

Original Papers

Polish Psychological Bulletin
2020, vol. 51(3) 226–235
DOI – 10.24425/ppb.2020.134729

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The impact of portfolio-based writing instruction on writing performance and anxiety of EFL students

Abstract: Although the usefulness of alternative assessment in second language (L2) classrooms has been extensively recognized by scholars, the use of the various types of alternative assessment in English as a Foreign Language (EFL) contexts has not received adequate attention by L2 practitioners. To contribute to this line of research, the present research sought to examine the impact of a portfolio-based writing instruction on writing performance and writing anxiety of EFL students. To this end, a number of 41 EFL learners were recruited as the participants of this study. They were then randomly divided to an experimental group (N=21) and a control group (N=20). The participants in the experimental group received portfolio-based writing instruction, whereas the control group received the regular writing instruction with no archiving of students' drafts in portfolios. Timed-writing tasks and the Second Language Writing Anxiety Inventory (SLWAI) were employed to collect the data. The results obtained from ANCOVA analysis revealed that the portfolio-based writing instruction aided the participants in improving their writing performance more than the control group. Moreover, it was found that the use of portfolios significantly reduced the L2 writing anxiety of the participants while the traditional writing instruction did not have any significant impact on L2 writing anxiety of the control group. The pedagogical implications for portfolio-based writing instruction are discussed finally.

Keywords: Alternative assessment, portfolio assessment, writing performance, writing anxiety, EFL

Introduction

As the pendulum of educational paradigm has swung towards learner-centered approaches, testing in second language (L2) education has witnessed a radical shift of orientation from a positivistic, psychometric, and test-focused approach to a constructivist, edumetric, and assessment-focused paradigm (Cain, Grundy, & Woodward, 2018; Clarke & Boud, 2018; Gipps, 1994; Lynch, 2001; Mak & Wong, 2018; Puppin, 2007; Sulisty et al., 2020; Young, 2020). This new assessment framework advocates learners' heightened engagement in the process of assessment, finally leading to the higher quality learning (Black & Wiliam, 2009; McNamara, 2001). A type of broad category which is based on the theories underpinning assessment is alternative assessment that is considered as an alternative to standardized testing (Huerta-Macias, 1995). According to Hamayan (1995), alternative assessment is concerned with

“procedures and techniques which can be used within the context of instruction and can be easily incorporated into the daily activities of the school or classroom” (p. 213). Alternative assessment varieties, including different types of assessment such as self- and peer-assessment and portfolio assessment, have attracted L2 researchers and practitioners (Belanoff & Dickson, 1991; Brown & Hudson, 1998; Derakhshan, Rezaei, & Alemi, 2011; Derakhshan & Shakki, 2016; Fathi, Mohebiniya, & Nourzadeh, 2019; Fathi & Shirazizadeh, 2019; Li, Xiong, Hunter, Guo, & Tywoniu, 2020).

Considered as a kind of alternative assessment, portfolio is viewed to be in line with the principles of communicative language teaching and can be employed to learn language more effectively in an authentic and more engaging context (Delett, Barnhardt, & Kevorkian, 2001; Ghoorchaei & Tavakoli, 2019; Young, 2020). Portfolios are considered as purposeful collection of students' work

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demonstrating not only their learning process but also their strengths as well as weaknesses (Genesee & Upshur, 1996). They archive students' learning by keeping a record of their academic work in order to be assessed and be given feedback by teachers and peers (Brown, 2004; Li et al., 2020). Rooted in the social constructivism theory (Cain et al., 2018; Kalina & Powell, 2009), portfolio underscores authentic interactions in which students practice, draft, redraft, revise, and reflect on their writing. According to Hamp-Lyons and Condon (2000), "portfolios provide a broader measure of what students can do because they replace the timed writing context, which has long been claimed to be particularly discriminatory against nonnative writers" (p. 61).

As far as L2 writing is concerned, Hyland (2003) considered portfolio assessment as a reaction against traditional, positivist, and one-shot concept of test in which the learners are not provided with enough freedom to select the topic, redraft, and revise their written tasks. From Hyland's perspective, the use of portfolios in assessing writing "reflects the practice of most writing courses where students use readings and other sources of information as a basis for writing and revise and resubmit their assignments after receiving feedback from teachers or peers" (p. 233). The use of portfolios in writing is also considered as "a collection of texts the writer has produced over a defined period of time to the specifications of a particular context" (Hamp-Lyons, 1991, p. 262). Using portfolios, educators are able to change a high-stakes test-oriented process into a learning-oriented and pedagogically effective process that can enhance writing (Weigle, 1999, 2007). In a portfolio-based writing instruction, the teacher is no longer just the assessor, but he is also assigned the role of a writing coach that aids learners in enhancing their writing ability during the course (Lam, 2018).

Among the three assessment paradigms in writing (Lam, 2018), portfolio assessment is categorized as the individualized paradigm envisioning writers as self-regulated learners who are empowered to self-evaluate, revise, redraft, and then enhance their writing according to received feedback and specified assessment qualities (Earl, 2013). Theoretically speaking, portfolio assessment in writing is grounded in three theories of cognitivism, socio-constructivism, and collaborative learning (Hamp-Lyons & Condon, 2000). Based on cognitivism, portfolio-based writing assessment underscores recursive writing processes usually manifested in the process-oriented portfolio classrooms. Socio-constructivism is concerned with portfolio procedures including collection, self-evaluation, thinking, contextualization of learning, development over time, and learner-focused instruction (Lam, 2018). From the socio-constructivist perspective, learners are inspired to concentrate on the dynamic associations among writers, audience, and the immediate discourse communities via portfolios (Weigle, 2002). Furthermore, with regard to collaborative learning, numerous individuals including learners, and instructors are encouraged to create a learning community to build up writing competencies (Lam, 2018).

Learners using portfolios in their writing courses do not consider ongoing assessment activities as formal tests, but regard them as various pedagogic venues by which they can think, outline, monitor, draft, and revise written tasks with formative feedback (Ghoorchaei & Tavakoli, 2019; Lam, 2018). In such classrooms, learners and practitioners would jointly participate in the portfolio production process in order to create writing knowledge and competencies by being disentangled from the inveterate hierarchies of power (Mak & Wong, 2018). Portfolios also contribute to teacher professionalism in a sense that teachers that use portfolios are required to design, plan, create, and practice related portfolio techniques via group efforts (Lam, 2018). In other words, portfolio assessment empowers teachers by assigning them further professional agency and not considering them as just technicians of assessment (Dixon, Hawe, & Parr, 2011; Lyons, 1998; Obeiah & Bataineh, 2016). Portfolio process also involves significant interaction among learners, colleagues, parents, and principals and since portfolio assessment is usually carried out in teams, it also entails operating in a community of practice (Barrot, 2016, Belanoff & Dickson, 1991).

Anxiety is regarded to be a significant construct in L2 learning as it is an influential affective factor which can impede or foster L2 learning (Horwitz, 2010). Foreign language anxiety is conceptualized as situation-specific feelings of apprehension which can negatively affect language learning process (Horwitz, 2001; MacIntyre & Gregersen, 2012). Writing anxiety, as a skill-specific type of anxiety (Matsuda, 2003), is concerned with a situation in which the L2 writers, in spite of their adequate writing competencies, have difficulty doing writing tasks (Cheng, 2002; Zheng & Cheng, 2018). It is also viewed as the 'fear of the writing process that outweighs the projected gain from ability to write' (Thompson, 1980, p.121). In other words, writing anxiety is associated with harmful feelings and apprehension which can negatively influence the process of writing (McLeod, 1987). L2 learners who have writing anxiety usually experience lack of motivation, low self-esteem, apprehension, tension, procrastination, avoidance, and withdrawal while carrying out L2 tasks (Cheng, 2004). The sources of writing anxiety are usually attributed to a person's writing competence, the amount of readiness to finish the writing task, and the fear of being evaluated or judged by others (Atay & Kurt, 2006; Cheng, 2004; Choi, 2013; Daud, Daud, & Kassim, 2016; Pajares & Johnson, 1994).

Taken together, despite the fact that portfolio assessment is regarded to be effective for language learning in general and L2 writing development in particular, this type of alternative assessment has not been widely practiced in EFL contexts. Moreover, compared with other kinds of alternative assessments which have been widely employed in education, portfolio assessment has received relatively less research attention in EFL classrooms (Yang, 2003). Additionally, with regard to the particular EFL context of Iran, practitioners still prefer summative evaluation of writing tasks and do not favor

learners' engagement in assessment process (Fathi & Khodabakhsh, 2019; Ghoorchaei, Tavakoli, & Ansari, 2010; Naghdipour, 2016). Therefore, in order to further illuminate the role of portfolio assessment in EFL contexts, this study investigated the impact of a portfolio-based writing instruction on writing performance and writing anxiety of EFL students. For this purpose, the following research questions guided this study:

1. Does portfolio-based writing instruction significantly improve writing performance of Iranian EFL learners?
2. Does portfolio-based writing instruction significantly reduce writing anxiety of Iranian EFL learners?

Literature Review

An accumulated body of research has verified the effectiveness of portfolio assessment in L2 writing development (e.g., Apple & Shimo, 2004; Belanoff & Dickson, 1991; Condon & Hamp-Lyons, 1994; Fahim & Jalili, 2013; Ghoorchaei & Tavakoli, 2019; Lam, 2016, 2018; Young, 2020). Although it is beyond the purpose of this section to review all of the related studies, some more relevant studies are reviewed to ground the purpose of this research.

For instance, Obeiah and Bataineh (2016) explored the effectiveness of portfolio assessment in affecting EFL learners' global writing skill and its underlying sub-skills of focus, development, organization, conventions as well as word choice. Concerning the writing instruction for the experimental group, numerous lesson plans according to Hamp-Lyons and Condon's (2000) portfolio model were created and employed for the instruction of the experimental group. The results of this quasi-experimental research indicated that the use of portfolios in writing significantly improved both overall writing and its underlying components. As the justification, the authors believed that providing feedback enables learners to realize their strengths and weaknesses and to improve their writing quality. Furthermore, they attributed the improved writing ability of the experimental group to the self-evaluation, critical thinking, and a sense of autonomy and direction created by the use of portfolios.

In another study, Meihami, Husseini, and Sahragard (2018) examined the usefulness of providing corrective feedback through portfolios in a writing course in influencing the writing performance of EFL learners. The study involved an experimental group who received continuous corrective feedback via portfolio whereas the control group received traditional writing instruction with receiving multiple feedback on various drafts. The results of this study revealed that giving corrective feedback through portfolios was significantly effective in enhancing writing abilities of the participants. The researchers justified the improved performance in the light of the features of portfolio writing including the potentials of portfolios in enhancing writing motivation, autonomous learning, and self-reflection or heightened consciousness.

In a similar line of inquiry, Ghoorchaei et al. (2010) examined the usefulness of portfolio assessment on the

writing ability of Iranian EFL learners. Using a quasi-experimental design, they found that portfolio assessment significantly improved not only the global writing ability but also its underlying dimensions of organization, focus, vocabulary, and elaboration. Besides, the content analysis of the data indicated that the participants held positive perceptions towards the use of portfolios for writing classrooms. The pedagogic benefits of portfolios were also verified by Paesani (2006), who found that writing portfolios positively affected the development of multiple competencies including proficiency skills, content knowledge, as well as grammatical competence. With regard to investigating the attitudes, Wang and Liao (2008) also uncovered learners' perception of portfolio assessment. Their findings indicated that the participants in the portfolio assessment group were more satisfied with the use of portfolios than those in the control group. The participants believed that portfolios could help them overcome their writing weaknesses.

Concerning the effect of portfolios on non-cognitive factors, Farahian and Avarzamani (2018) investigated the effect of portfolios on EFL students' metacognitive awareness, and their writing performance. The results of their study indicated that portfolio assessment was effective in improving EFL participants' writing skills and their metacognitive awareness. Moreover, it was revealed that the participants demonstrated positive attitude towards teacher and peer feedback and the formative nature of portfolio assessment. As a conclusion, the researchers found some advantages for the portfolio assessment in improving self-reflection in doing writing tasks. In the same vein, carrying out an action research, Öztürk and Çeçen (2007) examined the impacts of the use of portfolios on the writing anxiety of L2 learners. As for the treatment, the participants were required to participate in doing five writing tasks and shared three drafts of each task in group workshops. The data were collected by administering L2 writing anxiety scale developed by Cheng (2004) as well as via reflective sessions. The findings revealed that portfolio keeping significantly reduced writing anxiety of the participants.

Nevertheless, it should be noted that not all empirical studies have supported the usefulness of the use of portfolios in improving writing abilities or in positively affecting writing affective variables. For example, Hirvela and Sweetland (2005) reported two case studies which uncovered learners' experiences of portfolios in two L2 writing classrooms. Their findings revealed that although the students held positive attitudes of portfolios, they did not welcome employing portfolios in their writing classrooms. Exploring the perceptions of EFL learners towards portfolio keeping, Aydin (2010) concluded that keeping portfolios in EFL writing was effective in improving vocabulary and grammar, reading, research, as well as writing competencies. However, this study revealed that learners perceived some difficulties when they were engaged in the portfolio keeping process. Likewise, Roohani and Taheri (2015) investigated the impact of portfolio assessment on L2 learners' expository writing

competence. The results of this quasi-experimental study showed that portfolio assessment significantly contributed to improving expository writing ability including its subskills of support, support, and organization. Nevertheless, the effect of portfolios on two subskills of writing convention and vocabulary was not significant.

In another study, Boyden-Knudsen (2001) explored the impacts of analytical corrections and revisions on college students' writing ability in a portfolio assessment contest. The findings of this study indicated that although analytical corrections aided the participants in becoming prepared for the examinations, some participants failed to fully understand the corrections. By the same token, with regard to the effectiveness of revision strategy instruction, Sengupta (2000) questioned the usefulness of the revision procedures in improving text quality in L2 process-oriented writing classrooms. Therefore, she contended that redrafting, in addition to the integration of peer- and teacher feedback into revision, is not likely to enhance the quality of the written text. Moreover, Lam and Lee (2010) found that the students who experienced portfolio assessment felt less frightened with writing, and held a more positive attitude towards revising and redrafting. Nevertheless, it was found that some participants appeared to be more obsessed with the grading than with the learning potentials of portfolios because they liked to receive grades on each draft to be informed of their writing progress.

Overall, given the mixed results of the existing literature of portfolio assessment in L2 writing, it can be argued that the effectiveness of portfolios in L2 writing calls for further empirical research in order to be considered as a viable methodology for L2 writing practitioners (Hamp-Lyons, 1996, 2006; Lam, 2018). Additionally, the vast majority of studies ever conducted in this area have mainly focused on writing skill or its subskills, and few studies have ever examined the usefulness of portfolios in influencing affective dimensions such as writing anxiety.

Methodology

Participants

This study was carried out in a private language school (Gofteman) in Tehran, Iran. Initially, a total number of 62 intermediate EFL students of this institute volunteered to take part in the study.

In order to select the homogeneous number of participants, a version of Preliminary English Test (PET) was administered to all the participants. Based on the obtained scores of PET, 41 learners whose scores fell between one standard deviation above and one standard deviation below the mean were recruited as the homogeneous participants of this study. The participants were then randomly divided to an experimental group ($N=21$) and a control group ($N=20$). All the participants were female students whose age varied from 20 to 24. They were native speakers of Persian and had already completed twelve years of formal education at public schools and

they were college students of different majors or fields of study. The two classes were instructed by the same course instructor who was an experienced teacher of English as a foreign language.

Instruments

English Proficiency Test

In order to select the homogeneous number of the students as the participants of the study, a retired version of Preliminary English Test (PET, B2 version) published by Cambridge Assessment English was administered as the English proficiency test. The test included two parts comprising reading and writing sections. The participants had 60 minutes to answer both sections of the test. The internal consistency of the test was estimated using Cronbach Alpha analysis which showed a relatively high reliability coefficient ($r=.83$).

The Writing Scoring Scale

To rate the students' written tasks, the researchers employed a writing scale developed by Jacobs, Zinkgraf, Wormuth, Hartfiel, & Hughey (1981). This scale which is based on an analytical scoring procedure is concerned with the extent to which a written task meets the five content criteria of communicative quality, organization, paragraphing, cohesion, relevance, and adequacy. This scoring rubric constitutes five subcategories, namely, content, organization, vocabulary, language, and mechanics. It comprises a 100-point scheme based on which 30 points are given to the content of writing, 25 points to language use, 20 points to writing organization, 20 points to vocabulary use, and 5 points to mechanics. To guarantee the inter-rater reliability of the scoring procedure, half of the written essays were rated by an independent writing instructor that had familiarity with this rating scale. The assigned scores of the researchers and the independent rater were subjected to Cohen's Kappa's inter-rater reliability test. The internal consistency coefficient was .79.

Writing Tasks: Two 40-minute essays were administered as the pre-test and post-test of the current study. The two timed-writing essays were general and did not require the students to have any particular background knowledge about the topics. The topics of pre-test and post-test were as follows:

Topic A (pre-test): *Has human harmed the Earth or made it a better place?*

Topic B (post-test): *Should we save land for endangered animals?*

Second Language Writing Anxiety Inventory

To measure writing anxiety of the participants, Second Language Writing Anxiety Inventory (SLWAI), developed and validated, by Cheng (2004) was administered both as pre-test and post-test. This scale includes 22 items measuring three underlying components: Somatic anxiety (7 items), cognitive anxiety (8 items), and avoidance behavior (7 items) with seven items. This questionnaire is

a self-report scale which has a Likert 5-choice response format, including 1 (strongly disagree), 2 (disagree), 3 (undecided), 4 (agree), and 5 (strongly agree). As measured by Cronbach's alpha formula, the internal consistency coefficient for the whole scale was .84 in this study.

Procedure

Before starting the treatment, the timed-writing task (Topic A) and SLWAI were given to the participants of both groups as the pretest of the study. Before the intervention, the participants of the experimental group were briefed on the nature and the objective of the portfolio-based instruction. The portfolio framework employed in this writing course was the *classroom portfolio model* which was based on three consecutive steps of collection, selection, and reflection (Hamp-Lyons & Condon, 2000). The participants were required to do different types of written tasks and write various kinds of essays (i.e. expository, descriptive, narrative, compare & contrast, & persuasive/argumentative) during the course. Every participant in the experimental group was required to write the first draft of the essays and submit it to the teacher. The teacher used IELTS academic writing scoring rubric (UCLES, 2011) to review the first draft and provided each learner with individualized comments and feedback on various dimensions of the essays. More precisely, the teacher took into consideration the four aspects of task achievement (i.e. word count & accurate information), cohesion and coherence (i.e. linking devices & organization of information), lexicon (i.e. using appropriate words, collocation, phrasal verbs & prepositions), and grammatical range and accuracy (i.e. range of grammatical structures, tenses, & punctuation).

The students were asked to review the comments carefully and to think about the revisions as well as their weaknesses and strengths in written essays. The students could also receive suggestion from peers (i.e. peer-assessment) before revising and writing their second drafts at home. Additionally, the participants could sometimes consult the teacher to discuss comments in a one-to-one conference at the end of the class. In the following session, the students submitted the second draft to the teacher who examined the revisions to ensure that they had been correctly revised and in case of necessity gave further feedback to the students. The teacher devoted a separate folder to keeping the first and the revised drafts of the students in the experimental group. The purpose of keeping these folders was to trace each student's progress in writing competencies of students by comparing the various drafts in the archive.

On the other hand, the participants in the control group received the regular writing instruction with no archiving of students' drafts by the teacher. These students were instructed on how to develop ideas and how to write different sections of a usual essay such as the thesis statement, introductory paragraph, body, and conclusion. Like the experimental group, these students were taught on how to write various types of paragraphs. During the

sessions, the teacher reviewed the students' essays as well as written tasks and provided them with necessary feedback and required changes. But, the teacher assigned a score to each draft of the participants in this group. More specifically, these students were not required to think about the given feedback and their revisions. Nor were they required to submit the second draft for each essay.

At the end of the treatment, the participants of both groups were asked to complete SLWAI that was re-administered as the posttest of the study to identify the degree of change in the writing anxiety of participants. Furthermore, the timed writing task (Topic B) was administered to the students to measure their writing performance as the posttest of the study.

Data Analysis

In order to address the research questions of the current study and to investigate the impact of the portfolio-based writing instruction on students' writing performance and writing anxiety, two one-way between-groups analyses of covariance (ANCOVA) were performed to compare the impacts of the two types of writing instructions (i.e. traditional or portfolio-based) used in the control group and the experimental group on the two dependent variables of this research. According to Pallant (2013), ANCOVA is employed when there is a pretest/posttest design (e.g., comparing the effects of two various treatments, taking before and after measures for each group). Pretest scores act as a covariate to 'control' for pre-existing differences between the groups. For the two performed ANCOVA analyses, the kind of treatment (i.e. traditional or portfolio-based) was the independent variable, and the scores on the *timed-writing tasks* and *SLWAI* administered at the end of the study were considered as the dependent variables. Participants scores on the pretests (i.e. essays and writing anxiety scales) acted as the covariate in this analysis.

For both of the performed ANCOVAs, pre-requisite investigations of the assumptions were performed to make sure that the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate were not violated.

Results

Prior to analyzing the data for the purpose of answering the research questions, an independent-samples t-test was performed to compare the PET scores for the experimental and control groups. As Table 1 indicates, the results showed no statistically significant difference in the PET scores for the experimental group ($M = 61.42$, $SD = 14.82$) and the control group ($M = 62.57$, $SD = 15.03$); $t(39) = -.516$, $p > 0.05$, highlighting that the both groups were not heterogeneous in terms of general English proficiency before starting the treatment.

To investigate whether portfolio-based writing instruction could significantly improve writing performance

Table 1. Results of the PET for Each Group

Groups	M (SD)	T	Sig.
Experimental	61.42 (14.82)	-.51	.42
Control	62.57 (15.03)		

of Iranian EFL learners, ANCOVA was performed. As indicated in Table 2, the writing performance mean score of the experimental group was 55.19 ($SD = 9.78$) as assessed by the pretest (timed-writing task) and it increased to 74.17 ($SD = 10.16$) on the posttest of writing performance. Similarly, the mean score of writing performance as measured by the pretest for the control group was 58.75 ($SD = 10.46$), which increased to 65.50 ($SD = 11.68$) on the posttest. As a result, it appears that both types of writing instructions contributed to improving writing ability of the EFL students in the two groups.

Table 2. Descriptive Statistics for Pre- and Posttest Scores

Groups	Scales	Pretest		Posttest	
		M	SD	M	SD
Experimental	writing	55.19	9.78	74.17	10.16
	anxiety	73.47	10.10	62.33	9.33
Control	writing	58.75	10.46	65.50	11.68
	anxiety	70.85	9.24	68.55	9.76

However, after adjusting for the pretest scores of writing performance, a statistically significant difference was observed between the two groups on the posttest scores of writing performance, $F_{(1, 38)} = 4.93$, $p = .03$, partial eta squared = .11) (see Table 3). This finding indicates that the students in the experimental group improved their writing performance significantly more than the students in the control group, highlighting that portfolio-based writing instruction was significantly effective in enhancing the writing performance of the EFL learners.

Concerning the second research question and to examine the impact of the portfolio-based writing instruction on writing anxiety of Iranian EFL learners, the

Table 3. The Results of ANCOVA for Writing Performance Scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate (pretest)	37.24	1	37.24	.23	.629	.006
Between-subjects	775.16	1	775.16	4.93	.032	.115
Within-subjects	5974.03	38	157.21			

descriptive statistics (see Table 2) demonstrated that the mean score of the experimental group for writing anxiety was 73.47 ($SD = 10.10$) in the pretest and it was substantially reduced to 62.33 ($SD = 9.33$) on the posttest of writing anxiety. However, the writing anxiety mean score for the control group was 70.85 ($SD = 9.24$) on the pretest and it was slightly reduced to 68.55 ($SD = 9.76$) on the posttest. Therefore, it seems that the portfolio-based writing instruction has reduced writing anxiety but the effect of the traditional writing instruction on writing anxiety has been negligible. However, upon adjusting for the pretest scores of SLWAI, the results of ANCOVA (see Table 4) revealed a statistically significant difference between the two groups on the posttest scores of writing anxiety, $F_{(1, 38)} = 31.41$, $p = 0.000$, partial eta squared = 0.45). This finding revealed that portfolio-based writing instruction significantly reduced writing anxiety of Iranian EFL learners.

Table 4. The Results of ANCOVA for Writing Anxiety Scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Covariate (pretest)	1175.25	1	1175.25	58.12	.000	.60
Between-subjects	635.26	1	635.26	31.41	.000	.45
Within-subjects	768.36	38	20.22			

Discussion and Conclusion

The aim of this study was set to explore the impact of portfolio-based instruction on writing performance and writing anxiety of Iranian EFL learners. The results of the statistical analyses indicated that the portfolio-based writing instruction aided the participants in enhancing their writing performance significantly more than the control group. This finding is in line with the findings of a significant number of studies (e.g., Farahian & Avarzamani, 2018; Ghoorchaei et al., 2010; Lam, 2016; Meihami et al., 2018; Obeiah & Bataineh, 2016; Young, 2020), which corroborated the effectiveness of portfolio assessment in improving writing performance. Furthermore, this finding resonates with that of a significant number of previous studies (e.g., Bitchener & Knoch, 2010; Chandler, 2009; Ferris, 2010; Van Beuningen, 2010), which verified the effectiveness of written corrective feedback in enhancing the writing performance of the EFL learners. More particularly, these findings partially support the empirical evidence that providing further corrective feedback through portfolios is likely to enhance the writing performance of intermediate EFL learners (Hamidnia, Ketabi, & Amirian, 2020; Hartshorn & Evans, 2012).

It is argued that students' multiple drafting or editing in the portfolio-based instruction might have increased students' quality of writing in terms of different aspects expected of a good piece of written text. The participants of the experimental group received further assistance and corrective feedback by the teacher, making them more competent and confident in doing written texts. This positive role of teacher's extra feedback and assistance has been previously corroborated by several researchers (e.g., Ellis, Sheen, Murakami, & Takashima, 2008; Lam, 2013; Paulus, 1999; Sengupta, 2000). The participants of the experimental group, in addition to being assessed by the teacher, were engaged in self-assessment, self-reflection, as well as peer-assessment; therefore, they could improve their writing quality. Following Tavakoli and Ghoorchaei (2009), it can be argued that teacher assessment is better to be combined with self-assessment in L2 assessment. Furthermore, this study also re-echoed that claim made by Hirvela and Pierson (2000), who maintained that grades fail to take into account the learning process of the learners or to show how learners are engaged in the learning process. The findings of this study may be also at variance with those of a number of studies which did not lend support to the effectiveness of feedback on the grounds that L2 learners usually fail to either understand or apply the comments and feedback received by the teacher or the peers (Aydin, 2010; Boyden-Knudsen, 2001; Goldstein, 2006; Hirvela & Sweetland, 2005; Lee & Schallert, 2008; Sengupta, 2000 among others).

Furthermore, the results indicated that the portfolio assessment significantly reduced the L2 writing anxiety of the participants, while the traditional instruction failed to have any significant effect on L2 writing anxiety of the control group. This finding is in line with the findings of some studies (e.g., Lam & Lee, 2010; Öztürk & Çeçen, 2007), which found the positive effects of portfolios in reducing anxiety of the L2 learners. Consistent with the findings of previous studies (Farahian & Avarzamani, 2018; Hassaskhah & Sharifi, 2011), it is likely that the participants of the experimental group have held positive perceptions of the portfolio-based instruction, thereby reducing their writing anxiety. As emphasized in the related literature (Dysthe, 2008), portfolios enable learners to take more responsibility of their own learning, feel more autonomous and confident, and encourage further student-teacher communication, a situation which may reduce learning anxiety. As portfolios are argued to have potentials in fostering learning motivation and confidence of the students (Murat & Sibel, 2010; Tiwari & Tang, 2003), the participants of the experimental group might have felt less apprehension or difficulty completing writing tasks. The portfolio assessment marks a kind of shift in the role of students as test-takers to writers (Lam, 2018) who may no longer feel anxiety or reduced learning motivation due to the fear of the grades and the complex nature of L2 writing (Crusan, 2010). This kind of shift puts an end to the positivist paradigm that is concerned with standardized tests objectivity of scoring. In contrast, the use of portfolios is based on the socio-constructivist

paradigm which emphasizes the contextualization of learning in a more comfortable environment free from the fears of scores (Lam, 2016).

Portfolio, as a kind of assessment, can be viewed as an integration of teaching and learning in which the writers might feel less anxiety in the absence of quick, objective grades. It can be argued that delayed evaluation (i.e. grading) of portfolio assessment is likely to have reduced participants' writing anxiety as it creates a non-threatening environment via a low-stakes context provided by portfolios. As a remedy to experiencing anxiety in L2 writing, Leki (1999) proposed a less punitive and less judgmental approach to the L2 writing instruction. From this perspective, it can be argued that the use of portfolio-based instruction which emphasized the process and the evolution of the skill through successive drafts of writing rather than grading or criticism of the products was useful in reducing the writing anxiety of the participants.

Overall, portfolio assessment appeared to contribute to improving writing performance and to reducing writing anxiety of EFL participants. Demonstrating the strengths and weaknesses of the students, portfolios provide teachers with appropriate information on how to direct and enhance their teaching based on the needs of their learners. Knowing participants' weaknesses in L2 writing, the EFL teacher of the present study could reflect on the weaknesses, strengths, and needs of the L2 writers. He could negotiate their writing problems via one-to-one interactions with students. Therefore, teacher was able to provide each writer with specific feedback and comments which corresponded to the learner's individual strengths and shortcomings. These individualized and very relevant comments could have played a key role in helping learners to enhance their writing competencies as well as reduce their writing anxiety. The findings of this study might also partially support the findings of Fathi and Nourzadeh (2019), who found that multiple feedback and comments via blogs not only improved the writing performance of Iranian EFL learners but also reduced their writing anxiety, suggesting that "positive changes in emotions and attitudes were accompanied by better L2 writing performance" (p. 84). As far as the theoretical foundations are concerned, portfolio assessment, as discussed before, is rooted in cognitivism, socio-constructivism, and collaborative learning (Hamp-Lyons & Condon, 2000). These three major theories underpinning portfolio assessment in writing appear to significantly contribute to improving writing performance and to reducing their writing anxiety.

Taken together, it seems that portfolio-based writing instruction can be a useful alternative to the deep-rooted traditional product writing approaches that prevail in EFL contexts. Employing portfolio assessment, EFL writing instructors can provide their students with specific corrective feedback as well as useful comments on their writing tasks which can improve their writing quality and reduce their anxiety. Nevertheless, effective implementation of assessment requires that teachers not only increase their assessment skills but also change their beliefs (Earl & Timperley, 2014). As a result, EFL teacher education

programs should take more fundamental actions in preparing pre-service and prospective teachers to practice portfolio assessment in their classrooms.

With regard to the limitations of this study, it should be stated that the present study was quantitative in nature. Future studies are suggested to utilize qualitative or mixed-methods research designs in order to cast more insight into how portfolio assessment can affect writing skill and other related affective variables such as anxiety or motivation among EFL students. In addition, future studies can recruit bigger samples of learners from various contexts and at different levels of language proficiencies.

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