Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.8, No.35, 2017

The Effect of Mediation via the Interventionist Model of Dynamic Assessment on Reading Comprehension: Evidence from Iranian EFL Learners

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Abstract
Dynamic assessment (DA) has been an interesting area of study for many researchers since its introduction about eighty years ago. However, the detailed procedure of mediation or treatment as the key part of DA has hardly ever been shared with the interested practitioners who are motivated to actualize and apply DA in their language classrooms. Therefore, the purpose of current study is twofold: 1) to provide a full description of the procedures of mediation via the interventionist model of DA, and 2) to investigate its effect on the Iranian EFL learners' reading comprehension. To this end, twelve female intermediate students were chosen from the population of English language learners in a private language institute in Tehran, Iran to act as members of both the control and experimental groups in a quasi- experimental design study. The results of the One-way repeated measures ANOVA indicated that Mediation via the Interventionist Model of Dynamic Assessment helped the participants in the experimental phase to improve in reading comprehension. Moreover, the findings shed some light on why and how to implement DA in the EFL classes.
Keywords: Dynamic assessment, Interventionist, ZPD, Reading comprehension, Non-dynamic assessment

1. Introduction

Under the influences of linguistics and psychology, language teaching has experienced so many new methods and approaches, most of which were actualized in language teaching classrooms. However, language assessment has hardly ever experienced new approaches, and as a results, standard SA (static assessment; static because they consider learners' performance static) has dominated the field over a considerably long period of time. In the meantime, SA was criticized for many shortcomings as well. For instance, it was argued that they just measure the actual performance rather than the potential; they ignore learning or do not lead to learning; they do not address instructional and teaching goals; they overlook affective or nonintellectual factors, and so on. These criticisms are important if one considers that decision making inherent in assessments is very influential in students' lives.

Consequently, alternatives were suggested. One of the approaches which is derived from sociocultural view is Vygotsky's theory of ZPD (Zone of Proximal Development) which is said to be able to compensate for all those shortcomings in static assessment. Later, ZPD was associated with a new approach to assessment called Dynamic assessment.

Poehner and Lantolf asserted that classroom formative assessment can be more effective by dynamic assessment which provides a kind of mediations which are continually adjusted to the students' needs (2005). DA is helpful in that students become more aware of these abilities by receiving continual feedbacks. As Vygotsky asserted the aim of instruction should be in a way that causes invisible become visible. DA is more accurate and better in providing information about the learners' abilities than SA. Assessing students by their initial performances underestimates their abilities, namely their potential abilities.

Although the advantages and benefits of DA were revealed and confirmed by a lot of discussion at the theoretical level, it is hesitated to apply due to the fact that the number of practical studies which can provide guidelines for its methodological application are restricted. As Haywood and Lidz asserted the most intimidating aspect of dynamic assessment is its mediations (2007). This issue has not investigated in general dynamic assessment research (Lidz, 1991) and also DA research in second language (Aljaafresh & Lantolf, 1994; Poehner & Lantolf , 2005). More specifically, according to Kozulin and Grab (2002), dynamic assessment techniques in content areas, such as reading progressed very slowly and it requires the construction of materials which are sensitive to cognitive strategy use. As mater of the fact, reading is very complicated process since it needs six general component skills and knowledge areas: Automatic recognition skills, Vocabulary and structural knowledge, Formal discourse structure knowledge, Content/world background knowledge, Synthesis and evaluation skills/strategies, and Meta-cognitive knowledge and skills (Alyousef, 2006). Therefore, by reading the components of communicative competence, such as linguistic, discourse, pragmatic, strategy and intercultural can be improved (USO-Juan & Martinez-Flor, 2006). As Doghonadz asserted "among the language skills, reading is one that a person has to learn throughout his/her life and it is most significant for EFL learners to

sharpen in order to reach a higher level of language competence" (2017, p.3).

Considering that applying interactionist DA in the classroom context with a large number of students is inappropriate (Hassaskhah & Haghparast, 2012), and owing to the fact that reading comprehension is significant in gaining communicative competence, this study was designed to investigate the effect of mediation via the interventionist model of DA on EFL reading comprehension. The interventionist model of DA is a good approach for teaching reading comprehension in that, at first, it diagnoses the learners' problems and then removes them by mediations. To be more exact, this study incorporated two formats of the interventionist DA, namely cake and sandwich in the instruction of reading comprehension in the language classroom and scrutinized their effects on reading comprehension.

2. Review of the Related Literature

DA is not a mere assessment tool; it is also concerned with instruction and learning (Amini, 2015). That is, it can move the learners to higher levels of development via mediations. Therefore, teaching and assessment are integrated and reconciled in DA. Dynamic assessment has been attributed to several origins based on its diverse viewpoints (Murphy, 2011; Chaiklin, 2003). Some attributed the origin of DA to Alfred Brent due to his notion of investigating ability during a test and his idea of a continuously developing latent trait (Murphy, 2011) which is comparable with Jean Piaget's view. However, Piaget was concerned with errors, not remediation. Although he suggested general ideas on remediation, others view Reuven Feuerstein as the originator. He believed that product-oriented tests or SA are unequal because they do not consider children with the disadvantaged family. Therefore he developed IE (Instrumental Enrichment) program to compensate the inequality regarding the deficit cognitive functions which are not developed rightly in the disadvantaged family. According to him, individuals are the open system whose intelligence can adapt and change in interaction with the environment. According to Sternberg and Grigorenko (as cited in Murphy, 2011, p.3), "it is due largely to Feuerstein and his followers that dynamic assessment has flourished, especially its gradual development in the west".

However, DA is most often associated with Vygotsky's notion of ZPD (zone of proximal) which is rooted in sociocultural theory. In fact, literature knows Vygotsky as "father foundation". Vygotsky (1980) and his colleagues argued that IQ scores are not an accurate predictor of children's success in school; so as to they attempted to use ZPD theory to explain the phenomenon. They criticize the SA (static assessment) for its one-dimensional assessment of just the actual performance rather than the potential ability. More specifically, Vygotsky believes that in order to have a complete picture of a person's abilities, we have to consider the matured (developed) and developing abilities. Therefore, they put forward an assessment with "hints and prompts" during the test (Van der Veer & Valsiner, 1991, p. 337). This assessment method was later called DA by Feuerstein. Therefore, ZPD predicts the success better than IQ.

Later, Luria (1961), Vygotsky's colleague, tried to explain that in order to have better and clear picture of the child's level of functioning, he should get assistance according to his ZPD needs. Therefore, in steps, first, the teacher should analyze the child's need for assistance (what kind and how much assistance he/she needs), then after providing the extent of assessment needed, the child should be tested again this time without assistance in order to measure his improvement. Poehner elaborated on DA and Vygotsky's SCT (social cognitive theory) in his book "dynamic assessment" (2008) and declared that Vygotsky found out the internalized abilities of learners can be measured by SA that there was no sign of the process that was still developing. Therefore, the learner's potential abilities can be measured by the supports or mediation he gains and then he internalized new abilities, here the instruction and assessment are integrated.

It should be noted that both Vygotsky and Feuerstein reject the separation of cognition and instruction or learning as the cultural tool. They believe that culture, learning, and development are not separable. Culture and development integrated in learning process. Therefore, we are in process of the learning, our cognition is not static and it is in the process of changing.

Ceci's Bio-Ecological model illustrated that the level of mental activities or IQ is dependent on context. He emphasizes the role of culture in shaping intelligent along with the role of society in "how society shaped intelligent". In his biological theory, Bronfenbrenner and Ceci termed the "central proximal process", which refers to the successively differentiated and complex process that unfolds over time between developing organism and persons, objects, and events in the environment. In their model, genotypic tendencies may get promoted by more differentiated interaction.

2.1 Interactionist vs. interventionist

There are two approaches to dynamic assessment: interventionist and interactionist. There is an interaction between examinee and examiner in the interactionist model and the speed and quantity are not matter of consideration. In this model, learners' needs are significant, therefore, it is matched to the Vygotsky ZPD and Feuerstein mediated learning. On the other hand, interventionist approach to DA includes standard and prepared list of mediation. As mater of the fact, it is psychometric quantification and speed is the matter of significance.

One famous procedure to interactionist approach is "mediated learning experience" (MLE) which belongs to Reuven Feuerstein who believes that environment doesn't effect on human beings directly but this effect happens through mediator who modifies and assists the learners to reach higher level in which structural cognitive changes can occur (Lantolf & Poehner, 2004). His SCM theory (structural cognitive modifiability) emphasizes that human cognitive abilities are not fixed systems, but they are changeable by appropriate forms of interaction and instruction (Feuerstein et al., 1981). The MLE came into reality by LPAD (learning potential assessment device). Although Vygotsky emphasizes the history of development and believes that activity is always and everywhere mediated, both believe there is cultural transmission in mediation (Lantolf & Poehner, 2004).

Likewise, mediation in the Interventionist approach is provided via two formats: cake and sandwich. The design in sandwich format is pretest-train-posttest. Mediation which is a list of hints and prompts is after the pretesting stage. Milton Budoff pioneered this approach. In this approach, firstly leaners' actual performance is measured, and then training starts. And afterwards, posttest is administrated in order to see the effect of training. Therefore, here we have three groups of learners, namely high scores those who gain high scores in pretest and progressed or improved very little. The second group is gainer those learners who progressed significantly, and last group is non-gainer those learners who gained low scores in pretest and posttest (Lantolf & Poehner, 2004). Cake format of interventionist dynamic assessment refers to applying a list of mediations during the administration of the assessment. The word "cake" indicates the layering of test items and hints in which each test items are mediated before moving to the next item on the test (Lantolf & Poehner, 2004). There are two models for cake format of interventionist approach of DA: LLT (Jürgen Güthke's Leipzig learning test) and Brown's graduated prompts approach. LLT firstly appeared as the learn test (Lantolf & Poeher, 2004). In this test learners are given sets of geometric figures matched with invented language words and they are asked to do the tasks. Hence mediation starts from implicit and the results are in form of scores or profiles explaining sorts of errors and form of assistance which used as the basis for the following instruction. In Brown's graduated prompts approach examinees receive prepared mediation which is arranged from general to specific to teach them to solve problems. In this approach, learners mastered principals and then they can solve the problems independently. In the first posttest which they are "near transfer" problems, learners solve similar practiced problems. Posttests are designed in steps; in initial steps learners are given problems which are not so far the practiced one. Then gradually they are given "far transfer" problems to be solved. Finally, learner's profiles are established which includes two axis: one the speed of learners' ability to learn the new pattern and the other their abilities to transfer their knowledge to new problems.

2.2 Related Studies

Nassaji and swain (2000) conducted a study to find out whether any kind of mediation will result in development or mediation should be sensitive to learners' ZPD to lead in improvement. To do so, they paired a tutor with a student. The tutor tried to provide mediations systematically from the least implicit to most explicit in a response to the learners' need. The same tutor was paired with another student, this time providing implicit and explicit mediations randomly with no consideration of the student's ZPD. The result revealed that the ZPD learner did worse than the non-ZPD learner in independent performance. However, he outperformed the non-ZPD learner after mediation. Therefore, considering learners' ZPD before mediation is a necessity.

Kozulin and Grab (2002) focusing on DA and second language reading achievement first administered a reading comprehension pre-test to a group of learners. Then, the learners were instructed and helped to develop general reading strategy by reviewing the same test after that a posttest administrated. The test is paralleled with the pretest in this step, and there was no mediation. In this study, they devised a formula to calculate learning potential score. Their work was quantitative and indicated that learners with similar scores on static assessment showed different ability to learn and used new text comprehension strategy.

Anton (2003) used DA as a placement procedure to place the learners in a Spanish undergraduate language program. In the placement oral test, the examiner prompted learners who had made some mistakes in order to give them the chance to revise their performance. The learners who could revise were considered to be more advanced than the learners who could not, so the learners were placed in the program according to their potential for learning.

Poehner and Lantolf (2005) studied advanced second language learning classroom. At first, learners narrated orally a short video clip which they did not get any mediation. After that, they watched the second clip of the same story and this time they were guided by hints, suggestion, leading questions and explicit feedback during oral narratives. Therefore, he used the difference between the first and second test as the basis for instruction.

Pishghadam, Barabadi, and Kamrood (2011) investigated the effect of interventionist model of dynamic assessment on the reading comprehension of intermediate EFL learners by using the designed software CDRT (Computerized Dynamic Reading Comprehension Test). This software provides five strategy-based mediations

in forms of hints for each item. Two scores, namely dynamic and non-dynamic are created after the test is finished. The results indicated positive effect of DA and revealed that using DA increased the students' reading comprehension. Additionally, the study showed that the low achievers benefited more than high achievers in dynamic assessment reading comprehension.

Ajideh and Nourdad (2012) investigated the difference between using dynamic and non-dynamic assessment of EFL reading comprehension ability and examining its immediate and delayed effect. The mediator provided the same hints for all learners but adjusted it to their ZPD. Statistical analysis of the results indicated a significant difference between dynamic and non-dynamic assessment of reading ability regarding dynamic assessment.

Hassaskhah and Haghparast (2012) indicated that although DA was superior to SA, there was a difference in the situations to which they were applied. While interventionist DA was more appropriate for larger classes, interactionist DA worked better with individual learners or in classes with fewer than four or five students.

Nazari and Mansouri (2014) conducted a study on 30 EFL learners to observe the effect of DA on the reading comprehension. They applied pretest-mediation-posttest paradigm. Both control and the experimental group went through treatment; however, for EG it was based on the DA approach and for CG NON-DA. In fact, it was traditional and static. The result of this study represented the effect both on EG and CG; however, the effect size in EG was greater.

In one study by Teo (2012), the researcher investigated the effect of DA in five Taiwanese college EFL students' reading skill, namely finding main idea, predicting words meaning by using contextual clues and making inference, and its effect on their realization of their learning potential. The design of the study was pretest-mediation-posttest which was interactionist model of DA. The result showed that all the student except one had a significant improvement.

Li Qinghua and Li Di (2015) have reviewed 25 empirical studies on dynamic assessment. He discussed some of the major findings and problems and offered some suggestions for further research. The significant findings of this review are as follows: 1) DA has the potential to promote L2 competence development 2) Both the interactionist approach and interventionist approach have gained the attention of L2 researchers 3) Most studies have focused on small samples 4) Reading and grammatical knowledge have drawn the most attention 5) Group DA may be a potential method to advance L2 competence development in both the focused individual and the other members of the group 6)Computers might play a complementary role to humans acting as mediators; and 7) Case study methodology has been the overwhelming choice for experimental design.

Based on the available research, the writers suggest that additional studies are called for on the following issues: 1) L2 DA as an approach to measurement, 2) potential mediators, 3) validity issues of L2 DA, 4) the interface between DA and second language acquisition, and 5) the development of L2 classroom teachers. However, research on DA in the language learning domain is very limited, and more studies are needed to help teachers how to incorporate it into the classroom. Accordingly, this study aimed at investigating the effect of interventionist model of dynamic assessment on the reading comprehension of Iranian intermediate EFL learners.

3. Methodology

3.1 Participants

The sample of this study consisted of twelve female intermediate students who acted as the participants both in the control group and the experimental groups. The participants (from 14 to 19 years old) were chosen from the population of EFL learners in one of branches of Afaq English language institute in Tehran, Iran. It should be mentioned that the levels of the EFL learners in this institute were determined via standard placement tests, achievement test scores and oral interview. Therefore, the participants are expected to be homogenous in terms of their level of proficiency.

3.2 Instruments

In order to fulfill the purpose of this study, the following materials were used as follows: six reading comprehension tests, two dynamic versions of reading comprehension tests and CDRT (Computerized Dynamic Reading Comprehension Test). All the instruments were piloted. The reliability indices for the (n= 8) reading comprehension tests were estimated through a pilot study. Additionally, the values of the reliability estimation were explained according to the reliability standards suggested by Barker, Pistrang, and Elliott (2003). Moreover, the reliability of the hint that was going to be given during the treatment phase in the main study was estimated by test-retest method through giving the test associated with the determined hint to the pilot study group two times. Afterwards, the correlation coefficient between the two sets of scores was computed by running Pearson correlation test. The reliability estimate is .93. Further explanation is provided below.

3.2.1 Reading Comprehension Tests

Six reading comprehension tests were used for the purpose of this study. The first test was chosen for pre-test

purpose, it was selected from the book "Longman complete course for the TOEFL test preparation for the computer and paper tests" (Philips, 2001). The other four reading comprehension tests, i.e. Tests 1, 2, 3 and post-test control for the control group were taken from the book "TOEFL reading flash" (Broukal, 2005).The last comprehension reading test, i.e. post-test DA was used to see whether the learners' reading comprehension ability changed after the treatment. This test like the pre-test was taken from the book Longman complete course for the TOEFL test preparation for the computer and paper tests (Philips, 2001). All these six tests were administered conventionally in NON-DA way, i.e. without any mediation with 55 minutes allotted time. And all of them were in the same level of difficulty.

3.2.2 Dynamic Version of Reading Comprehension test

Test 1 DA consisted of two passages which were chosen from test 5 in the book TOEFL reading flash (Broukal, 2005), the first passage included eleven questions and the next, nine questions in total twenty questions. This test was conducted individually and in a dynamic way with written two hints for each item, which the first hint was less explicit than the second one for the mediation. Each item had its own hints; all the hints were written on the separated cards. The time allotted for this test was seventy minutes, 15 minutes for each passage and 2 minutes for answering each item. Each item had 5 points if the students answered it correctly without receiving Hints, if they received Hint 1 they would lose 2 points, therefore, got 3 points for that item, and if they received Hint 2 they got 1 point for that item. Therefore, the total score for this test is one hundred.

Test 2 DA similar to the Test 1 DA included two passages which was taken from the website: www.yeuanhvan.com, like the Test 1 DA, it consisted of two passages with twenty questions and two specific written hints for each item. The process of conducting and allotted time was like the Test 1 DA.

3.2.3 CDRT

The computerized dynamic reading test was developed by Pishghadam and Barabadi (2011), according to them this software had moderate reliability (r = .70) and concurrent validity (.66). As they piloted it, they made some modification both in the content of the test and in the software package. CDRT had two passages with twenty items, the passages were chosen from the book "preparation course for the TOEFL Test" by Philips (2007), and they declared that they chose these two passages among many available ones because they were in line with strategy based mediation. Each passage contains ten questions and each item is accompanied with five specific hints which are arranged from the most implicit to the most explicit, the first and the last hints are fixed for the all items and shown as Hint 1: Your answer is wrong, try again and Hint 5: The right answer is …., but the others are specific to the items. This test should be conducted individually and the test takers have 2 hours for whole the test, 20 minutes for each passage and four minutes for each item if the students could not answer the item after 4 minutes the software automatically shows the next item. If the test takers answer each item correctly without getting any hints they will get five points for that item. If they receive Hint 1 they will get four points, and respectively Hint 2, three points; Hint 3, 2 points; Hint 4, 1 point; and Hint 5, 0 points. After completing the test, a score file is generated on the desktop for each student which contains two scores: a score gained with the use of hints and a score gained with no hint or mediation, the number of hints used in each item and also the total time spent on the test.

3.3. Procedure

All the participants of this study (n=12) first took the pretest of TOEFL reading comprehension test which was conducted in non-DA way, i.e. without intervention in order to calculate their actual abilities. Then they were considered as the control group and took part in 7 sessions class, each session lasted 1 hour and 30 minutes. In the session one, three and five, a reading passage with multiple questions which was chosen from the TOEFL tests was worked with students as the same method which applied in the institutes, i.e. they first read the passage by themselves, and then give the summary. Afterwards, the teacher asks one or more than one student to read it aloud while it is being read the teacher says the meaning of the unknown words. Then, students answer the questions in turn; if they answer them wrongly the teacher will correct them.

In sessions two, four and six, the students took the tests 1, 2 and 3 which are another reading TOEFL tests, the time allotted for each test is fifty-five minutes. Again they are conducted in non-DA to see the students' progress, and finally in session eight, the student took the first post-test in order to examine whether the students' reading ability changed or not.

After these seven sessions, students' DA class started. In sessions nine, eleven and fifteen, the researcher taught the students reading skills, technique, and strategies by analyzing their pre-test. In sessions ten and twelve, they took test 1 and 2 which conducted in the dynamic way. Each test consists of two passages with total 20 multiple questions which are chosen from TOEFL tests. They are dynamic because each item accompanied with two written hints to help the student to answer the questions. If they answer the item correctly without hints, they will get 5 for that item, if they receive HINT1, they will get 3, if they receive HINT2, they will get 1, and zero for that item after receiving the two HINTs and still not being able to answer it. Therefore, the total score for each test is one hundred.

In session fourteen, they took the computerized reading dynamic assessment (CDRT developed by Pishghadam and Barabadi, 2011). And finally, in session sixteen, they took the last post-test in order to see the effectiveness of dynamic assessment treatment.

3.4 Treatment

In the sessions of the DA class, the reading strategies and skills were introduced and worked with the experimental group. The treatment and its details are as follow: in the first session, overall reading strategies in brief in five minutes were introduced such as differentiating between skim and scan, setting purpose, visualizing, making predictions, making the connection and locating keywords. Then the skills 1, 2 and 3 were introduced to the students. Skill 1 deals with finding the main idea, the students were taught how to find the main idea of a paragraph or paragraphs and how to answer the questions related to this skill. The second skill is the organization of the idea in the passage and how the information in the paragraphs is related to each other. The researcher taught the students by reading the first line of each paragraph and looking for words that show relationships among the paragraphs. And the third skill helped the students to answer stated detail questions first by choosing a keyword in the question then skim the appropriate part of the passage for the keyword. Then after the skills were taught to the learners, they were given a passage with multiple questions which tested these kinds of skills in order to practice these three skills. All the skills which were worked in DA class were taken from the book "Longman complete course for the TOEFL test preparation for the computer and paper tests (Philips, 2001).

In the second session, the skills related to guessing the meaning of words were introduced, which are as follows: skill eight deals with guessing the meaning of unknown words by their parts. A short list of word parts and examples were provided and asked the students to memorize this list. Then a passage which had the questions considering this skill was practiced. Thereafter, skill nine which is about finding the meanings and definitions from the structural clue such as punctuations (comma, dash, and parentheses), restatement (or, that is, in other words and i.e.) and examples (such as, for example, e.g. and for instance) was presented. Then again a passage considering all these was practiced. Next, skill ten: using context to determining the meaning of difficult words was introduced by finding the word in the passage, reading the sentence contains the word and looking for context clue to help to understand the meaning of it. And the last skill in vocabulary which is regarding the guessing of the meaning of simple words by using context clue was presented. The students were explained that it was not right just to consider the first meaning of words, they could find the right meaning of the questioned words by context clues. Then, a passage was given to them in order to practice the skills related to the guessing the meaning of words.

In session three, the entire student participated in test 1 DA. It was conducted individually and in a dynamic way. Each student had seventy minutes for this test, 15 minutes for each passage and two minutes for answering each question. First they read the first passage and answered the item one, if they could answer it correctly they could answer next item, if not, they received Hint 1 (All the Hints were written in the cards), again if they answered it correctly they could answer item two if not they received Hint 2, whether they answered it correctly or wrongly they had to answer next item. After the students answered the item 1 to 10 in this way, they read next passage. The same procedure was administrated for the second passage and items.

In session four, skills 4, 5 and 6 were worked. First, skill 4 which was about answering unstated detail question was explained with examples. And a passage was given in order to practice. Then skill 5 which was about finding pronoun referents was introduced and explained how to find them in the passage with examples. Next, skill 6 was introduced; it was about how to answer implied detail questions correctly. The examples were presented and a passage was given to students in order to practice and to be more skilled in these skills.

In session five, Test 2 DA was administrated; again it is administrated individually and dynamically. This test like the Test 1 DA had two passages and twenty questions that seventy minutes for the whole test was allotted, fifteen minutes for each passage and two minutes for each question. The procedure of conducting and administrating was as same as Test 1 DA which was conducted in session three. It should be mentioned that each DA test contains its own written hints.

In session six, skills 7 and 12 were practiced. Skill 7 is about transition, it was explained what is meant by the words "preceding" and "following" in the questions and how to answer these kinds of questions. The examples were provided and practiced. Then skill 12 which deals with determining where the specific information found was explained and explicated how to cope with such question. And examples were provided and presented. Then a passage was given to the students in order to practice more in these two skills.

In session seven, Test 3 DA which was Computerized Dynamic Reading Comprehension Test (CDRT) software was administrated. Three laptops were provided; therefore, this dynamic test was conducted in four groups of three. In each group, each student had a laptop to give the test. This computerized test had two passages and twenty questions, 20 minutes for each passage and four minutes for each item, but whenever students answered the first item below the 20 minutes they lost the remaining time for reading the passage. After the test finished, a score file automatically made.

In session eight, skills 13 and 14 were presented, explained by the examples and practiced in passages which were provided for this session. Skill 13 is related to determining the tone, purpose, and course, what is meant by them and how to answer such question were elucidated. And skill 14 which is determining where to insert a piece of information was clarified and worked by provided examples.

4. Results and Discussion

One-way repeated measures ANOVA examined the research question. Before running the main statistical analyses for the research question, the main assumptions of parametric tests were examined. The results of the analyses and the corresponding interpretations of the findings are presented in the following sections. One of the assumptions of parametric tests is the level of measurement. This assumption was met in this study since the dependent variable was measured at the interval level and was continuous scale. Furthermore, the measurements that made up the data were independent of one another and each measurement was not influenced by any other measurement. For examining the assumption of normal distribution, the distribution of scores for the reading test scores was checked using Shapiro-Wilk test. The results are in Table 1.

Table 1.
Test of Normality

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Pre-reading Test Scores	.91	12	.24
Test1CScores	.87	12	.07
Test2CScores	.82	12	.02
Test3CScores	.96	12	.80
Posttest C	.94	12	.45
Test 1 DA Scores	.94	12	.46
Test 2 DA Scores	.90	12	.14
CDRT Scores	.98	12	.97
Posttest DA Scores	.89	12	.12

The values of (p) for the pre-reading test scores equaled (p=.242), for the Test1 C scores came to (p = .071), for the Test 2C scores came to (p = .016), and for the Test 3C scores amounted to (p = .801). Besides, for the post- Test C scores came to (p = .450), for the Test 1 DA scores came to (p = .456), for the Test 2 DA scores came to (p = .145), for the CDRT Scores equaled (p = .975), and for the Posttest DA scores amounted to (p = .118). Given the aforementioned (p) values for the Shapiro-Wilks test and using (α = .01), it was concluded that the reading scores were normally distributed. Therefore, the assumption of normality had been met for these samples. In addition, the Sphericity assumption required that the variance of the population difference scores for any two conditions were the same as the variance of the population difference scores for any other two conditions (Pallant, 2010). Mauchly's Test of Sphericity was used to assess the Sphericity assumption. The results are in table 2.

Table 2.
Mauchly's Test of Sphericity

Within Subjects Effect	**Mauchly's W**	**Approx. Chi-Square**	**df**	**Sig.**	**Epsilon**		
					Greenhouse-Geisser	**Huynh-Feldt**	**Lower-bound**
Conditions	.005	42.70	35	.24	.53	.90	.12

The results of Mauchly's Test revealed that the assumption of Sphericity was not violated. The Sig. value of (.243) in the Mauchly's test of Sphericity was greater than (.05) indicating that the assumption was not violated.

4.1. Descriptive Statistics for the Reading Comprehension Tests

The descriptive statistics including the mean, standard deviation, and total number of participants was computed for the nine sets of scores. The results are given in Table 3.

Table 3.
Descriptive Statistics of the Reading Tests

	Mean	Std. Deviation	N
PrereadingTestScores2	26.3	4.97	12
Test1CScores2	25.5	5.20	12
Test2CScores2	26.8	4.22	12
Test3CScores2	27.7	4.50	12
PosttestC2	27.8	4.47	12
Test 1 DA Scores	52.1	4.68	12
Test 2 DA Scores	63.9	5.05	12
CDRT Scores	68.4	4.81	12
PosttestDAScores2	57.8	6.63	12

As it was depicted in Table 4.3., the lowest mean for the reading comprehension tests was for Test 1 before the intervention ($M_{Test\ 1}$=25.50; $SD_{Test\ 1}$= 5.19) and the highest means were for CDRT scores (M_{CDRT} = 68.41; SD_{CDRT} = 4.81) and Test 2 DA scores ($M_{Test\ 2\ DA}$ = 63.91;$SD_{Test\ 2\ DA}$ =5.05), respectively.

4.2. Inferential Statistics for the Reading Comprehension Tests

To show if these differences among the scores were statistically significant, the multivariate test was also run. The results are presented in Table 4.

Table 4.
Multivariate Tests for the Reading Comprehension Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Conditions	Pillai's Trace	.999	374.57	8.000	4.00	.00	.99
	Wilks' Lambda	.001	374.57	8.000	4.00	.00	.99
	Hotelling's Trace	749.14	374.57	8.000	4.00	.00	.99
	Roy's Largest Root	749.14	374.57	8.000	4.00	.00	.99

The value for Wilks' Lambda was .001, with a probability value of (α=.00) which meant ($p<.05$). The p-value was less than .05; therefore, it could be concluded that there was a statistically significant effect for time. This suggested that there was a change in reading comprehension scores across the nine different times.

After it was found that there was a statistically significant difference between the nine sets of scores, the effect size was also computed through obtaining Partial Eta Squared that is given in the Multivariate Table 4.4. above. The partial Eta came to (r= .99) that was considered a very large effect size based on guidelines proposed by Cohen (1988).

Since a statistically significant result was reported from the multivariate analyses, there was a difference somewhere among the nine sets of reading comprehension scores. To see which set of scores (Time 1, Time 2, Time 3, .., Time 9) differ from one another, the pair wise comparisons were made and compared each pair of time points and assessed if the difference between them was significant (see Table 5.).

Table 5.
Pairwise Comparisons of the Reading Comprehension Tests

(I) Conditions	(J) Conditions	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Test 1	Test 2	.83	.72	1.00	-2.20	3.87
	Test 3	-.50	1.05	1.00	-4.94	3.94
	Test 4	-1.33	.79	1.00	-4.69	2.02
	Test 5	-1.50	.61	1.00	-4.08	1.08
	Test 6	-25.75*	.92	.00	-29.67	-21.84
	Test 7	-37.58*	.95	.00	-41.61	-33.56
	Test 8	-42.08*	.92	.00	-46.00	-38.16
	Test 9	-31.50*	1.18	.00	-36.52	-26.48
Test 2	Test 3	-1.33	.90	1.00	-5.14	2.48
	Test 4	-2.17	.63	.19	-4.82	.49
	Test 5	-2.33	.85	.67	-5.92	1.26
	Test 6	-26.58*	.94	.00	-30.57	-22.59
	Test 7	-38.42*	.95	.00	-42.44	-34.39
	Test 8	-42.92*	1.03	.00	-47.27	-38.57
	Test 9	-32.33*	1.10	.00	-36.99	-27.68
Test 3	Test 4	-.83	.83	1.00	-4.37	2.70
	Test 5	-1.00	1.00	1.00	-5.24	3.24
	Test 6	-25.25*	1.15	.00	-30.12	-20.38
	Test 7	-37.08*	.96	.00	-41.17	-32.99
	Test 8	-41.58*	.98	.00	-45.74	-37.43
	Test 9	-31.00*	1.40	.00	-36.95	-25.05
Test 4	Test 5	-.17	.57	1.00	-2.60	2.27
	Test 6	-24.42*	.95	.00	-28.44	-20.39
	Test 7	-36.25*	.91	.00	-40.09	-32.41
	Test 8	-40.750*	.86	.00	-44.40	-37.09
	Test 9	-30.17*	1.22	.00	-35.33	-25.00
Test 5	Test 6	-24.25*	.80	.00	-27.64	-20.86
	Test 7	-36.08*	.76	.00	-39.32	-32.85
	Test 8	-40.58*	.76	.00	-43.82	-37.35
	Test 9	-30.00*	1.15	.00	-34.90	-25.10
Test 6	Test 7	-11.83*	.57	.00	-14.27	-9.39
	Test 8	-16.33*	.99	.00	-20.49	-12.18
	Test 9	-5.75*	1.03	.01	-10.12	-1.38
Test 7	Test 8	-4.50*	.62	.001	-7.14	-1.86
	Test 9	6.08*	.72	.000	3.02	9.15
Test 8	Test 9	10.58*	.84	.000	7.03	14.14

The findings of pair wise comparisons revealed that some of the differences were not statistically significant. The Sig. values for the comparison between test 1 and test 2, test 1 and test 3, test 1 and test 4, test 1 and test 5 were higher than .05. Similarly, the Sig. values for the comparison between test 2 and test 3, test 2 and test 4, test 2 and test 5, test 3 and test 4, test 3 and test 5, and test 4 and test 5 were higher than .05. Thus, the differences were not significant for these tests.

However, the Sig. values for the comparison between the mean scores of test 1 and test 6, test 1 and test 7, test 1 and Test 8 (CDRT), test 1 and test 9 were less than .05. Moreover, the comparison between the mean scores of test 2 and test 6, test 2 and test 7, test 2 and Test 8 (CDRT), test 2 and test 9 were less than .05. When it comes to the third test, the results were statistically different from tests 6, 7, 8, and 9. Concerning the fourth test, the results were significantly different from the results of sixth, seventh, eighth, and ninth tests. Additionally, the results of the fifth reading comprehension test were statistically different from tests 6, 7, 8, and 9. Test 6 was also statistically different from tests 7, 8, and 9 and statistically significant differences were reported between test 7 and Test 8 (CDRT), test 7, and test 9, and the eighth and ninth tests. Thus, the differences were significant for these tests.

The highest mean difference was reported for Test 2 and Test 8 (CDRT) with the mean difference of 42.917 closely followed by the difference between Test 1 and Test 8 (CDRT) with the mean difference of 42.083. In contrast, the lowest mean difference was reported between tests 4 and 5 with the mean difference of .167.

A one-way repeated measures ANOVA was conducted to compare scores on the reading comprehension test at Times 1to Time 5 prior to the intervention, and Time 6 to Time 8 following the intervention and Time 9 after accomplishing the treatment. There was a significant effect for time, Wilks' Lambda = .001, F (8, 4) = 374.57, p <. 05, multivariate partial eta squared = .99. Consequently, there was a significant relationship between dynamic assessment and reading comprehension in Iranian EFL learners.

The following profile plot visually depicts the participants' performance on reading comprehension tests that were administered nine times.

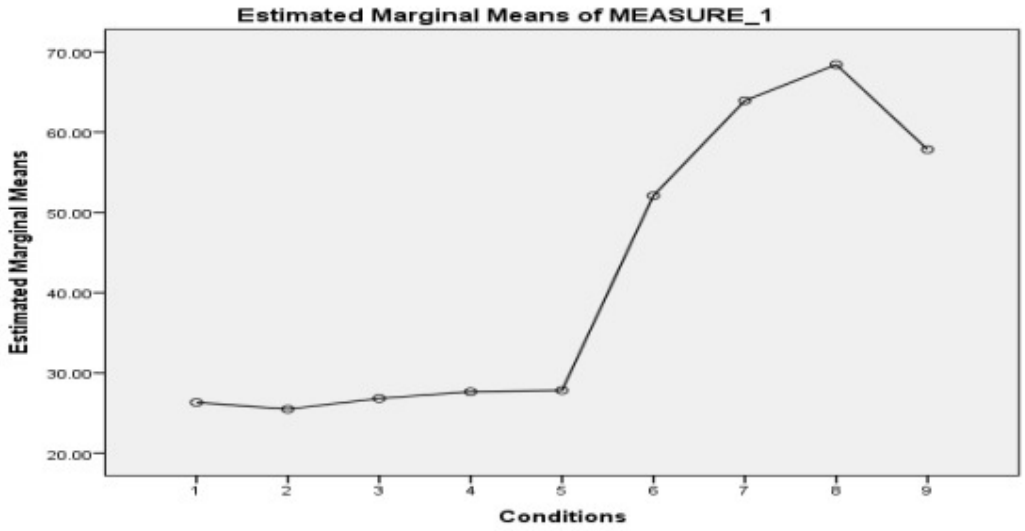

Figure1. The comparison among the means of nine reading comprehension tests

5. Conclusion

The results of this study indicated that dynamic assessment improved EFL learners' reading comprehension abilities significantly. Additionally, it indicated that learners benefited from DA had higher gain scores of reading comprehension before experiencing mediations. These results provided more empirical support for dynamic assessment approaches especially cake and sandwich format. Additional findings obtained based on this study are s:

DA by integrating teaching and assessment provides accurate information about learners' abilities and finds the reasons for the learners' poor functions. And additionally, it recommends efficient remediation, as Ajideh and Nourdad asserted "Dynamic assessment with its monistic view toward teaching and testing can be seen a one-way road taken by all the learners. No matter what their present level of proficiency is, and each person takes the advantages and moves forward as much as their ZPD allows him or her" (2012, p. 119).

Another finding of this study is that the researcher found the students were more interested and at ease in the DA class compared with the control class. This can be explained as Kozulin and Grab (2004) declared that "dynamic assessment bridges the psychological gap between assessment and instruction and may reduce the students' test-taking stress" (p. 74). Therefore, students become more active and interested.

The other finding of this study is that the pre-test scores were not enough to give the teacher sufficient information for preparing effective lesson plans. Hence teachers can see beyond what is indicated in static scores by dynamic assessment (Teo, 2012). In other words, whenever the students had same scores in their pre-test, it does not mean that they were at the same proficiency level and they would have same future learning potential. Students with similar performance have different potentialities and different abilities to learn (Kozulin & Grab, 2004). Their potential ability could be determined by mediations which took place in dynamic assessment. Therefore, knowing students' learning potential ability by dynamic assessment can contribute teachers to design effective lesson plans that are based on the students' needs which revealed by their responses to mediations and they should be satisfied in the next step of instruction. Hence, it can be concluded that DA is a powerful tool that integrates assessment and instruction.

One more finding of this study was transfer or transcendence effect of dynamic assessment on the reading comprehension of EFL learners. In the final sessions of DA class, i.e. session fourteen, the researcher used CDRT software which was designed for assessing academic EFL learners' reading comprehension potential abilities, therefore, regarding the level of difficulty; it was more difficult than Test 1 & 2 DA. It was used in order to understand whether the students can deal with a more difficult task based on the tasks which they had done in the original assessment (Poehner & Lantolf, 2013).

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