

Dynamic Assessment: The Effect of Mediated Learning Experience on Iranian EFL Learners' Writing Skills

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Abstract

Originated from Vygotsky's sociocultural theory, Dynamic Assessment (DA) has attracted a lot of attention among scholars in EFL contexts within the past few years. This paper presented an effective incorporation of DA as an alternative to static procedures of assessment. It aimed at examining the difference between dynamic and non-dynamic (NDA) types of assessment of EFL writing ability of 60 intermediate English students. To fulfill this end, data were collected through the application of writing tasks in both pre-test and post-test. One group of participants (DA) enjoyed six-week mediation after the pre-test while the other group (NDA) went through the traditional forms of instruction. The results of the students' performance in both tests for both groups were calculated through t-test. The findings indicated that DA group made significant improvements in the post-test which can encourage practitioners to consider DA procedures more seriously in their everyday teaching practice.

Keywords: Dynamic Assessment, Static Procedures, Non-dynamic Assessment, Writing Task

Introduction:

The shortcomings of psychometric and discrete-point testing have led to the growing acceptance of dynamic assessment (DA) among language practitioners. Having its roots in Vygotsky's ideas on child's cognitive development and his sociocultural theory into assessment, DA is defined as the procedure which blends assessment and instruction into a unified activity aimed at promoting learners' development through appropriate forms of mediation tailored specifically for the individuals' needs (Lantolf & Poehner, 2004). In other words, "teachers instructional efforts are aligned with the need to continually diagnose learners progress towards stated objectives, as teaching and assessment are seamlessly integrated" (Poehner, 2009).

The assumption is that assessment of an individuals' present knowledge is not an indication of his/her potential. Hence, DA which is prioritizing potentials of learners to their typical performance stands in sharp contrast to traditional views of assessment. Of critical importance in this definition is the role of mediation which results in significant changes in one's conceptual understanding. Put another way, it offers ways of interaction through giving hints, providing prompts, modeling and leading questions as learners face difficulty in their daily instructional classroom activities. Donato and MacCormik (1994) argue that mediation is the instrument that assists achieving higher levels of learning and mental functioning. DA can be regarded as an effective tool to bridge the gap between teaching and testing and help test takers put aside their debilitating attitudes as well as destructive feelings in teaching and testing situations.

Related to what has been talked about so far, the present study seeks to assess a group of junior students' writing abilities through the implementation of interactionist approach to DA, hoping that it would promote the performance of learners being offered mediation and support in completing their writing task. In general, EFL learners consider writing as a laborious task to accomplish and it appears to be even more problematic for junior students in their early attempts to write in English. This can mainly arise from the insufficient exposure to different language models and their poor understanding of academic writing conventions. DA provides language

instructors with the opportunity to replace the prevalent and ineffective "teaching to test" with more dialectic and interactive procedures. Hence, this study aims to reflect the effectiveness of dynamic assessment in teaching and learning contexts and provides more evidence on how to facilitate the emergence of learners' potentials in a sense that achieving higher stages of their development will be attainable dynamically.

Research Background

Sociocultural Theory and Zone of Proximal Development

According to Sociocultural theory (SCT), learning is described as a social process that plays a fundamental role in the development of cognition. In other words, SCT wants to indicate the relationship between individuals' mental functioning and cultural contexts. Therefore, it focuses on the role played by participants in social interactions which can influence psychological developments. This internalization can occur if assistance would match learners' zone of proximal development (Poehner, 2011) which is defined by Vygotsky as the distance between the actual developmental level and the potential one in collaboration with more capable persons. In general, as stated by Mardani and Tavakoli (2011) two major characteristics can be assumed for Vygotsky's SCT. The first one refers to the role of interaction in development while the second feature emphasizes that ZPD results in cognitive development.

The investigation of ZPD enables us to evaluate the future development of individuals based on their interaction patterns with more competent peers or teachers. In this case, the observed changes in the individuals' rate of performance when mediation is provided, demonstrate abilities that are still under the process of development. Briefly put by Van Compernelle and Zhang (2014), "the ZPD encompasses emerging capabilities that are in the process of maturing but are not yet under independent control". Furthermore, while maintaining the importance of ZPD, Lauria (1961, as cited in Poehner, 2009) emphasizes that valuable information about individuals' abilities can be obtained through analyzing their response to mediation, the extents to which their performance develops as the result of mediation and their degree of success when mediation is transferred to new situations. As learners improve in their task performance, they become increasingly more capable of functioning independently in situations in which they previously performed only through collaboration with others.

Dynamic Assessment versus Static Assessment

Van Compernelle and Zhang (2014) define DA as a theoretical approach to capture the interrelatedness of teaching and testing which is applied for formative as well as diagnostic and summative assessments. In line with their ideas, Poehner and Lantolf (2010) assert that learning during testing brings validity to assessment as it indicates the appropriateness of the mediation provided to learners which in turn informs us of the current and emerging abilities of them. Xiaoxiao and Yan (2010) define DA as an interactive psychological assessment with an emphasis on the important role of interaction in its implication. In contrast to DA, non-dynamic assessment is regarded as product-oriented with no intervention or feedback from tester and is intended to assess learners' potentials in their present state. To avoid measurement errors and increase reliability, both testers and test takers play their roles neutrally (Sternberg, Grigorenko & Erham, 2002). Haywood and Lidz (2007) argue that traditional forms of assessment reduce learners' cognitive development in their independent functioning while DA boosts that through appropriate mediation which can consequently lead to more effective learning and empower learners with the required knowledge to manage subsequent tasks more successfully.

The distinction between DA and NDA can be realized in three ways as follows (Sternberg & Grigorenko, 2002):

- **Assessment goals:** While NDA concentrates on the already acquired skills, DA rejects any product-oriented approach and refrains making any conclusions based on preexisting skills.
- **Feedback:** Although DA allows for the implementation of constructive feedback during test procedure, NDA avoids giving feedback to test takers.
- **Involvement:** In contrast to the interactive nature of examiner in DA where learners are viewed as active participants and examiner acts as an intervener who seeks to motivate and maintain positive changes in cognitive functioning of the learners, testers in NDA appear to be detached from the whole mentioned testing process.

Sternberg and Grigorenko further elaborate on the contrast between DA and NDA and define DA as a procedure whose outcome "takes into account the results of an intervention. In this intervention, the examiner teaches the examinee how to perform better on individual items or on the test as a whole. The final score may be learning core representing the difference between pre-test (before learning) and post-test (after learning) scores, or it may be the score on the post-test considered alone" (p.7).

In general, due to ontological and epistemological differences between DA and NDA, they cannot be posited along a single continuum. While NDA views assessment and instruction as dualistic procedures, DA suggests a monistic view with an attempt to improve abilities through support, intervention and collaboration. Lidz and Gindis (2003, as cited in Ajideh & Nourdad, 2012) assert that these two philosophical approaches have significant indications in assessing students in a way that DA uses particular instructional activities to provide learners with enough support. This will diminish learning deficiencies by making use of learners' potentials in performing tasks.

Interventionist or Interactionist?

DA originates from the notion of the ZPD which explains the unique human potentials to improve beyond existing capabilities in collaboration with those whose two-way interaction mediates individuals to higher levels of functioning (Poehner & Lantolf, 2005). According to Lantolf and Poehner's proposal (2004), there are two general distinguishable approaches to DA. They consider "interactionist" as a more dialogic and open-ended approach and "interventionist" as a standard mode of presenting mediation.

In interventionist interpretation, with the typical design of sequencing pre-test, teaching and post-test, the ZPD of learners is measured quantitatively as an indication of changes that occur between the performances of individuals before and after implementing mediation. On the other hand, an interactionist DA interprets the ZPD qualitatively. It follows Vygotskian preferences for dialogic interaction and differs quantitatively from interventionist approach that remains close to some forms of static assessment which show tendency towards the psychometric properties of testing. From this perspective, instead of interventionist model which measures the current state of learners' capabilities, an interactionist model that emphasizes the interaction between the mediator and the individual for the emergence of assistance among them, is adopted. In fact, interactionist approach considers DA as a tool that informs us about the psychological processes that learners might be able to manifest in the later phases of development.

Previous studies on DA

The emergence of DA can be traced back to Vygotsky's criticism of traditional assessment (Shabani, Khatib & Ebadi, 2010; Lantolf & Poehner, 2004). Vygotsky maintains that traditional forms of assessment are only representative of the level of development that has been already achieved rather than the level which is going to emerge. Due to the shortcomings of psychometric approaches to assessment along with the outstanding outcome of DA, particularly in the case of second language acquisition, scholars are motivated to pay particular attention to its use as a feasible alternative (Poehner, 2007; Elder, 1997). In spite of having a considerable body of research on dynamic assessment in educational settings based on Vygotsky's approach, DA is not completely known. Yildirim (2008) examines DA issue based on Vygotsky's sociocultural theory. He investigates his approach theoretically but his study does not concern the empirical and practical dimensions of this theory in detail.

Anton (2009) investigates the effectiveness of DA among university students through a diagnostic test of speaking and writing. The findings indicate that DA results in a more comprehensive analysis of students' abilities. In another study, Lantolf and Aljaafreh (1995) study the influence of interaction on adult ESL learners with a more competent non-native teacher. By using pair work and providing mediation through interaction in the students' ZPD, their independent functioning gradually emerges and reaches a higher level of accomplishment. The mediation provided by cultural affordances has effects on the cognitive development of the learners. This issue has attracted many scholars in second language acquisition research in the last few passing decades (Johnson, 2006; Lantolf & Johnson, 2007; Poehner & Lantolf, 2005). In a similar study, Nassaji and Cumming (2000) conduct a case study on the features of the ZPD in language teaching and learning. They examine 95 exchanges in interactive dialogue journals written during 10 months between a six year old Persian speaker starting to learn English and his Canadian teacher. They report the importance of interaction in teaching and learning with the emphasis on the role of scaffolding by the teacher. In another case study, Van Compernelle and Zhang (2014) focus on the design, administration and scoring of dynamically administered elicited imitation (EI) test of L2 English, morphology. The major contribution of their test is that learners' ZPD can be better understood in the light of the mediation provided through appropriate application of EI.

Birjandi, Daftarian and Lange (2011) examine whether it is possible to differentiate the qualitative and quantitative effects of dynamic assessment on the items and responses. Two types of Rasch scaling are used to scale sets of "Wh-type" questions and "scanning items". Frothy-two Iranian university students participate in the study and take both the pre-test and post- test. The findings are indicative of the anticipated improvement in learners' performance in both tests. The writers suggest that the rating scale formulation used as an effective measure of the ZPD.

In a recent study, Naeni and Duvall (2012) use a mixed method to see how students' reading comprehension improves through the implementation of DA approach to instruction and assessment. Participants are provided with mediation in three subskills of reading, namely "finding the main idea", "inference" and "understanding unknown words". The findings show that mediation can play an effective role in improving students' reading comprehension abilities.

Writing as a skill which is hard for learners to master has always been the center of attention in EFL contexts. Due to the significant value of writing ability in higher education levels and its important role as an indicator of individuals' competency in language, there seems to be an immediate need to think of effective ways to pave the way for students' improvement. DA as an alternative offers practical and convincing solutions to facilitate learners' accomplishments in academic writing and opens up new windows to teachers in their teaching and assessment settings.

Research Methodology

The population, Sample and Sampling

The present study included a number of 60 intermediate EFL students of Shiraz Azad University. Participants took the Oxford Placement Test (OPT) with 60 multiple choice items on grammar which was used to assign learners into two homogenous groups. Both groups experienced similar course of learning including the same content and class duration which lasted for six weeks; two sessions per week. The two groups were distinguished by the assessment used for each. Traditional forms of teaching writing were used for the NDA group whereas the other group enjoyed dynamic methods of teaching. A description of different stages of test administration is described as follows:

Phase 1: A sample of Toefle writing pre-test containing some topics was used as a pre-test for both groups and the writings were scored based on Toefle writing checklist. The results were then recorded for later comparison.

Phase 2: Mediation was offered to the DA group within a six-week period. The researchers followed an interactionist model in which cooperation was mainly emphasized. According to this approach, assistance arises from the interaction between the mediator and the learner. In contrast to traditional settings that favor psychometric computations, interactionist DA emphasizes the implementation of supportive and dialectic relationship that can lead to overall success of individuals.

Participants in the DA class were divided into ten groups of three students and similar topics from Toefle writing were administered to them during each session. They were encouraged to cooperate and share their ideas not only within their own group, but also with the members of other groups. During the mediation phase, the teacher constantly monitored all the students' writings, answered their questions and provided them with appropriate hints and feedback. The discussions between the students and the teacher were mainly about paragraph structure and organization (e.g. how to initiate, develop and terminate a paragraph, how to use cohesive devices and maintain coherence) and grammatical points. Some of the most frequently used techniques for providing feedback were:

- Giving corrective comments related to the errors made by the students in their pre-test writing task.
- Asking students leading questions such as "how to develop a paragraph".
- Modeling effective use of writing strategies.
- Starting to solve the task (in case problem arises) and asking learners to continue.

On the other hand, the NDA group went through the traditional methods of writing. Each session, the teacher introduced a new topic on which the learners were supposed to write individually. The teacher collected the writings, corrected and scored them and returned the papers back to students.

Phase 3: In this part of the study, a post-test was given to both groups and the results were recorded for further analysis. The procedure used for scoring was the same as pre-test.

Research Tools:

Two instruments were used in the present study. At first, an OPT was administered to assign participants into two groups (DA and NDA) based on their L2 proficiency levels. Then, after ensuring the homogeneity of the groups, a Toefle writing test was used as the pre-test to gain an estimate of the participants' mastery of writing. Finally, after six sessions, the post-test was given to both groups.

Research Findings:

To investigate the effect of implementing dynamic assessment on EFL learners' writing ability, independent sample t-test was run. The finding of which are as follows:

The results of pre-test descriptive statistics for both DA group and NDA group, presented in table 1, show that the mean scores of these groups are 8.06 and 8.00 respectively. Obviously, their mean scores are different.

Table 1. Pre-test Descriptive statistics for DA group and NDA group

Group Statistics

	group	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	DA	30	8.0667	2.18037	.39808
	NDA	30	8.0000	2.08443	.38056

To see if the observed difference is significant, an independent sample t-test was performed. The results are presented in table 2.

Table 2. Pre-test Independent sample t-test for DA group and NDA group

	Learner's Test for Equality of Variances								
	F	Sig	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Pre-test Equal variances assumed	448.	506.	121.	58	904.	06667.	55072.	Lower	Upper
Equal variances not assumed			121.	57.883	904.	06667.	55072.	1.03572-1.03577-	1.169061.16910

As table 2 indicates, the difference is not significant ($t=.12$, $df=58$, $p>.05$). This means that there is no significant difference between the level of learners' writing performance in DA group and NDA group in pre-

test and the two groups are equivalent. This equivalence is seen in figure 1 which demonstrates the bar graph of pre-test performance of both groups.

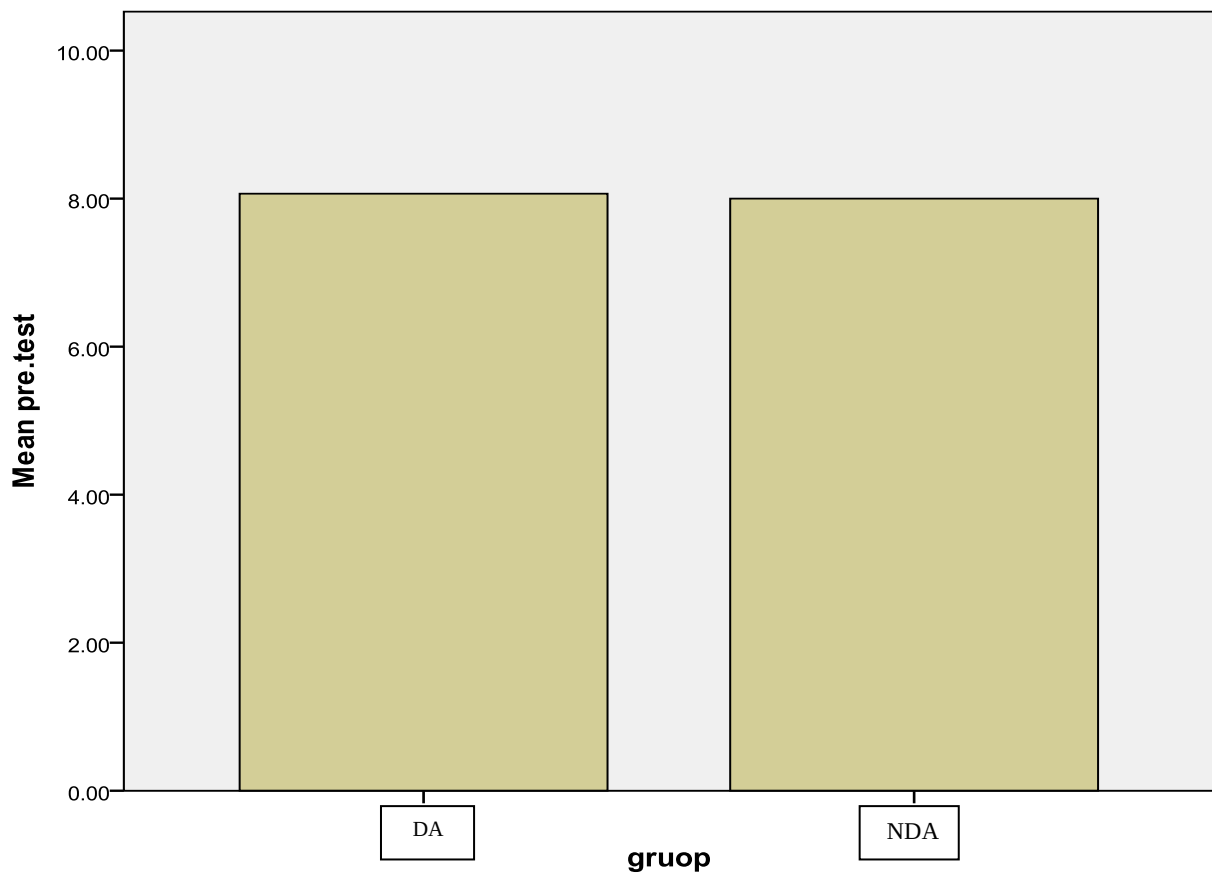


Figure 1. Bar graph of pre-test performance of DA and NDA group

The results of post-test group descriptive statistics for both DA group and NDA group, presented in table 3, demonstrate that the mean scores of these groups are 15.43 and 12.43 respectively.

Table 3. Post-test Group statistics for DA group and NDA group

Group Statistics

	group	N	Mean	Std. Deviation	Std. Error Mean
Post-test	DA	30	15.4333	2.12835	.38858
	NDA	30	12.4333	2.17641	.39736

To see if the observed difference is significant an independent sample t-test was performed. The results are presented in table 4.

Table 4. Post-test Independent sample t-test for DA group and NDA group

	Learner's Test for Equality of Variances								
	F	Sig	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Pre-test Equal variances assumed	234.	630.	5.398	58	000.	3.00000	.55578	Lower	Upper
Equal variances not assumed			5.398	57.971	000.	3.00000	.55578.	1.88749 1.88748	4.11251 4.11252

As table 4 indicates, the difference between the two groups is significant ($t=5.39$, $df=58$, $p</05$). This means that the level of learners' writing performance in DA as well as NDA group is significantly different and apparently DA group outperformed NDA group. The effect size (Cohen's d) is 1.39, revealing a large value of difference, which tells us that the difference between these two groups is large and consistent enough to be considered. The significant difference in learners' performance is clear in figure 2, which is the bar graph of learners' post-test performance.

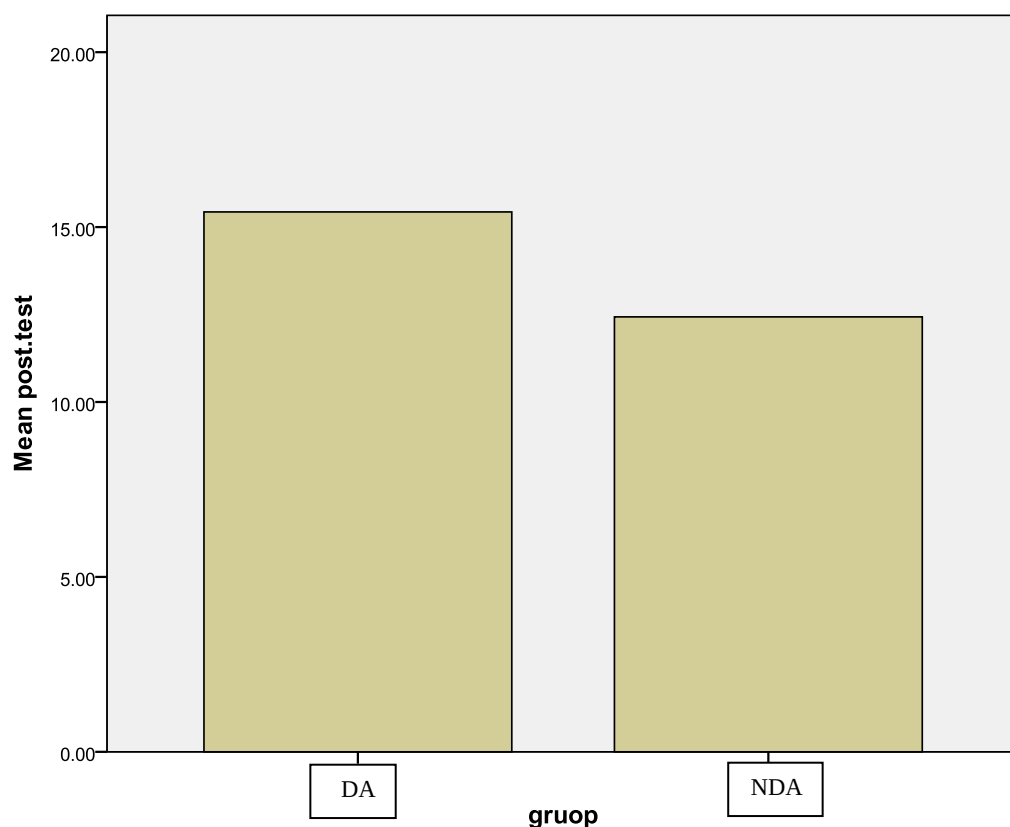


Figure 2. Bar graph of post-test performance of DA and NDA group

Discussion and Conclusion:

The present study was undertaken to explore the effect of dynamic assessment procedure on writing abilities of EFL learners. It provided us with empirical support concerning the effective application of DA in contrast to more traditionally psychometric-based system of assessment which is prevalent in Iranian settings. This can in turn lead to a shift in the role of both practitioners and learners, from passive individuals to dynamic negotiators in teaching and learning contexts.

The results of the study indicated that there is a meaningful difference between two groups with a statistically significant improvement in the writing scores of the group which was dynamically taught (DA group). The findings support the accumulated body of research on DA such as Poehner (2008), Seyed Erfaniand and Agha Ebrahimiyan (2013), Birjandi et. al (2011), Dual and Naeni (2012) and Van Compernelle and Zhang (2014).

The above-mentioned studies are in line with the findings of the present study which indicated that dynamic assessment improved the overall ability level of learners including writing and other skills being investigated. It can also promote cooperation and interaction among students in stress-free environments which can consequently reduce the detrimental effects of test scores to minimum. This way, instructors can assess the true state of individuals' ability and capture their potentials in their ZPD. Moreover, it may help teachers revisit their instructional practice and make it more compatible with learners' needs which can later promote their conceptual understanding of language.

In conclusion, while rigid and imposed syllabuses limit the assessment of traditionally-based classrooms in which students are evaluated merely based on their independent performance, a different route is taken by DA where a totally different picture of learners' potentials in a purposeful mode of mediation is provided. Additionally, it can be claimed that DA can be applied to evaluate different skills involved in learning a language by constructing a more effective means of assessing and teaching students. Therefore, the need to pay more careful attention to DA procedures should be mainly considered by stakeholders to eradicate the present shortcomings of the educational settings in Iran.

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