The Impact of Dynamic Assessment on EFL Learners' Vocabulary Learning

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ABSTRACT

This study was carried out to determine the effect of dynamic assessment (DA) on the EFL learners' vocabulary learning. To do so, 50 EFL learners in Esfarayen, at the intermediate level of proficiency were selected as the sample of the study. Sandwich model of DA (pretest-mediation-posttest design) was used in this research. All participants of the study were assigned to two groups. One of the groups serving as an experimental group received mediation after pre-test. The second group as a control group did not receive any mediation. The analysis of data revealed that there were a significant difference between the experimental group performance and control group performance. Better to say, incorporation of DA as a supplementary procedure to standard testing has positive impact on Iranian EFL learners both test performance and vocabulary learning.

Keywords: *dynamic assessment; vocabulary learning; EFL*

INTRODUCTION

The fundamental concepts, beliefs, and practices in language assessment have changed in recent years, partly, because of the shifting relationship between assessment and teaching. As Chapelle and Brindley (2002) stated , in 1970s, "assessment tended to take the form of proficiency testing, based on general ability constructs, which was largely unconnected to the curriculum" (p.284). They contended that current approaches to testing highlight the need for close relationship between the desired outcomes of instruction, curriculum, content, and assessment and this new emphasis is reflected in assessment policies, methods, and materials.

Traditionally, two purposes for assessing were identified: summative and formative. Bachman (1990) explained that summative assessments (SA) occurring at the end of an instructional period are intended to capture the results of instruction. Although summative assessments are concerned with products of past learning, in reality, they are often used to make decisions about individuals' futures. Bachman continued that formative assessments (FA), in contrast, are administered before completion of a course. They have a much closer relationship to instruction because their results give feedback into classroom teaching.

Despite the benefits of FA practices, there have been some major concerns over their effectiveness in enhancing learning. In order for FA practices to be effective in learning, instruction and assessment practices need to be integrated and harmonized. However, some critics believe that this expectation is not fulfilled. Specifically, Poehner and Lantolf (2005) contended that in most FA practices, assessment and instruction remain two separate entities. Similarly, Torrance and Pryor (1998) argued that teachers have little understanding of the relationship between assessment and learning and there is no actual intervention in the development process of the learners in most classroom-based FA practices. Consequently, Stenberg and Grigorenko (2002) have called for a paradigm shift in the practices of FA to integrate instruction and assessment as a unified activity.

Nowadays educators are recommended to use multiple assessments to evaluate what learners have learned. Dynamic assessment (DA) is a kind of interactive assessment used most in education. It is a product of the research conducted by the developmental psychologist, Vygotsky. He believed that the normal learning situation for a learner is a socially meaningful cooperative activity. This interpersonal interaction is the originator of new cognitive

functions and learning abilities. Later, they are internalized and transformed and establish the learner's inner cognitive processes. DA is a relatively new approach to L2 assessment that has been introduced to L2 research and educational community by Lantolf and Poehner (2004) and Poehner and Lantolf (2005).

LITERATURE REVIEW

Theoretical Basis of Dynamic Assessment

DA has emerged from the work of Vygotsky and Feuerstein. This notion views intelligence developmentally rather than as a static entity. Vygotsky' Zone of Proximal Development is the difference between the learner's actual level of development and that level of performance that can be attained in collaboration with an adult. It is hypothesized that a learner is able to imitate a cognitive strategy only if the potential exists within the learner. Kinginger (2002) points out that the ZPD construct is a shorthand device emphasizing the emergence of cognitive development within social interaction, when participants engaged in a learning activity receive assistance from more-competent others (teachers or peers). Taking into account the role of social interaction in SL and FL classes, the concept of the ZPD provides an important understanding of the focuses and practices of language assessment.

In dynamic assessment, interaction between teachers/assessors and learners creates their ZPD where the learners learning potential emerges. In other words, to assess a learner's learning potential means to create his or her ZPD through the interaction with the teacher/ assessor. Lidz and Peña (2009) contended that DA is an approach to individual assessment based on ZPD. The internalization process leading to learner's potential proficiency involves a transformation shift from inter psychological to intrapsychological planes within social interaction in the ZPD, where the expert (teacher/assessor) and novice (learner) together engage in communication. The dynamic assessor instructs learners on how to perform certain tasks, provides mediated assistance on how to master them, and then measures their progress in learning to solve similar problems (Kirschenbaum, 1998). In other words, dynamic assessment goes beyond the cognitive measure of the one-shot standardized test.

In sum, it seems that even though some current DA approaches do not directly derive from sociocultural theory(SCT), nevertheless they have borrowed and modified SCT's original concepts and methodologies and "took off from Vygtosky's work as the main launching point for their research'' (Sternberg & Grigorenko, 2002, p. 46).

Dynamic Versus Non- Dynamic Assessment

DA can be better understood when contrasted with static assessment (SA). Poehner and Lantolf (2003) proposed understanding the future as the main difference between DA and SA. They believed that "DA is very much in line with Valsiner's future-in-the-making model, since it is anticipated that future performance will be different from current performance. This model enables us to chart out development before it happens and compel us to participate actively in the developmental process itself. In DA, as called for in Vygotsky's ZPD, assessment and instruction are dialectically integrated as the means to progress and move towards an always emergent future. They also mentioned some methodological differences between these two conventions. Focusing on the product of past (SA) and future (DA) development, the relationship between the examiner and the examinee, and the provision of feedback are the main methodological difference between them.

The marked difference between DA and SA is that DA focuses on the learning process, whereas SA stresses the results or products of learning. In SA, which is usually done for summative purposes, any kind of interaction or assistance during the assessment is considered unacceptable. In fact, interaction and assistance of any kind could be seen as being unfair or even cheating. In particular, changes in the learner's performances during the assessment process jeopardize the reliability of test scores (Lidz, 1991). However, DA adopts a categorically different stance and underscores this idea that important information about a learner's abilities can only be obtained by offering assistance and intervention during the assessment.

In DA, a very specific form of feedback is provided, mediated assistance, and this is the heart of the assessment process. The mediation can be presented in two formats: sandwich or cake. The sandwich format typically consists of three stages: pre-test →mediation (instruction) →post-test. That is, first, test-takers are asked to complete pre-test activities; second, they are given instruction

(planned in advance or adjusted to test-takers' needs taking into account their performance during the initial test), and finally, they move on to a series of post-tests. This DA format is labeled "sandwich" because instruction usually occurs between pre-test and post-test stages throughout the test administration. In sandwich format, instruction may be given in individual or group settings to promote test takers' development.

Within the layer-cake format, assessment comprises intervention (or feedback) from the examiner during the test administration itself. In this DA format, the examinees carry out testing activities that are given item by item. If they cannot answer an item correctly, they are provided with instruction in the form of pre-fabricated hints. The cake format lends itself to individual administration in that the examinee is provided with instruction during the assessment process itself. The examinee's ability to learn is measured during the process of learning and feedback is given until the examinees succeed in doing the task or give it up.

Approaches to Dynamic Assessment

There are a number of approaches and models that fall under the umbrella term of DA. This is due to the fact that mediation can be implemented in a number of ways. However, Lantolf and Poehner, (2004) identified two general approaches to DA: interventionist and interactionist.

The interventionist type of DA includes intervention from the examiner during the test procedure itself and it is a more formal and standardized approach. During interventionist DA, the examinees are given instruction item by item and if they cannot solve the item correctly, they are given pre-fabricated hints. Poehner (2008) stated that the defining characteristic of interventionist DA is the use of standardized administration procedures and forms of assistance to present easily quantifiable results that can be exploited to make comparisons between and within groups, and can be contrasted with other measures and employed to make predictions about performance on future tests.

Using a pretest-intervention-posttest format, Budoff (1987) developed dynamic procedures for administering several widely recognized static tests of mental ability, including the Raven learning potential test, the Wechsler intelligence scale for children, and the Wechsler adult intelligence scale. His work focused on individuals from at risk backgrounds "whose

abilities were likely to be underestimated by traditional [static] IQ tests – specifically minority-group children and those from non-English-dominant homes" (Lidz 1991, p. 22). Budoff, apparently, tried to determine how much of the performance can be caused by the environment as represented by the tester and how much is to be attributed to the learner.

Interactionist approach is usually accompanied with the name of Feuerstein. Feuerstein fully integrated assessment and instruction so that one does not exist apart from the other (Poehner, 2008). According to Feuerstein, human cognitive abilities are not fixed and can be modified or developed through intervention. Thus, he criticizes prevailing assumptions about normal distribution of intelligence and traditional psychometric models (Feuerstein & Feuerstein, 2001). One of the concerns in such assessments is the issue of cultural differences, which is also addressed by Feuerstein. In fact, in Feuerstein's Mediated Learning Experience (MLE) model, the stimulus-response model has been revised so that the child is interacting with a more competent peer who helps the child in any way by selecting, changing, amplifying, elaborating, and interpreting the objects with the child through mediations.

Unlike interventionist orientations to DA, which have a strong propensity toward quantification and psychometric analysis, interactionist approaches follow Vygotsky's preference for qualitative assessment of psychological processes and dynamics of their development (Minick, 1987). Indeed, Vygotsky (1998) himself insisted that "we must not measure the child, we must interpret the child" (p.204) and this can only be achieved through interaction and cooperation with the child. Interactionist DA entails mediation emerging from interaction between examiner and examinee. During interactionist DA, leading questions, hints or prompts are not planned in advance; instead, they emerge from mediated dialogue and collaborative interaction.

Each of these two approaches to DA has both strengths and weaknesses. Researchers who implement standardized assistance cite validity issues with those who implement the qualitative approach. Haywood and Lidz (2007) held that "much of the interpretation of DA data depends on the skill and experience of the examiner" (p.3). Without standardization, the mediator is given the arduous task of

interpreting correctly a learner's need for assistance instantaneously. Those who implement qualitative DA argue that the quantitative approach overlooks important aspects of learners by reducing their performance to a numerical score.

Studies on Dynamic Assessment

Since the early 1960s, a range of approaches to DA has been developed in different contexts such as Germany, Denmark, and the US. As noted by Haywood and Lidz (2007), the hallmark of the studies that fall under the umbrella of DA is active intervention provided by examiners during the test procedure and assessment of the examinees' response to intervention.

Antón (2003) found the utility of DA procedure to test language proficiency of advanced L2 learners. The DA procedure included mediation to observe what learners were able to do with the language while being exposed to dialogic teacher-learner interactions. The participants of the study involved five undergraduate learners majoring in Spanish at an urban US university. The results of the study also showed that the inclusion of a mediation-driven DA procedure in the placement test increased the test's ability to differentiate learner's writing and speaking skills and provided the learners with more accurate recommendations concerning their particular academic needs.

Ableeva (2008) reported on a study focusing primarily on the effects of DA on developing L2 French learners' listening comprehension in university-level in which participants achieved a better comprehension with mediator guidance. This revealed that learners' abilities were more developed than one would have expected in an unmediated condition. Lantolf and Poehner (2011) examined the implementation of DA in a combined fourth and fifth grade Spanish classroom. In this study, the classroom teacher used standardized mediation prompts to dynamically assess noun/ adjective agreement in Spanish. They incorporated dynamic assessment into daily lessons without changing instructional objectives or curricular goals by teaching within the ZPD of learners to promote the development of grammatical structures in question in Spanish and found positive results in promoting the group's ZPD.

Antón (2009) conducted a study in which she implemented DA with third-year Spanish language majors at the university level. After completing a non-dynamic entry exam that assessed grammar and vocabulary, listening comprehension, reading comprehension, writing and speaking, learners took part in a mediated learning experience focused on the written and spoken portions of the test. Based on learners' responses to mediation during the dynamic speaking test, Antón gained a clearer picture of learners' actual and emergent abilities.

Mardani and Tavakoli (2011) investigated the role of dynamic assessment in reading comprehension of 30 Iranian male learners. During the mediation phase the researchers followed an interactionist method which was based on cooperative dialog. The findings rejected the null hypothesis of the researchers and they concluded that incorporation of DA as a supplementary procedure to standard testing had positive effects on both test performance and learning of learners.

Shrestha and Coffin (2012) explored the value of tutor mediation in the context of academic writing development among undergraduate business studies learners in open and distance learning. The authors concluded that DA can help to identify and respond to the areas that learners needed the most support (in this study, managing information flow). However, the authors recognized that the study was limited to a particular sociocultural context in higher education (Open University) and their findings could not be generalized to other contexts.

Sadeghi and Khanahmadi (2011) probed the role of mediated learning experience in L2 grammar of Iranian EFL learners. Sixty EFL learners (30 male and 30 female) in two institutes in Iran were the participants of the study. The results showed that the type of assessment –based instruction or mediation (DA based versus NDA-based) made significant difference in the learning of grammar by Iranian EFL learners.

Pishgadam, Barabadi, and Kamrood (2011) examined the effectiveness of using a computerized dynamic reading comprehension test (CDRT) on Iranian EFL learners with a moderate level of proficiency. Findings showed that providing mediation in the form of hints increased significantly the learners' scores and consequently their reading comprehension. DA seemed to be a bigger help to weaker learners than stronger ones. Naeini and Duvali (2012) investigated improvements in English Language Training (ELT) university learners' reading comprehension performance

by applying the mediations of a dynamic assessment approach to instruction and assessment. The descriptive and analytic analyses of the results revealed dramatic and measurable progress in participants' reading comprehension performance.

To summarize, a brief overview of the a few studies done in the area of dynamic assessment especially in educational context reveals the usefulness of this approach in helping learners to achieve higher levels of learning. However, little research exists examining the role of mediation through dynamic assessment in teaching EFL vocabulary. In line with the previous studies in DA and to extend the scope of its applications, this study aimed to apply dynamic approach to teaching and assessing of vocabulary by Iranian EFL learners. To achieve this goal the following research question is posed:

Is there a statistically significant difference between the vocabulary learning of dynamically-assessed learners and non-dynamically-assessed ones?

METHOD

Participants

The participants of the study were fifty female learners attending at the Gifted junior high school in Esfarayen. They were at the intermediate level of English language proficiency and ranged in age from 13-16. They were assigned to two groups; one as our experimental and the other as the control group. The homogeneity of the two groups in terms of vocabulary knowledge and language proficiency was checked. The classes were held for two hours a day, two days a week.

Instrumentation

Three instruments were used in the study. The participants were already placed at intermediate level by the teacher, but to ensure the homogeneity of the groups in terms of their

L2 proficiency, especially vocabulary knowledge, at the start of the study, they sat for Nelson test. Furthermore, a 35- item vocabulary test was designedas a pre-test. Of course, after a pilot study some items were revised and 5 of them were dropped. Finally, a post-test designed in parallel with the pre-test in terms of content, length and level of difficulty was developed to measure the influence of the treatment on the participants. The pilot study and item revision were done on the post-test, too.

Procedure

The fifty participants in the two intact groups were assigned to two groups namely, control group and experimental groups. The learners in these classes learned English as a foreign language. In the control group, vocabulary was taught using traditional method and there was no mediation after pre-test by the teacher. In the experimental group, dynamic approach was used in the class after vocabulary pre-test. DA in the experimental group included mediation between the examiner and the examinee such as hints, explanations, suggestions, prompts, and more importantly leading questions by the tester. In other words, the pre-test-mediation-posttest design (sandwich model of DA) was used in the study. In the first phase, a 30-item vocabulary test was administered as the pre-test. In the second phase, mediation was provided for the experimental group. During four successive sessions, 30 minutes of class time was allocated to mediation and discussion of the results of their exams. Finally, a post-test was administered to both groups. The collected data were analyzed using appropriate statistical procedures.

RESULTS

The collected data were analysed using SPSS. Table 1 shows descriptive statistics for the control and experimental groups.

Table1. *Descriptive statistics for control and experimental groups*

	N	Range	Minimum	Maximum	Mean	MeanStd.Error	Std. Deviation
Pretest(control)	25	9	16	25	20.72	.51807	2.59
Posttest(control)	25	10	17	27	22.68	.48208	2.41
Pretest(experimental)	25	9	17	26	20.68	.46447	2.32
Posttest(experimental)	25	6	22	28	25.16	.34967	1.74

As shown in Table1, the two groups had similar means in the pre-test, 20.72 and 20.68 for control and experimental groups, respectively. However, after mediation the difference between the means of the groups is increased

dramatically. To achieve the goal of study and obtain a clear picture of the impact of dynamic assessment on the vocabulary learning of the Iranian EFL learners, ANCOVA was adopted to analyse the data. Table 2 shows the findings.

Table2. *Tests of between-subjects effects*

Source	Type of III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Group	78.152	1	78.152	20.72	.000	.364
Error	136.330	47	2.901			
Total	28898.000	50				
Corrected Total	289.680	49				

a. R squared = .529 (adjusted R squared = . 509)

As shown in Table2, the difference between the pre-test and the post-test was statistically significant (p<0.05). It implies that the treatment in the form of dynamic assessment and mediation after pre-test has been effective in the vocabulary learning of EFL learners.

DISCUSSION AND CONCLUSION

It is clear that evaluating learners' performance constitutes an indispensable part of English language courses. However, most EFL learners look at testing as something frightening and disgusting. They do not consider it as a learning opportunity. Static assessment which is commonly used by teachers in EFL context (especially in Iran) is criticized by educational experts due to having a number of serious inadequacies. Taking into account the limitations of static assessment and considering new trends in language assessment, the present study intended to touch upon the role of dynamic assessment in vocabulary learning in EFL context.

The analysis of obtained data reveals that the difference between the control group and the experimental group which received treatment in the form of mediation between the examiner and the examinee such as hints, explanations, suggestions, prompts, and more importantly leading questions by the tester was statistically significant. In other words, dynamic assessment could improve the vocabulary learning of EFL learners. This can strengthen the findings of previous studies done by Albeeva (2008), Pishgadam et al. (2011), Sadeghi et al. (2011) and other researchers who have found positive effects of DA on learning a foreign or second language.

Therefore, mixing assessment and instruction can be beneficial for EFL learners in vocabulary learning. Process oriented dynamic assessment can improve the vocabulary learning of EFL learners. The researchers believe that adopting DA in EFL classes leads to more involvement of leaners in the process of learning. It also increases learners' motivation and reduces the anxiety of taking test. On the other hand, teachers can exploit DA to gauge the leaners' understanding and awareness and diagnose the areas that learners need more help. Teachers may be able to challenge learners to reach higher levels of functioning by engaging in DA.

Findings of this study may offer insightful suggestions to the EFL test developers as well as those involved in educational administrations. EFL teachers, syllabus designers, curriculum planner, and materials developers and also the learners interested in learning EFL can take advantage of the study. Other researchers can replicate this study using different participants in other contexts. Moreover, the role of dynamic assessment in learning language skills or other language components can be investigated separately.

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