



## An Online Portfolio Assessment and Perception Study of Iranian High School Students' English Writing Performance during the COVID-19 Pandemic

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### Abstract

With the abrupt emergence and dissemination of the COVID-19 pandemic, the traditional face-to-face classes were replaced by online classes in Iran. This quick shift has put great demands on finding and practicing new methods to teach and learn English in high schools. Owing to this urgent call, the present study follows a two-fold purpose. Firstly, it purports to disclose the effects of online portfolio assessment (PA) on developing Iranian high school students' English writing skills. Secondly, it aims to excavate the Iranian high school students' perceptions about the merits of online PA in cultivating their writing skills. To meet the aims, an intact second-grade class, including female students (n = 25), was chosen in Shahed public high school in Borujerd City. The class received online instruction (sixteen sessions lasting 90 minutes) based on the tenets of PA (e.g., collection, selection, and reflection). Then, a focus group interview was conducted with five of the active participants. Findings evidenced a significant improvement in the participants' writing skills owing to the instruction. Additionally, the results of the focus group interview yielded some themes about the benefits of PA as perceived by Iranian high school students: 'developing students' autonomy'; 'fostering a sense of belonging to classroom community'; 'providing a comprehensive analysis of students' writing proficiency'; 'collecting empirical evidence on students' gradual improvement in writing'; 'training self-regulated students'; and 'making classes student-centered by teachers-as-advisors'. Finally, a range of implications is presented to various stakeholders.

**Keywords:** Online Portfolio Assessment, Online Learning, Writing Skills, Content Analysis, High School Students

Vis-à-vis standardized testing climate which has exceptionally become prevalent in second language (L2) assessment owing to its liability claim, as Lam (2018) asserts, several educational stakeholders in Asia corroborated the state-of-the-art reforms of assessment to elevate the quality of L2 language pedagogy by other forms of assessment such as self- and portfolio assessment (PA) (For example, Ekbatani & Pierson, 2000; Fox, 2010; Hung, 2006; Paulson & Paulson, 1992; Valencia & Calfee, 1991). Specifically, PA, as Nunan (2004) declares, suggests an alternative approach to assessment in L2 instruction, launched as a summative/formative assessment tool for teachers, students, and administrators.

As summarized by Hung and Huang (2014, p. 1), PA, through “aligning assessment and instruction,” can demonstrate students’ performance development and instructional processes not only as a “learning tool” but as an “assessment instrument.” In other words, the overall purpose of PA represents, as Lam (2018, p. 2) maintains, instructional growth in “specific subject domains,” which acts as “a catalyst” to enhance instruction and testing for collecting “qualitative and quantitative learning evidence.”

More specifically, writing PA in second and foreign language writing classrooms, according to Burner (2014, p.143), deals with students’ “reflective skills, metacognitive thinking and self-regulated learning capacity when they are expected to write for passing an examination, learning formal written English and communicating with each other.”

Thus, considering the underlying underpinnings of writing PA (Hamp-Lyons, 2001, 2007) characterizing individualized assessment through: “self-regulated learners, teachers-as-advisors, learning-how-to-learn approach” (p.23), this study, therefore, set out to disclose the effects

of online PA on developing Iranian high school students' writing skills. Accordingly, implementation of a mixed-methods design, using both PA and an interview, appears to be scant in Iranians' high schools.

### Literature Review

It is now well established from various studies that writing PA is a response to the traditional, standardized assessment and an embrace to the integration of instruction and assessment with enthusiasm (Coombe et al., 2012; Hamp-Lyons & Condon, 2000; Hirvela & Pierson, 2000).

By far, the most influential account of writing PA is to be found in some USA universities which used PA as a substitute to essay assessment (Belanoff & Dickson, 1991). Also, writing PA altered the writing examination format in the General Certificate of Education in the UK in the 1970s. Entering the 21<sup>st</sup> century, writing PA followed the assessment for learning paradigm. Since the PA regards student agency and reflective approaches, students are prompted to self-evaluate their writing performances using an individualized assessment framework, which fosters autonomy and self-efficacy (Lam, 2018).

### Online Teaching and Learning

Though the abrupt emergence and dissemination of the COVID19 pandemic replaced the traditional face-to-face classes with online classes, it is over two decades that the development and popularity of social or Web 2.0 technologies (e.g., social networking sites, blogs, microblogs, and wikis) has shifted the attention of educational stakeholders to online classes. Online teaching and learning are considered those activities that use social technologies to facilitate quality teaching and learning in cooperative settings (Hamid et al., 2015). Some of the activities that can be used to facilitate teaching and learning in online classes include “content-generating, sharing, interacting, and collaborating” (Hamid et al., 2015. p. 2). Using social technologies, as Osman and Koh (2013) note,

students can easily design and develop their own content, create their unique ideas, and support them. Additionally, students are equipped with the required abilities to create and share their ideas and content with others around the world (Gao, 2013). Besides, as it is evident, social technologies allow students to participate actively in online discussions (Munoz & Towner, 2009). Finally, according to Kane and Fichman (2009), social technologies let students work and learn cooperatively and put their thoughts and effort together to solve a problem.

In the related literature, a number of noticeable advantages have been listed for online classes. The biggest advantage is flexibility (Wasilik & Bolliger, 2009). It means that online classes are available to students with less constraint of time and location. The next significant advantage is self-motivation (Pacansky-Brock, 2016). That is, since self-directed and motivated students can learn at their own pace and they are not restricted to the course deadline, they can open up time in their schedule for more learning and activities. The next important advantage is cost-effectiveness (Everson, 2009), given that students do not have to commute to schools and they can save their time and money. The last advantage is independence (Davis et al., 2019). That is, online classes are found more comfortable for introverted students. Taken together, the above-mentioned advantages have created significant interest and growth in online classes.

### Writing in EFL Classrooms

The concept of writing both for communicative purposes and social interactions is highly required nowadays. As Browker (2007) puts it, writing is a communicative skill needed in many aspects throughout life. In line with this necessity, EFL learners need to be trained to develop various levels of writing skills, including ‘grammar, vocabulary, mechanics, paragraph organization, cohesion, and coherence’ (Harmer, 2007, p. 86). In addition, writing activities can be shown in a continuum that ranges from ‘controlled writing’ to ‘real writing’ (Harmer, 2007).

### ***L2 Writing Approaches***

There are a large number of cross-sectional studies that developed and practiced L2 writing approaches (Hyland, 2016; Silva, 1990). Accordingly, these approaches can be discussed under two headings, which are: product-oriented and process-oriented approaches.

In the product approaches, the main focus is on the final draft that L2 writers are supposed to produce based on contextual needs (Hyland, 2016). In this approach, L2 learners are provided with appropriate linguistic patterns to generate a well-formed text.

However, in the process approaches, as Crusan (2010) notes, L2 learners perceive the writing process as a cognitively demanding and problem-solving activity in which required strategies used by professional writers are needed to be practiced. In sum, despite zooming in on the final product of writing, the concurrent development of process writing is of focal attention.

### ***L2 Writing Assessment***

Regarding writing assessment types, Weigle (2013) asserts that authenticity, “the degree to which writing tasks simulate real-world writing conditions,” determines the assessment on a continuum. In one end stands indirect and direct writing tests. The former measures the linguistic sub-skills such as syntax through multiple-choice or fill-in-the-blank questions (Crusan, 2010). The latter, as Elliot and Perelman (2012) point out, asks learners to produce a piece of writing in relation to some rubrics. On the other end of the continuum, several non-testing performance-based assessment methods, in which authenticity is the focal point, are existent such as self-assessment, peer-assessment, PA (Nunan, 2004).

### **Portfolio Assessment**

In the literature of L2 assessment, several considerable advantages for PA have been listed. One of the most cited merits of PA is the ownership development (Hirvela & Pierson, 2000; Lam, 2010, 2018). In this vein, L2

learners are allowed to merge their portfolios and also select and review their performances that fully delineate their writing skill progress. Another significant advantage linked with PA concerns integrity maintenance (Cohen, 1994). That is, unlike the traditional testing practices which compel L2 learners' individual attempts, PA encourages them to ask their teachers and peers to construct their portfolios. As a result of this consultation with others, L2 learners generate the significant role of integrity and community to pave the way for their learning. Another potency of PA lays the groundwork for the students' overall competence, which provides a complete description of the learning process that can be a resourceful repertoire for the examiners and teachers in evaluation (Hirvela&Sweetland, 2005). To put it simply, PA inspects diverse linguistic and cultural backgrounds of L2 learners through generating a detailed account of learners' language ability growth process for evaluators and teachers to provide a more accurate judgment of the learners' development.

The literature on writing PA has also highlighted several concerns. First, the implementation of PA in classrooms requires teachers to draw up detailed guidelines, counseling sessions, and, above all, read and score all portfolios, something labeled as a logistic issue (Song & August, 2002). Another concern pertains to the reliability issue, which appears to be challenging where a large number of L2 learners' performances from various tasks need to be rated based on established criteria (Hamp-Lyons & Kroll, 1996). The last but not the least concern relates to validity issues. In other words, due to portfolios' task-driven nature, as Bachman (2002) identified, task-driven evaluation involves complications in determining the L2 knowledge domain and achieving the essential substantiation to confirm the relevancy of content and assessment tasks.

Thus far, previous studies have attempted to evaluate the impacts of writing PA on students' performances. To lay the ground for the present study, some of them are critically reviewed. Lo (2010), for example, in an

investigation into PA, studied the effects of PA on developing autonomous learning among Taiwanese college students ( $n = 101$ ). The required data were obtained using pre-and post- questionnaires and field notes. The researcher found out that owing to the positive effects of PA, the participants become more autonomous learners.

In another study, Yilmaz and Akcan (2012) probed into the role of PA in urging high school students ( $n = 22$ ) to take up the responsibility for their own learning and become more independent learners in the Turkish context. The researchers employed an observation checklist and semi-structured interviews to gather the required data over a course that lasted twelve weeks. The findings unveiled that the participants actively took part in their learning process and tried to reduce their reliance on their teacher at the end of the course.

In a follow-up study, Barootchi and Keshavarz (2002) explored the feasibility of PA in the EFL learners' learning in the Iranian context. More specifically, they wanted to know if there is any statistical relationship between PA and teacher-made tests. To this aim, sixty female students aged 16 years old were selected and randomly assigned into an experimental group (taking teacher-made tests and portfolio assessment) and a control group (taking only teacher-made tests). The researchers realized that the participants perceived PA positively, received effective feedback, and considered assessment and instruction more closely connected. In addition to a statistically significant difference between the performance of the participants on the post-test, the results indicated that students' perceived PA as a good way to detect and satisfy their interests and needs.

Moreover, the effectiveness of PA vis-à-vis traditional approaches in cultivating ESL learners' writing was put into research by Song and August (2002) in the U.S. context. Two groups, namely the experimental group ( $n = 103$ ) and the control group ( $n = 107$ ), were selected and went through pre-test, intervention, and post-test procedures. Their findings

reported that the experimental group was twice as likely to pass the writing tests compared to the control group.

### Context of the Study

Since 2020, the world has been experiencing a unique phenomenon called the COVID-19 pandemic. This vital pandemic has dramatically changed all dimensions of people's lives across the world. To reduce the transmission of the COVID19, governments have tried to implement nationwide closures. Concerning education, the pandemic has adversely impacted education systems worldwide, leading to the near-total closures of schools, colleges, and universities. To alleviate this complex situation, the education officials have tried to replace the face-to-face classes with online classes. Teachers and students have been prompted to teach and learn online on a global scale. For example, in Iran, the ministry of education has started running online classes on TV and invented an application named "Shad" to help teachers manage their school courses online. Though the integration of new social technologies into L2 education has been advancing for years and has been taken up by many in well-resourced contexts, for the first time, thousands of Iranian English teachers and students are relying on online classes as the only way for teaching and learning English. Due to this unique condition, it is essential to explore the effectiveness of new approaches such as PA in online classes to facilitate English teaching and learning. Studies like the present one can be very promising to Iranian English teachers and students as they pave the way for quality teaching and learning in online classes. Hence, the current study is an exploration of the effects of online PA on the development of Iranian high school students' writing skills and to disclose their perceived value of online PA. With these aims, the following research questions were put forward:

1. Does online portfolio assessment result in developing the Iranian high school students' English writing skills?



2. What are the merits of PA as perceived by the Iranian high school students on the development of their English writing skills?

## Method

### Research Design

The current study benefited from a mixed-methods design as the required data were collected both qualitatively and quantitatively. The underlying reason to use a mixed-method design was to achieve triangulation. According to Riazi (2016), with the help of triangulation, researchers are able to get a better picture of the topic under scrutiny by using different data collection approaches. Moreover, grounded theory was used to build empirical checks into the analytic process for the qualitative data (Bryant & Charmaz, 2007). Therefore, it possibly provided the researchers a better explanation of students' perceptions about the benefits of PA in cultivating their writing skills.

### Participants

The present study was conducted at Shahed public high school in Borujerd City, Iran, in Autumn 2020 Semester. An intact grade 11 class, including 30 female students, was randomly selected. The participants aged between 15 and 17 years old and just those students whose parents allowed them to participate in the study were included. Therefore, the study was run with twenty-five students as the other five students were not allowed to participate by their parents.

Due to the high school English language syllabus and its compulsory subjects, students had to attend the English language course for three hours per week. It was also disclosed, based on students' written statements, that they have just been learning English at school time. Nevertheless, according to Naghdipour (2016), Iranian high school students hardly ever find opportunities to use English for spoken or written communication purposes. In order to make sure that the students have not studied

paragraph writing yet and the results can be attributed to the effects of the given instruction, the students were instructed on the content of Vision III.

Prior to running the present study, the first researcher went to Shahed High School and explained the objectives of the current research to them. Considering the explanation provided by the first researcher, the school principal, and the English teachers allowed the study to be run in their school setting. Also, they let the first researcher randomly select one grade 11 class. Furthermore, one of the English language teachers in Shahed High school, who had an M.A. degree in Teaching English as a Foreign Language (TEFL), was recruited to be the instructor in the current study. The researchers took the students' parents' phone numbers, contacted them, and explained the current study's objectives to them. For those parents who agreed their student to participate in the present study, a written consent form in Persian was sent via WhatsApp Messenger (WAM, 2020) and signed to the researchers. The researchers ascertained the school principal, the English language teacher, the students, and their parents that the students' performance would remain confidential and they would be informed about the final findings.

## **Instruments**

### ***Portfolios***

Portfolios were the main instrument used in the current study. In this approach, the students were invited to gather, select, and reflect on their writings during the instruction. In line with Nunan and Wong (2003), PA principles and procedures and their benefits were presented and demonstrated to the students (see data collection section). They then gathered samples of their writings, and the teacher encouraged them to refer back to their portfolios and reflect on their progress each session. In addition, the students were informed that their portfolios would be assessed in the second, eighth, and last session against the following criteria (Nunan, 2004, p. 163):

1. **Content.** It needs to be suitable and adequate. Suitable implies the content is meaningful to the topic, and adequate means that there is enough content (i.e., not too little and not too much).
2. **Organization.** It means that content/ideas should be presented logically and grouped or separated in meaningful ways.
3. **Language.** It means that students need to make use of a range of grammatical and sentence structures, vocabulary and expressions, punctuation, and spellings accurately.
4. **Task Requirement.** It means that students need to follow the task requirements. For example, a task requirement may limit the students' writings to 100 words.

It should be noted that the students were informed about using a rubric in measuring their writings in terms of content (out of 5 scores), organization (out of 5 scores), language (out of 5 scores), and task requirements (out of 5 scores). In other words, the sub-scales were rated as 1 (unsatisfactory), 2 (below average), 3 (average), 4 (standard), to 5 (outstanding). Hence, the students' scores ranged from 5 to 20. It is worthy to note that the students' portfolios were rated by the first two researchers to ensure inter-rater reliability ( $\alpha = 0.87$ ).

#### ***Focus Group Interview***

To triangulate the data and to investigate the students' perceptions about the merits of PA in developing their writing skill, a focus group interview was conducted with five of the students via the Adobe Connect platform (AD, 2019). They were selected on a voluntary basis. Prior to administrating the focus group interview, written consent in Persian was sent to the students via WhatsApp Messenger (WAM, 2020) to be signed by their parents and turned back to the researchers. Significantly, the third researcher guided the interview and encouraged the participants to express their attitudes toward the effectiveness of PA. During the interview running in the Adobe Connect (AD, 2019), the participants took turns

expressing their experience of the intervention and in response to other participants' views. It should be noted that the focus group interview was run at the end of the instruction at agreed time points with all the participants, lasted around 2-3 days, and was run in the participants' mother tongue (Persian) to let them express their views with ease.

### Data Collection Procedures

To gather the required data in the present study, some distinct steps were taken in order. Having selected the intact class and gathered the written consent of the students, the researchers planned and ran a mini-workshop on the principles and procedures of PA the students and the English language teacher. This mini-workshop was run in the school setting by giving particular attending to healthcare during the COVID 19. The first researcher of the current study, an assistant professor in applied linguistics at Ayatollah Borujerdi University, ran the mini-workshop. In two sessions, the researcher offered a comprehensive explanation of the basic tenets of PA interactively and provided some tangible examples to demonstrate how PA is practically implemented in classes. In light of the reflections and explanations taken from the English teacher and the students, the researcher ensured that they had fully learned the principles and procedures of PA. In the next step, the teachers contacted the students and asked them to install WhatsApp Messenger (2020) application and Adobe Connect (AD, 2019) platform on their cell phones. It should be noted that due to the COVID 19 pandemic and holding the school classes online, most Iranian high school students had to supply a smartphone. Then, the English language teacher created a WhatsApp group and invited the students to be in touch with her during the course. In the next step, the instruction lasting 16 sessions and running in 90 minutes twice a week was offered to the students. The sessions were run via the Adobe Connect (AD, 2019) platform along with the WhatsApp group. At the first session, the English language teacher introduced and explained PA to the students and

its significant benefits to cultivate the students' writing skills. To ensure that the students know how to implement portfolios, including collection, selection, and reflection, the English language teacher also provided the students with a detailed explanation in Persian. Then, she played some informative short videos where the students could see how PA can be used in real classes. In addition, she administered some examples practically. Then, the students were invited to ask their questions and ambiguities. The remaining sessions were run based on the model of Tompkins (2010) explained below.

The first stage was pre-writing (10 minutes), in which the English language teacher presented a topic taken from the students' coursebooks and tried to activate the students' background knowledge about the subject. The second stage was working with ideas (10 minutes), in which the students tried to draft their ideas concerning their objectives and intended readers. The third stage was drafting (10 minutes), at which the students attempted to change their drafts into written text. The teacher recommended the students consulting dictionaries, grammar reference books, and model paragraphs for some conventions to complete this stage. The fourth stage was revising (10 minutes), at which the students tried to revise their writings. In doing so, the students went through their writings meticulously and tried to detect and rectify their problems. The fifth stage was sharing (15 minutes), in which the students took a clear picture of their writing and sent it to their English language teachers via WhatsApp Messenger (WAM, 2020). Based on the teachers' feedback, the students were encouraged to correct their writing (10 minutes). The teacher asked the students to select their best sample paper and keep it in a safe place (10 minutes). In the last stage called reflection (15 minutes), the English language teachers urged them to go through their previous portfolios and reflect on their development and growth. It should be noted that all the sessions were run following the sample template though there were some minor changes depending on the class context. After the instruction, the

third researcher invited five of the participants to the focus group interview run on the Adobe Connect (AD, 2019) platform. The details of the focus group interview were presented in the previous section.

### Data Analysis Procedures

Due to the mixed methods design of the current study, the collected data were subjected to quantitative and qualitative analyses. For the quantitative data, which included the students' scores obtained at three-time points, SPSS version 26 was used. Along with calculating the mean and standard for the given measures, a repeated-measures ANOVA and a Bonferroni post-hoc analysis were run to see there were any statistically significant changes in the students' mean scores over the three-time points. Additionally, the qualitative focus group interview was analyzed using the inductive grounded theory approach, including the three stages of open coding, axial coding, and selective coding (Strauss & Corbin, 1998). In keeping with Glaser (2011), in order to do inductive grounded theory, the first researcher went through three distinct phases. The first phase was *open coding*, in which the researchers read and re-read the excerpts so much so that to identify as many themes and concepts as possible. The researcher asked questions of the data to extract ideas and concepts related to the study. As the researchers continued to comb the data, 123 code labels were characterized based on similarities and differences (e.g., decreasing reliance on the teacher, boosting student's confidence and motivation, getting to know how to self-correct). When no more new themes emerged from the data and the codes became meaningful and coherent, the open coding phase stopped. Because of the non-linear nature of the coding process, the second phase, *axial coding*, was simultaneously done along with open coding (Glaser, 2011). The researcher reviewed the previous codes to find relationships among codes that tend to cohere (e.g., student-centeredness, group cohesiveness, students' proficiency level, students' improvement in writing). The third phase was selective coding, in which

the researchers tried to reduce and combine the codes to extract the most general themes. It is worthy to note that the consistency of the findings was assessed through inter-rater reliability. For this, having completed the data analysis, the researchers recruited two well-experienced analysts to analyze the whole data set. The results of their analysis yielded ( $\alpha = 0.93$ ). Besides, the researchers used the member-checking strategy to assess the credibility of the findings. In doing so, the researchers gave a copy of the final results to three participants to check if they represented their intended meanings. In total, there was a perfect match between the findings and the students' meanings.

## Results

### Quantitative Results

#### *The Results of the First Research Question*

To explore the effect of online PA on high school students' writing development, a repeated-measures ANOVA was run. In order to achieve that goal, the assumptions for running the parametric test of repeated measures ANOVA tests were examined. First, there were no single data points within the data that do not follow the usual pattern, that is, there were no significant outliers in the related groups. Second, the values of skewness and kurtosis indices and their ratios over the standard errors of these ratios were less than  $\pm 1.0$ , so the distribution can be normal. Third, the normality of data was verified using the Shapiro-Wilk normality test ( $n > 50$ ) ( $p > .05$ ).

Table 1.

*Descriptive Statistics for the Group in Three Time Points*

Time Points	N	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
2nd	25	7	14	10.32	2.05	[-.12, .46]	[-.93, .90]
8th	25	12	17	14.28	1.30	[.40, .46]	[-.75, .90]
16th	25	16	20	18.48	1.04	[-.18, .46]	[-.05, .90]
Total	25						

As it is shown in Table 1, the mean score at the beginning of this study was lower than the 8<sup>th</sup> and 16<sup>th</sup> sessions ( $M = 10.32$ ); learners after receiving the portfolio writing treatment gained higher mean scores in 8<sup>th</sup> and 16<sup>th</sup> sessions, respectively ( $M = 14.28$ ,  $M = 18.48$ ).

Furthermore, before running the repeated measures ANOVA, the variances of differences between all combinations of related groups must be equal. For this purpose, as witnessed in Table 2, Mauchly's Test of Sphericity showed that this assumption was met,  $\chi^2(2) = 4.49$ ,  $p = 0.10 > .05$ .

Table 2.  
*Mauchly's Test of Sphericity*

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	Df	p	Greenhouse-Geisser	Huynh-Feldt	Lower-bound
portfolio_writing	.82	4.49	2	.10	.84	.90	.50

As the sphericity assumption was met and  $\epsilon$  values are .84 and .90, which are less than .75, the Huynh-Feldt correction was used (Field, 2013). The repeated-measures ANOVA was run. Based on the results of this test in Table 3 ( $F(1.81, 43.53) = 228.51$ ,  $p = .00$ ,  $p < 0.05$ ,  $\eta_p^2 = .90$ , which according to (Plonsky & Ghanbar, 2018) represents a large effect size), it can be concluded that there were significant differences among the mean writing of learners' writing portfolios in time points. As the main ANOVA is significant, this means that there is a difference between at least two-time points.



Table 3.

*Test of Within Subject Effects for Writing Portfolios*

Source		Type III Sum of Squares	df	MS	F	p	$\eta_p^2$	Observed Power
Portfolio writing	Sphericity Assumed	832.56	2	416.28	228.51	0.00	0.90	1.0
	Greenhouse-Geisser	832.56	1.69	490.23	228.51	.000	0.90	1.0
	Huynh-Feldt	832.56	1.81	458.93	228.51	.000	0.90	1.0
	Lower-bound	832.56	1.00	832.56	228.51	.000	0.90	1.0
Error(portfolio_writing)	Sphericity Assumed	87.44	48	1.82				
	Greenhouse-Geisser	87.44	40.75	2.14				
	Huynh-Feldt	87.44	43.53	2.00				
	Lower-bound	87.44	24.00	3.64				

Table 4 presents the results of the Bonferroni post hoc test, which allows us to discover which specified means differed. In sum, it can be seen from the table that the learners' writing performance in session 16 significantly outperformed their performance in session 2 ( $MD = 8.16, p = .00 < .05$ ). Moreover, their writing performance also in session 8 outperformed session 2 ( $MD = 3.96, p = .00 < .05$ ). Furthermore, learners in session 16 did better than session 8 ( $MD = 4.20, p = .00 < .05$ ). Thus, the learners' writing portfolios performances changed significantly in the eighth and the last sessions.

Table 4.

*Result of Post Hoc Comparison for Writing Portfolios*

Time Points		MD	Std. Error	p	95% CI
2 <sup>nd</sup>	8 <sup>th</sup>	-3.96*	.37	.000	[-4.91, -3]
	16 <sup>th</sup>	-8.16*	.45	.000	[-9.31, -7]
8 <sup>th</sup>	2 <sup>nd</sup>	3.96*	.37	.000	[3, 4.91]

Time Points	MD	Std. Error	p	95% CI
16th	-4.20*	.31	.000	[-5, -3.40]
16 <sup>th</sup> 2nd	8.16*	.45	.000	[7, 9.31]
8th	4.20*	.31	.000	[3.40, 5]

## Qualitative Results

### *The Results of the Second Research Question*

In this section, the results of the interview data analysis are reported to answer the second research question. Owing to inductive analysis, five recurring themes emerged from the analysis above, namely, 1) developing students' autonomy, 2) fostering a sense of belonging to the classroom community, 3) providing a comprehensive analysis of students' writing proficiency, 4) collecting empirical evidence on students' gradual improvement in writing, 5) training self-regulated students, and 6) making classes student-centered by teachers-as-advisors.

**Theme 1: Developing students' autonomy.** The first primary theme concerning the benefits of PA by the Iranian high school students is developing students' autonomy. PA enables L2 learners to stand on their own feet and to be responsible for their own learning through reflecting on the quality of their writing (Hung, 2008).

[Interview Excerpt 1, January 10, 2020]

This method taught me how to be responsible for my own writings and how to be in control of my own progress over time.

[Interview Excerpt 2, January 12, 2020]

With the help of the portfolios, I recognized that although teachers are important in clarifying complicated sections of writing, I myself should be in charge of the processes of learning writing and making decisions in the nick of time.

**Theme 2: Fostering a sense of belonging to the classroom community.** The second theme regarding students' perceptions about the

values of PA is fostering a sense of belonging to the classroom community. That is, students consider the class a social environment in which collaboration and cooperation would be the prominent aspects of their group work activities in the process of learning. As (Hung & Huang, 2014) purports, PA encourages learners to ask for support from their peers to tackle a problem and construct their portfolios properly, resulting in the sense of belonging to the class community (Hung & Huang, 2014).

[Interview Excerpt 3, January 14, 2020]

For the first time in my whole studies, I felt like being in a class that resembles a community in which writing can give me a voice to find myself among others.

[Interview Excerpt 4, January 10, 2020]

Online portfolio writing guided me to ask peers' help in constructing my writings. For example, during the revising phases, I turned to my peers for some substitutions in grammar or vocabulary, which really facilitated my writing in the end, so I think writing together as a community is much easier than writing without anybody else.

**Theme 3: Providing a comprehensive analysis of students' writing proficiency.** The third theme is providing a comprehensive analysis of students' writing proficiency. Through PA, students are equipped with a wide range of information and feedback on their writing. PA provides a miscellaneous file of techniques and strategies in developing writing skills that students can refer to when they need an authentic source to check the accuracy of their writing (Nunan & Wong, 2003).

[Interview Excerpt 5, January 14, 2020]

I have always been confused about the way my compositions are scored because, during the previous school years, teachers just scored our papers, and I did not know the procedures for correcting my performances.

[Interview Excerpt 6, January 12, 2020]

Now I thoroughly know that the scoring writing of papers includes different elements, such as content, organization, and language. So, when I am writing, I have to pay close attention to all these factors to live up to the required goals of successful writing.

**Theme 4: Collecting empirical evidence on students' gradual improvement in writing.** Students' gradual growth in L2 writing is the fourth theme. PA can also yield a compilation of students' regular progress in writing. Students' writings are always reachable in case of confronting difficulty in writing tasks. Thus, their writings can reflect concrete evidence of their growth and development in writing.

[Interview Excerpt 7, January 10, 2020]

In this course, I observed how my paragraphs developed every session. I think the only reason for this awareness was portfolio writings which the recorded texts informed me of my earlier mistakes.

[Interview Excerpt 8, January 14, 2020]

Through online portfolio writings, I was able to trace my progress in each session. At the beginning of this instruction, I was totally doubtful about my success in writing using portfolios, but now when I flashback to the earlier writing, I can easily find out the step-by-step improvement in my writing performances.

**Theme 5: Training self-regulated students.** Training self-regulated students is the fifth theme. Self-regulation provides opportunities for learners to monitor their understanding and adopt appropriate strategies for learning (Schmidt, 1983).

[Interview Excerpt 9, January 10, 2020]

Online portfolio writing assisted me in controlling my learning without dependence on others. I mean, writing was not an external control which must be taken from teachers or peers.

[Interview Excerpt 10, January 12, 2020]

Online portfolio writing taught me the way of standing on my own feet to regulate the appropriate phases of planning, drafting, editing based on my own perception rather than others which seems to be long lasting and memorable.

**Theme 6: Making classes student-centered by teachers-as-advisors.** Student-centeredness is the last theme. Unlike the prevalent cultural belief of teacher-fronted classes in Asia (Hu, 2005), PA supports students' active participation in class and reduces the authoritative role of teachers in EFL climate

[Interview Excerpt 11, January 12, 2020]

Surprisingly, we, students, could take charge of planning, drafting, revising in writing portfolios under the guidance of the teacher.

[Interview Excerpt 12, January 14, 2020]

Students could control the procedures of their learning writing under the teacher's supervision. However, the teacher just paved the way for better writing by giving immediate feedback on performance.

## Discussion

### Discussion on the Quantitative Results

The first research question examined if online PA results in the development of the Iranian high school students' English writing skill. The findings evidenced that the students' writing skill improved at the end of the instruction. Vis-à-vis the first two portfolios, the results indicated that the students' writings boosted in terms of content, language, organization, and task requirements in the last portfolio. This improvement in the students' writing skill might be ascribed to the instruction offered in line with the principles of online PA (i.e., collection, selection, and reflection). It can be argued that because the students had sustainable opportunities to

collect their writings, select the appropriate ones, and reflect upon them, they could detect and correct their writing problems over the instruction.

The findings might be discussed from this perspective that online PA was found interesting and useful by the students since it might have led to learner-directed assessment. As Gottlieb (2000) notes, under this premise, we can argue that by implementing online PA, the participants received an active role in the instruction. This, in turn, may have stimulated them to put more time and energy into their writing development. Another possible explanation for the study's findings may lie in the fact that the use of PA might have led to an interactive assessment process.

The study's findings can also be explained in the light of the social constructivist theory (Alleman & Brophy, 1998; Klenowski, 2002). As this approach considers language learning as an ongoing process, online PA might have created a setting in which the students had dialogic interactions with their teacher, peers, and themselves. That is, online PA might have promoted L2 learning by urging L2 learners to interact with their writings multiple times, their teacher, and their peers. This might have functioned formatively in the scope of L2 learners' Zone of Proximal Development (ZPD) (Vygotsky, 1978), where L2 learners not only might have detected those abilities that have not yet matured but also might have achieved those abilities which were beyond the reach of the students when doing a task independently. In this respect, as Vygotsky (1978, 1986) stresses, assessment can be used as an effective tool to facilitate student learning.

To discuss the findings more, we can refer to this view that online PA might have developed a sense of ownership in the students (Hirvela & Pierson, 2000). By giving the control over which writings to include, the students might have decided upon reviewing and selecting the writings that most properly represented their writing competence. This review and selection process, as Hung and Huang (2014) argue, might have made the students carefully self-assess and reflect on their writings during the course. This, in turn, might have let the students create a greater sense of

ownership over their writings. Likewise, this process in which the students took responsibility for making decisions may have increased the students' motivation and autonomy of learning (Lam & Lee, 2009).

Another reason for the study's findings may be attributed to this view that online PA might have created a setting in which the students' attention were drawn to the processes involved in writing. That is, in alignment with Hirvela and Pierson (2000), it might be argued that in the traditional assessment methods where the primary focus is on grades and products, PA is very facilitative to draw learners' attention to the processes by which they can produce the final products. Under this premise, the students might have been encouraged to focus on the processes leading to the intended products. In this way, they might achieve a better understanding of what they have learned. This view may cast light on the issue that the major problem of Iranian high school students' writing skills is the classroom practices where the major focus is on the one-shot essay tests (Ghoorchaei & Tavakoli, 2019).

Thus, the study's findings are congruent with the previous studies (Armstrong, 2011; Barootchi & Keshavarz, 2002; Gonzales, 2009; Nezakatgoo, 2011), reporting that PA is highly effective to urge L2 learners to take charge of their learning and reflect upon their own growth and development. Also, the study's results lend support to those of Hung (2008), revealing that by using PA, the students might have obtained the qualification to make correct judgments about the quality of their writings and become more autonomous learners. Further, the study's findings are partially consistent with those of Barootchi and Keshavarz (2002), disclosing that PA was welcomed by their participants, offered constructive feedback, made the teaching and assessment more interrelated, and helped their participants to diagnose their needs and wants. Moreover, in accordance with the study's findings, Song and August (2002) disclosed that their participants' chances to pass writing tests increased two times as they were instructed and assessed by PA.

Besides, the study's findings lend credence to those of Sajadi (2014), reporting that students' writing ability improved due to the instruction offered in line with PA tenets.

Furthermore, in alignment with Delett et al. (2001), it can be argued that online PA might have created an interactive assessment climate where both the teacher and students were involved and formed a partnership in the learning process. In a sense, online PA might have provided the students with a sense of involvement in and control over their learning processes by establishing an interactive learning environment (Lam, 2010).

### Discussion on the Qualitative Results

The second research question examined the Iranian high school students' perceptions about the efficiency of online PA on developing their writing skills. As reported above, the results evidenced that the students had positive attitudes toward the efficiency of online PA in the cultivation of their writing performance. The students' responses disclosed that online PA could develop their autonomy, foster a sense of belonging to the classroom community, provide a comprehensive analysis of their writing proficiency, collect empirical evidence on students' gradual improvement in writing, train self-regulated students, and make classes student-centered by teachers-as-advisors.

According to the first theme, 'developing students' autonomy', the students' statements indicated that due to the positive effects of online PA instruction, the students became more autonomous learners (see *Interview Excerpts 1-2*). It means online PA might have helped the students move away from the dependency on the teacher and move forward to autonomy learning by taking responsibility to plan, monitor, and evaluate their own learning. In this regard, in alignment with Hamp-Lyons and Condon (2000) and Bruner (2014), it is argued that by implementing online PA, the students might have reflected over their learning (self-assessment) and



taken responsibility for ameliorating their problems, and improved the quality of their writings. These words gain support from the previous studies (Lo, 2010; Ziegler & Moeller, 2012; Yilmaz & Akcan, 2012) which reported that online PA led to autonomous learning and developed their learners' capacity for self-regulated learning.

With regard to the second theme, the students' perceptions turned out that during the instruction, they could 'foster a sense of belongingness to classroom community' (see *Interview Excerpts 3-4*). In a sense, this view was inferred from the responses that online PA created an interactive learning environment where they had close relationships with other class members. As Cohen (1994) notes, in comparison with the traditional testing practices, which deprive students of seeking help from teachers and peers while taking a test, in doing online PA, the students might have been encouraged to ask the teacher and peers to scaffold them to take over a learning problem and appropriately construct their portfolios (Hung & Huang, 2014). Due to the regular give-and-take ideas with their peers and receiving constant consultations from the teacher, the students might have come to the conclusion that the teacher and peers were present in the roles of allies. This, in turn, must make the students create a sense of community.

Considering the third theme, 'providing a comprehensive analysis of students' writing proficiency', the students' words disclosed that with the help of the offered instruction, the students might have achieved a good picture of their writing proficiency (see *Interview Excerpts 5-6*). The study's findings may be associated with this view that the portfolios might have acted as a robust enabling learning tool that concentrated on the learning processes (Klenowski, 2009). In this respect, Hamp-Lyons and Condon (2000) argue that portfolios have three main features, including collection, selection, and reflection. In the collection phase, the students were urged to collect their best writings. In the selection phase, the students were encouraged to examine their writings and select the best ones. In the

reflection phase, including a kind of self-assessment, the students had reflected on their writings. In these three steps, as Bruner (2014) stresses, the students might have taken an active role in their learning process and given enough attention to the processes involved in developing their writings. In other words, the findings lend credence to Williams (2005). They argue that PA entails collecting writings to show learning progress, reflecting on learning processes, and revising writings with the help and interaction of teachers and peers.

In line with the fourth theme, ‘collecting empirical evidence on students’ gradual improvement in writing’, the students’ statements revealed that by referring to the past portfolios, the students could get clear evidence on their gradual improvement in their writing performance (see *Interview Excerpts 7-8*). The study’s findings can be discussed from this view that this gradual improvement may have created a sense of achievement in the students. In turn, this sense of achievement might have motivated the students to achieve better results. Along with Lam (2018), it can be argued that when the students could gain empirical evidence on their previous performance, they might use them to avoid the common writing problems they have already had.

Based on the fifth theme, ‘training self-regulated students’, the students’ statements indicated that they got more self-regulated learning at the end of the instruction (see *Interview Excerpts 9-10*). A line of discussion for the study’s findings may be ascribed to this view that in quality assessment, students are not the objects of evaluation. They are agents of evaluation (Genesee & Upshur, 1996). Under this premise, it can be argued that online PA might have opened this opportunity for the students, as agents of evaluation, to determine their own learning goals, to monitor their own learnings, and to reflect upon their own learning. In this way, they might have detected and corrected their own writing weaknesses. Consequently, they become more self-regulated. Additionally, the study’s findings may be discussed from this view that

online PA, as an informative assessment, might have helped the students to become self-regulated learners. Along with Ghoorchaei and Tavakoli (2019), it can be argued that as the students had multiple opportunities for collecting, selecting, and reflecting on their own writing performance, they might have got independent of the teacher to control their own learning and got more self-regulated learners.

According to the sixth theme, ‘making classes student-centered by teachers-as-advisors’, the students’ remarks evidenced that online PA led to a more student-centered class where the teacher acted as an advisor (see *Interview Excerpts 11-12*). A possible explanation for the study’s findings, as Bruner (2014) notes, is that PA “integrates teaching, learning, and task” (p. 5). By placing students in the center of learning processes and prioritizing student-centered pedagogy, the online PA might have provided this opportunity for mingling teaching, learning, and task appropriately. The evidence for this is that online PA was interactive, ongoing, and engaged the teacher and students actively in the learning process (Lee, 2011). In line with the theoretical tenets of constructivist theory (Brown, 2014), as this active involvement occurred for the students, they might have constructed the complete knowledge and skills in their mind by discovering “the missing link between teaching, learning, and assessment of L2 writing” (Bruner, 2014, p. 6).

Thus, the study’s findings are compatible with those of the previous studies (Farahian & Avarzamani, 2018; Ghoorchaei & Tavakoli, 2019; Sharifi & Hassaskhah, 2011), reporting that the students who were trained on PA expressed positive attitudes toward it. Additionally, the study’s findings are in line with the previous studies revealing that PA makes L2 learners get interested in learning (Chen, 2006), obtain increased confidence (Ramova & Andrew, 2011), and get motivated to write more (Gue’nette, 2007). However, the study’s findings are in contrast with those of Matsuno (2009), revealing that the Japanese students had no positive

attitude toward PA. As Matsuno argued, the findings might be ascribed to the Japanese students to show a degree of modesty.

### Conclusion

As noted above, the purpose of the present study was two-fold. Firstly, it purported to disclose the effects of online PA on developing Iranian high school students' writing skills. Secondly, it aimed to excavate the Iranian high school students' perceptions about the efficiency of online PA in cultivating their writing skills. In general, it is worth mentioning that due to the lack of random sampling, these results should be interpreted with caution. Thus, the study findings evidenced that online PA was found fruitful to boost the students' writing performance. Additionally, the results of the focus group interview yielded some themes: 'developing autonomy'; 'fostering a sense of belonging to classroom community'; 'providing a comprehensive analysis of students' writing proficiency'; 'collecting empirical evidence on students' gradual improvement in writing'; 'training self-regulated students'; and 'making classes student-centered by teachers-as-advisors.' It is safe to conclude that due to the online portfolio assessment, the students had the opportunity to collect, select, and reflect on their previous writings. In this way, their meta-awareness is raised to gain control over the diverse dimensions of a qualified paragraph (e.g., content, language, organization, and task requirements).

Based on the study's findings, some pedagogical implications are suggested. The first implication is that education officials can hold in-service workshops on alternative assessment methods such as online PA. In such a way, the workshop trainers can teach the principles and procedures of online PA to the participating teachers. As such, it can be assured that Iranian English teachers can be equipped with the required abilities to implement successfully online portfolios in their classes. The second recommendation is for the Iranian English high school coursebooks

to assign a particular space at least in the workbook. For example, some blank pages can be designed at the end of the workbook so that the students can select and collect their best performances during the course and stick them on the blank pages. Later on, they can return to their portfolios and gain a sense of ownership and get a clear understanding of their growth and development. The third recommendation is for Iranian English language teachers. In light of the study's findings, they should not consider assessment apart from teaching. In other words, alternative assessment methods like online PA can be used to consolidate students' learning and as tools for learning. The fourth implication of the findings is again for teachers. In light of the findings, it can be implied that due to COVID 19 pandemic, the Iranian English language teacher should not be disappointed and try to adapt their teaching to the new situation and practice new pedagogies to facilitate their students' learning. The subsequent implication is that, as the findings evidenced since online PA had the students write more frequently, helped them to be more aware of their writing strengths and weaknesses, got them to reflect on their writing performances critically, and increased their self-regulated skills, the Iranian EFL teachers may want to use it in their classes. However, they need to present a clear and straightforward explanation of the benefits of online PA to their students and train them as to how to do it inside and outside of the class. The last implication is for the high school students. As online PA raised the students' metacognitive awareness, they can implement it to improve their self-regulation and become independent learners.

In light of the limitations imposed on the current study, some suggestions for further research are presented here. As this study's results provided support to the positive effects of online PA to promote the Iranian high school students' writing ability, future studies can explore how online PA can improve the other language skills (listening, speaking, and reading), language components (pronunciation, vocabulary, grammar,

spelling), and communicative competence (pragmatic competence, discourse competence, and strategic competence). Additionally, further research can probe into the effectiveness of online PA on developing high school students' self-regulation skills and meta-cognitive awareness. For example, future studies can examine how using PA leads to the improvement of students' self-regulation skills. Moreover, the effects of online PA can be examined with various participants (e.g., kids, teenagers, and adults) in other contexts (e.g., elementary schools, private language schools, and universities). Likewise, a further study can investigate the efficiency of online pair or group PA from social constructivist views where the students can be graded to interact with their teachers and peers to complete their portfolios. Last but not least, as the present study addressed the Iranian EFL learners' perceptions about the implementation and efficiency of PA to raise writing skills in online classes, further research can be conducted to further our understanding of the Iranian English teachers' perceptions about the implementation and efficiency of online PA.

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