel and Prop (2008) are likely to be the contextual and cultural factors as the present study was carried out in Iran in the context of EFL and Van Wesel and Prop's (2008) investigation was carried out in the USA with medical students. Another source causing the disparity of the results for the present study and Van Wesel and Prop's (2008) could be the duration of the study, as Van Wesel

and Prop's (2008) study lasted a whole academic year while in the current study ran for only 20 sessions. A third source contributing to the difference in results could be the inclusion of students' perceptions concerning the use of portfolios which was not the focus of the present study.

The findings of the current study regarding the positive effect of dynamic assessment on writing performance are in line with Antón's (2003) investigation. Antón (2003) came to the conclusion that dynamic assessment procedures improved the participants' speaking and writing performance. The results of the present study support the findings of Xiaoxiao and Yan's (2010) investigation. Their study revealed that the use of dynamic assessment led to better writing performance. Similarly, the results of the present study consolidate the findings of a study by Shrestha and Coffin (2012). Their findings indicated that dynamic assessment improved the writing performance among undergraduate business students. Likewise, the results of the current study are a confirmation of the findings of Alemi's (2015) investigation. Alemi (2015) concluded that dynamic assessment helps students in becoming more accurate in assessing their writing ability which can consequently improve their writing performance.

The findings of the present study concerning the positive effect of e-portfolio on writing performance can be justified based on the advantages that portfolios in general and e-portfolios in a particular offer to the learning process. As Barrett (2006) notes, portfolios pave the way for learners to reflect upon the learning process which can lead to better performance. Moreover, e-portfolios have the advantage of removing the monotony of traditional learning approaches which can improve learners' interest and motivation (Barrett, 2000). Therefore, reflection and more motivation and interest can be the reasons for the positive influence of e-portfolios on writing performance.

The results of the current study regarding the positive effect of dynamic assessment on writing performance can be justified based on the theory of ZPD. Based on ZPD (Vygotsky, 1978), to improve learning, collaboration, and guidance on the part of more capable peers can help learners to better accomplish the learning goals. According to Poehner and Van Compernelle (2011), the step-wise mediation provided by the instructor can trigger learners' potential and consequently lead to more independent thinking, problem-solving, and finally effective learning.

Conclusion

The results of the present study concerning the positive effects of e-portfolio and dynamic assessment on writing performance should not be considered conclusive. Thus the replication of the present study can provide a more comprehensive picture concerning the effects of e-portfolio and dynamic assessment on writing assessment. As the participants of the present study were all female and within the age range of 30 to 42, researchers are encouraged to replicate the same study with other age groups and/or male participants to enrich the existing findings and contribute to the literature. Moreover, the participants of the present study were all at the intermediate level of language proficiency since the

researchers had access to an adequate number of participants at this proficiency level. Future studies can include participants at other levels of language proficiency to increase the generalizability of the findings. The perceptions of learners towards the use of e-portfolio and dynamic assessment were not assessed in this study. Future studies may evaluate learners' perceptions towards the implementation of e-portfolios and dynamic assessment to provide a clearer picture of these two assessment types and how they contribute to writing performance.

The results of previous studies (e.g., Alemi, 2015; Karami, et al., 2018; Masaeli & Chalak, 2016; Meshkat & Goli, 2012; Xiaoxiao & Yan, 2010) and the present study confirm the effectiveness of e-portfolios and dynamic assessment toward writing performance. It can be concluded that e-portfolios and dynamic assessments have great potential to be implemented for writing improvement. However, it needs to be pointed out that both dynamic assessment and e-portfolio assessment bring about certain challenges. Poehner (2008), highlighting the challenges for the use of dynamic assessment, notes that:

Intending to mediate development in the L2 classroom entails being open to providing any form of mediation learners require.... While one may certainly enter an interaction with a plan that includes forms of mediation that might be offered, interaction in the ZPD requires that this plan be altered and perhaps even abandoned at any moment. (p. 104)

Along the same lines, e-portfolios have their challenges when it comes to their implementation. Some of the learners may have a certain level of dislike towards organizing their learning content in a certain way. Moreover, some learners may clutter their e-portfolios with a diverse array of files which makes it difficult and time-consuming for the teacher to evaluate. Although these two assessment types have certain challenges, their implementation can offer insights into the learning and teaching processes in general and the assessment process in particular. Therefore, dynamic assessment and e-portfolios are likely to be beneficial both for the teachers and learners. Therefore, EFL teachers are encouraged to employ e-portfolio assessment and dynamic assessment to improve learners' writing performance. EFL teacher educators may endeavour to provide EFL teacher trainees with greater awareness concerning the implementation of e-portfolios and dynamic assessment to assist teachers in managing the difficulties involved in the administration of these two assessment procedures.

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Appendix (A)

Topics for the Pretest and Posttest

Pretest

This is part of a letter you receive from an English pen friend.

We're doing a project on life in the UK at school and I wondered if you could tell me something about a particular festival you celebrate as a family.

You are writing a letter to this pen-friend.
Write the letter in about 100 words.

Posttest

A friend in your English class called Elena has invited you to her wedding.
Write an email to Elena. In your email you should:

- congratulate her on her marriage
- say how pleased you are to be invited
- ask her if there is anything she would like as a present

Write in about 100 words.

Appendix (B)

Writing Scoring Scheme

Band	Criteria
5	<p>Very good attempt:</p> <ul style="list-style-type: none"> • Confident and ambitious use of language. • Wide range of structures and vocabulary within the task set. • Well organized and coherent, through the use of simple linking devices. • Errors are minor, due to ambition and non-impeding. • Requires no effort by the reader.
4	<p>Good attempt:</p> <ul style="list-style-type: none"> • Fairly ambitious use of language. • More than an adequate range of structures and vocabulary within the task set. • Evidence of organization and some linking of sentences. • Some errors, generally non-impeding. • Requires only a little effort by the reader.
3	<p>Adequate attempt:</p> <ul style="list-style-type: none"> • Language is unambitious, or if ambitious flawed. • Adequate range of structures and vocabulary. • Some attempt at organization; linking of sentence not always maintained. • A number of errors may be present but are mostly non-impeding. • Requires some effort by the reader.
2	<p>Inadequate attempt:</p> <ul style="list-style-type: none"> • Language is simplistic/limited/repetitive. • Inadequate range of structures and vocabulary. • Some incoherence; erratic punctuation. • Numerous errors, which sometimes impede communication. • Requires considerable effort by the reader.
1	<p>Poor attempt:</p> <ul style="list-style-type: none"> • Severely restricted command of language. • No evidence of a range of structures and vocabulary. • Seriously incoherent; absence of punctuation. • Very poor control; difficult to understand. • Requires excessive effort by the reader.
0	<ul style="list-style-type: none"> • Achieves nothing: language impossible to understand, or totally irrelevant to the task.