Investigating the Effect of Portfolio Assessment on Vocabulary Learning of Iranian EFL Learners

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ABSTRACT

Vocabulary as a major component of language learning has been the objective of numerous studies, each of which has its own contribution to the field. This study tried to investigate the effect of portfolio assessment as a teaching, learning and assessment tool on vocabulary learning of Iranian intermediate EFL learners. To this end, forty-three EFL female learners aged from 14 to 18 were chosen through convenience sampling from Shokouh language institute in Qhaemshahr, Mazandaran province. They were randomly assigned into two groups: experimental (n=24) and control group (n=19). The experimental group received the treatment i.e. portfolio assessment. They were asked to make portfolios. During the study learners reflected on assessment that they completed and created a portfolio to show what and how they learned and the teacher provided them with feedback whereas the control group received conventional classroom instruction. After the treatment, by pre-test/ post-test comparison the researcher found that participants of the experimental group who were exposed to the techniques of portfolio assessment, gained better scores in the process of learning vocabulary and outperformed the learners in the control group. Both high-stake and low-stake holders can avail from the findings of this study. The results have also some implications for assessment, teaching and learning of L2 vocabulary learning.

Key words: portfolio assessment, vocabulary learning, EFL learners.

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1. Introduction

Effective learning of new lexical items in any language seems to be one of the main goals to be achieved by very language learners. It might not be possible to conduct a message or communicate in a language by those who may know some grammar, but their vocabulary knowledge is not still rich enough.

The role that knowledge of vocabulary plays in second and foreign language acquisition/learning has long been neglected. However, vocabulary is seemingly receiving much attention in the language teaching curriculum. According to Nunan (1999, p. 103), this is partly due to several reasons, such as the influence of comprehension-based approaches to language development, the research efforts of applied linguists, and the exciting possibilities opened up by the development of new types of assessments.

One of the key bases for instruction of English as second or foreign language is assessment. Assessment is a crucial activity in any instructional operation. The term "assessment" is often used in different contexts and means different things to different people. Most statistics faculty think of assessment in terms of testing and grading: scoring quizzes and exams and assigning course grades to students. But some typically use assessment as a way to inform students about how well they are doing or how well they did in the courses we teach. Therefore new ways of assessment have been developed to demonstrate what students learn and what they can do with their own knowledge. These new ways are called “authentic” or “alternative” assessment.

Herman, Aschbacher, and Winters (1992, p.6) proposed different set of characteristics for alternative assessments. They mentioned that alternative assessments need students to perform, create, or do something; use higher level thinking and problem-solving skills; use tasks that represent meaningful instructional activities; make sure that people, not machines, do the scoring; and ask teachers to perform new instructional and assessment roles.

Alternative assessments such as portfolios, conferencing, peer assessment and self-assessment are used as an alternative to put an end to one shot traditional assessment. Among all the procedures of alternative assessment, portfolio has become a popular technique, currently.

Portfolio is a collection of students work with a common theme or purpose. As Brown (2004) mentions Portfolio can include a range of materials like essays, reports, audio or video, homework, self and peer assessment. It shows students’ progress, achievement and self-reflection in one or more areas (Paulson & Paulson, 1991).

According to Moya and O’Malley (1994, p. 13–36), a portfolio is a collection of a student's work, experiences, exhibitions, self-ratings (i.e., data), while portfolio assessment is the procedure used to plan, collect, and analyze the multiple sources of data exist in the portfolio. The main goals of portfolio assessment are encouraging learners to become more autonomous, take the control of their learning, make decisions, participate in the evaluation of their own work and solve the problem they may deal with, individually.

2. Review of related literature

The concept of portfolio development was adopted from the field of fine arts where portfolios are used to display illustrative samples of an artist's work (Moya & O'Malley, 1994). The purpose of the artist's portfolio is to demonstrate the depth and breadth of the work as well as the artist's interests and abilities. Therefore, as Moya and O’Malley (1994) put it, portfolios can be used to demonstrate the depth and breadth of students’ capabilities through biographies of students’ work descriptions of students’ reading and writing experiences.
A Portfolio, according to O’Farrell (2009), is an accumulation of evidence about individual proficiencies, especially in relation to learning standards. Examples include but are not limited to: Samples of student work including projects, journals, exams, papers, presentations, videos of speeches and performances. A portfolio can also be defined as a purposeful collection of student work that tells the story of a student’s effort, progress and/or achievement in one or more areas (MacIsaac & Jackson, 1994).

According to Brown (2004) potential benefits of portfolios can be categorized as follows:

- It Fosters intrinsic motivation, responsibility, and ownership,
- It Promotes student-teacher interaction with teacher as facilitator,
- It Individualizes learning and celebrate the uniqueness of each student,
- It provides tangible evidence of a student’s work,
- It facilitates critical thinking, self-assessment, and revision process,
- It Offers opportunities for collaborative work with peers, and
- It Permits assessment of multiple dimensions of language learning (p, 257).

**Development of Portfolio Assessment**

During the constructivist post method era, there has been a paradigm shift from traditional testing of the outcome toward assessing learning process and performance. According to McNamara (2000), there has been new change from summative assessment to formative assessment which is called “Authentic” or “Alternative” assessment that emphasizes the need for assessment to be integrated with the goal of the curriculum and to have a constructive relationship with teaching and learning. It consists of different assessment procedures such as learner-centered assessment, student designed tests, portfolio assessment and self-assessment that the teacher and students can choose and use in language classrooms.

Among these, portfolio assessment is widely recognized and used in the field of teaching and learning of EFL/ESL writing. According to Genesee and Upshur, (1996, as cited in Brown, 2004) portfolio is defined as “a purposeful collection of students’ work that demonstrates to students and others their effort, progress and achievement in given area”. This portfolio assessment has been used for long. The portfolio alone is a useful teaching and learning tool in language learning classrooms. Portfolio assessment deals with any kind of acquired learning – knowledge, skills and abilities acquired through formal, informal, accidental and incidental learning (Shimo, 2005).

**Previous Studies Including Portfolio Assessment**

According to Hamp-Lyons, (2006), most of the literature regarding portfolios comes from first language writing and there can be found rare literature on the use of portfolios for L2 learners in assessment domains. There is also number of quantitative research considering the impact of portfolio assessment on EFL students’ writing ability and no study has been done - to date - to investigate the impact of portfolio assessment on vocabulary and collocation learning in Iran. The following is a study of some related researches which deal with portfolio assessment and its impact, as a new instructional strategy, on teaching and learning.

Elahinia (2004) investigated the effect of portfolio assessment on Iranian EFL learners’ writing achievement. Her study consists of two groups, one experimental group which are assessed through portfolios and one control group.
that are assessed based on traditional achievement tests. Findings revealed that portfolio assessment had a considerable positive effect on writing performance of the participants. Moreover, the participants of the study had a positive attitude toward their writing experience.

Considering the effect of portfolio assessment on learners’ achievement in writing, Al-Serhani (2007) found that portfolio assessment had a positive effect on students’ writing performance in general and the product skills of purpose, content, organization, vocabulary, sentence structure and mechanics in particular. The participants’ use of writing processes was also improved. As a result, there was a considerable difference between learners’ performance in portfolio and non-portfolio groups of planning, drafting, revising, and editing.

Sharifi and Hassaskhah (2011) in a study to investigate the effect of portfolio assessment on writing, tried a time series design. They used a traditional – based teaching in the first half of the semester and in the second half a portfolio-based teaching was used. They found that there was a close relationship between teaching and testing and portfolio had a positive effect on students writing ability.

Statement of the problem
It seems that learners of English as a Foreign Language (EFL) sometimes lack the vocabulary needed to produce acceptable sentences and written English. As a result, their writing and speaking is not proficient enough. For English language teaching in Iran, although many Iranian EFL learners have received several years of formal English instruction, frequently face difficulties to use the language, whether in the spoken or written form. Learning to use vocabulary proficiently in a foreign language is a difficult task for most learners, as they must face a complex set of challenges that include mastering lots of lexical skill.

Research efforts have been going on to scrutinize ways to improve learning languages including learning English as a foreign language. Learners learning English are often excluded from norm-referenced testing programs because of their lack of proficiency in English. As a result, these learners may be deprived of access to important educational opportunities that are based upon test results. After the paradigm shift from traditional way of assessment to alternative form of assessment, portfolio assessment technique has received a large degree of attention as a perfect pedagogical tool for non-native English learners that can closely tie assessment, teaching and learning all together. While, it has potential benefits to learners, it does not apply in Iranian educational setting and yet traditional final tests or quizzes with their all shortcomings, still dominate in EFL classes which cannot be good indicator of learners’ progress and effectiveness of teacher instruction.

Therefore, this study is an attempt to search whether the application of portfolio assessment technique affects EFL learners’ vocabulary learning.

Research Question
The present study addressed the following research question:

1. Does the application of portfolio assessment have any significant effect on vocabulary learning of Iranian EFL learners?

Research Null Hypothesis
Regarding the above mentioned research question, the following hypothesis is formulated:

H01. The application of portfolio assessment has no significant effect on the vocabulary learning of Iranian EFL learners.
3. Methodology

Participants

The participants of this study were 43 EFL learners studying English as a foreign language at intermediate level at one of the branches of Shokouh Institute in Mazandaran. All of the learners were female and their ages ranged from 14 to 18. To carry out the experiment, the researcher divided the learners into two classes, one class randomly assigned to serve as control group (19 learners) and the other as an experimental group (24 learners).

Instrumentations

In order to ensure the homogeneity of the subjects regarding their language proficiency in the first phase of this study, a version of PET (Oxford Preliminary Test) was given to the participants. The test consisted of three parts; part 1: grammar and vocabulary (49 items), part two: reading (10 items), and part 3: writing.

To measure the entry behavior of the participants in vocabulary, a test of vocabulary was administered as the pre-test. This paper and pencil test was developed by the researcher, based on learner’s text book. The researcher tried to select the more important words covered during the treatment procedure. This test consisted of 35 vocabulary tests (30 multiple choices and 5 close test items).

In order to find out the reliability of the test, the developed test was piloted with a group of 17 intermediate learners who were similar to the learners of the main study in terms of age, sex and proficiency level. The result of Cronbach Alpha formula showed that the test was reliable ($r=.718$). Furthermore, the content validity of the test was checked by two experts who were M.A. and Ph.D. holders in TEFL.

After fifteen half-an-hour sessions of instructions on vocabulary with specific treatment for the experimental group, the same test was administered as the post-test in order to determine the impact of specific instructions the participants received and the extent of achievement by the learners.

A group of forty-three female EFL learners who were studying at the intermediate level of English language proficiency in Shokouh English language institute was given a PET test in order to secure their homogeneity. Having analyzed the scores obtained through this test, the researcher could find that the difference between the control and experimental groups was not statistically significant and both groups belonged to the same level of proficiency. The forty-three homogenized learners were randomly assigned in two groups, one experimental and one control group. Experimental group included 24 learners and control group included 19 learners.

Then a 35-item vocabulary test was administered to the subjects. The portfolio model utilized in this study was based on show case portfolio model. This type of portfolio is a collection of the learners’ best or favorite work determined through a collaborative learner-teacher selection. Only completed work is included, thus the show case portfolio includes reflections by learner on decision-making processes used to determine which work is included in procedure of the portfolio assessment.

At the beginning of the term, the instructor explained about the design, goal and procedure of the portfolio assessment. Since in this study the researcher has assessed learner’s vocabulary through their writing, learners should make sentences, write definitions, synonyms, antonyms, brainstorming and give examples about the different vocabulary and create related paragraph writing.
The experiment lasted 15 sessions. The same home works from the textbook were given to both experimental and control groups. Both groups were taught by the same teacher, the experimental group received the treatment (portfolio assessment strategy).

The researcher provided each learner of the experimental group with two folders. One as a collection portfolio in which they would keep all assignments and the other was showcase portfolio that in which the returned paper selected for the portfolio would be put in according to the portfolio contents.

During the implementation of portfolio assessment model, by receiving the first assignment, the instructor (the researcher) read them patiently and carefully and she regularly reviewed the learners’ portfolio contents, she evaluated every assignment separately and provided feedback and comments. Therefore, learners received information about their strong and weak points in these aspects of their vocabulary. Then, the learners were asked to reflect on or self-assess their work and evaluate it. Furthermore, after the class, the learners consulted their instructor to gain comments in one-to-one conference. Then, they corrected and redrafted their work upon their instructor’s and own reflections. No grades were reported first, grading was delayed until the final version of each chosen assignment was submitted. Then researcher read and evaluated the learners’ portfolios independently using portfolio evaluation form.

For the control group, the same teaching materials, except the portfolio assessment model, were provided for the participants and they just received conventional assessment. The teacher clearly taught them variety of vocabulary from the same book. Contrary to the experimental group they were not asked to reflect on their work. Their vocabulary knowledge was evaluated base on the midterm and final exam. At the end of the term, after giving treatment to the experimental group, all learners in control and experimental groups took the same exam as the post-test to check the effects of the instructions. All required data were collected within eight weeks that included quantitative data.

**Design**

This study was conducted using quantitative method. We had two groups under the study which were not randomly selected but randomly assigned to two groups, an experimental group and a control one, and their post-test scores are compared, so the design of this study is quasi-experimental, with intact groups. Both groups were tested before and after the treatment in order to determine the efficiency of teaching through portfolio assessment on vocabulary and collocation learning.

The independent variable was the implementation of portfolio assessment and the dependent variables were the vocabulary and collocation learning which were measured through a post test. The experimental and control groups also received the same learning content.

**4. Results**

Based on the null hypothesis, the application of portfolio assessment has no significant effect on the vocabulary learning of Iranian intermediate EFL learners. To test this hypothesis, first, the researcher used a pretest to check the participants’ vocabulary knowledge before treatment. All learners were asked to answer 35 vocabulary items which were used for both pre-test and post-test. The descriptive statistics for comparing the performance of the two groups on pre-vocabulary test revealed that in experimental group the mean score was 14.95 while in control groups it was 15.15.
In order to ensure that there was no significant difference among subjects in the experimental and control groups before treatment in term of their knowledge of vocabulary, an independent sample t-test was performed. The result was shown in table 4.1.

Table 4.1 Independent sample t-test for equality of means for pre-test of Vocabulary

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
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<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Pre-Vocabulary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.121</td>
<td>.296</td>
</tr>
<tr>
<td>Equal variances not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
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</tbody>
</table>

As the table above indicates, sig value for vocabulary scores in t-test for equality of means in experimental and control groups is \(0.886>0.05\) which reveals that there is no statistical significant difference between two groups in their performance on pre-vocabulary test. As a result of the obtained data, the two groups were almost at the same level of vocabulary knowledge before treatment.

**Results related to post-vocabulary test**

The participants of control and experimental groups took the same version of pre-test after administration of the treatment. Descriptive statistics of vocabulary scores at post-test indicates that in experimental group the mean score was 26.95 while in control group the mean was 21.73.

In order to find whether there is significant difference between the control and experimental group in their performance on vocabulary post-test, an independent sample t-test was performed.
According to the above table, it can be concluded that there is a significant difference between control and experimental group in their performance (vocabulary learning) on post-test (sig = .00 < .05). These results not only reject the first null hypothesis saying that the application of portfolio assessment has no significant effect on the vocabulary learning of Iranian intermediate EFL learners, but also it shows that the learners in experimental group (portfolio assessment) out performed those in control group.

Finally in order to verify differences between the obtained scores in control and experimental groups before and after treatment and to check whether the treatment was effective or not, a paired sample t-test was performed. Based on this test if the sig value is less than .05, there is significant difference between mean scores of two groups before and after treatment.

Descriptive statistics such as number of participants, mean, standard deviation and standard error mean for both experimental and control groups are presented in table 4.3. And the results of paired t-test are shown in table 4.4.

4.3. Descriptive statistics of both groups before and after treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>24</td>
<td>14.9583</td>
<td>4.72256</td>
<td>.96399</td>
</tr>
<tr>
<td>Control</td>
<td>19</td>
<td>15.1579</td>
<td>4.21984</td>
<td>.96810</td>
</tr>
<tr>
<td>Post-Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>24</td>
<td>26.9583</td>
<td>5.82707</td>
<td>1.18945</td>
</tr>
<tr>
<td>Control</td>
<td>19</td>
<td>21.7368</td>
<td>2.64243</td>
<td>.60622</td>
</tr>
</tbody>
</table>
In the above table mean scores of both groups in their pre and post vocabulary test was presented. A brief look at table 4.3 reveals that learners in experimental group received higher mean scores than those in control group on their performance in post-vocabulary test.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean dif</th>
<th>SD</th>
<th>t</th>
<th>DF</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>-12.00000</td>
<td>4.41342</td>
<td>13.320</td>
<td>23</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 1: Pretest Posttest Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>-6.57895</td>
<td>2.34084</td>
<td>12.251</td>
<td>18</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 1: Pretest Posttest Vocabulary</td>
<td></td>
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</tr>
</tbody>
</table>

As the table 4.4 indicates, there was significant difference between experimental and control groups on their performance before and after treatment (sig= .00 < .05). In both groups participants have made a progress. Results shows learners in control group also benefited from conventional instruction, although the portfolio group performed much better. In other words, learners in experimental group outperformed those in control group and received better scores. Portfolio assessment was significantly improved Iranian EFL learners’ vocabulary learning.

**Discussions**

This study tried to examine the effect of portfolio assessment on vocabulary learning of Iranian EFL learners. Considering the fact that not enough research has been done to check the effect of alternative assessment techniques especially portfolio assessment on vocabulary learning in Iran as an EFL context, the researcher felt the need for further research. When we integrate teaching, learning and assessment, our assessment tool becomes a kind of learning tool that helps our students to learn and improve their skill.

Comparing the post test of the two groups revealed a significant difference between the performance of the experimental group and the control group. The results echo earlier findings in the literature. Regarding the research question, this study found that portfolio assessment significantly improves students’ vocabulary learning.

As far as, there was no study related to the effect of portfolio assessment on vocabulary learning, this finding confirms the results of the current study which were related to the effect of portfolio assessment on learners ‘other skills such as writing or reading. For instance, Elahinia (2004) investigated the effect of portfolio assessment on Iranian EFL learner's writing achievement. She found that portfolio assessment had a significant positive effect on writing performance of the subjects. The students in experimental group outperformed those in control group on writing test given at the end of the experiment. So, the findings are also in line with this study.
Moreover these findings are in agreement with the results reported by other studies (Aly 2000) that investigated the effect of using portfolio assessment on freshman in writing composition. In this study, the participants were first year students at Cairo University. This finding showed that the students had positive attitudes towards the use of portfolio. Furthermore, the study showed that portfolio strategy improved students' ability to recognize strengths and weaknesses in their writing.

5. Conclusions

When we integrate teaching, learning and assessment, our assessment tool becomes a kind of learning tool that helps our learners to improve their vocabulary knowledge. Comparison of the post test of two groups showed a difference between the performance of the experimental and control groups. Learners did their work based on portfolio achieved higher mean scores in their post-test than those in the control group. In the experimental group learners were receiving feedbacks from teacher while in the control group learners were just receiving a score that did not help them to improve their work; it is not enough to help them to know about their weaknesses and strengths. It can be said that the result of this study is because of the feedbacks that were provided. In addition, during the treatment, learners had an active role. They were assessing themselves, were reflecting their own progress. Learners became engaged in and more responsible for their own learning. At the same time this engagement in this process of improvement and decision making motivated the learners to learn and to try to improve their capabilities and it was also obvious that they enjoyed working with each other during the term. In the experimental group learners were encouraged to become independent that was one of the main goals of teaching and assessment. By involving in the process of assessment they practiced independently. Based on the findings of present study, portfolio assessment technique has a significant positive effect on EFL learners’ vocabulary learning and it can provide authentic information about the progress of learners during the term and helps them to be more independent. It is an effective instructional technique as well as assessment tool. Using portfolio assessment technique also helps students to make a bridge between their teacher and themselves. In addition teachers can use portfolio assessment technique to analyze their learners’ growth and use the information for future instruction. As a result it seems that using portfolio assessment as one of the alternative assessment techniques improves learners’ vocabulary learning by giving feedback, involving students in the process of learning and assessment. The better performance of the experimental group provides support for this kind of alternative assessment method.

6. Implications

The aforementioned findings and discussions have pedagogical and theoretical implications for FL-SL language learning and teaching. In this regard, the pedagogical implications can be listed as follows;

1. Through appropriate application, portfolio assessment technique has the potential to increase instructor professionalism through active and meaningful involvement in student assessment.
2. It can be a good instructional instrument as well as assessment tool in EFL educational setting.
3. Learners may benefit more from learning vocabulary and collocation through portfolio and they may be more interested in using vocabulary portfolio to improve their vocabulary achievement.
4. Portfolio assessment can be used as a complementary to traditional tests.
5. Portfolio assessment provides Opportunities for learners to practice reflection during class time.
6. Pair work and group work are encouraged in portfolio assessment in EFL classes.
7. The results of this study have important implication for English language institutes. Since portfolio assessment has significant effect on vocabulary achievement of Iranian EFL learners, syllabus designers, supervisors in institutes and teachers should take it into careful considerations in lesson plan in order to promote learners language achievements.

References