



DYNAMIC ASSESSMENT, A VERSATILE TOOL FOR TEACHING AND ASSESSING CRITICAL READING

Mahdi Mardani¹ⁱ,

Edward Owusu²

¹PhD, Behbahan Khatam Alanbia

University of Technology

Behbahan, Iran

²Senior Lecturer,

PhD, Department of Communication Studies and Dean,

School of Graduate Programmes, Research and Development,

Sunyani Technical University,

Sunyani, Ghana

Abstract:

This study presents Dynamic Assessment (Henceforth DA) as a way of mixing assessment and instruction. For this purpose, a number of reading strategies were applied to the reading course of ten EFL students studying in a language school. The strategies were incorporated in the reading course through DA and assessed via the same method. The data collection procedure was conducted through "University of Florida Critical Thinking Inventory Manual", "Observation logs" and "New tasks". Question one of the study dealt with awareness of students; for this question two types of data were gathered; quantitative data were gathered via EMI and qualitative data via descriptive records in teaching logs which showed an increase in students' awareness to CT. The aim of the second question was to prove that students have acquired these core CT skills and can apply them to analyzing unseen texts. Therefore, two new tasks, similar in length and level of difficulty but different in content, were designed and implemented, one at the beginning of the program and the other one at a fairly long interval after mediation. Results showed that DA had a significant effect on their ability to transfer the core critical thinking skills to unseen situations and critically read a text.

Keywords: dynamic assessment, interventionist DA, Interactionist DA, critical reading

1. Introduction

In recent years, a number of researchers and educators have highlighted the value of critical thinking (Kareshki, 2005; Maleki, 2005; Marashi & Jodeiri, 2006, Birjandi & Naeini, 2007). But, even in these studies the issue of assessing critical thinking is not

ⁱ Correspondence: email mardani@bkatu.ac.ir

rigorously dealt with because assessing higher order thinking is the most challenging part. The present study, however, has tried to propose DA a specific procedure for teaching and assessing critical thinking skills. Both of these two variables are influenced by social view of language. DA is rooted in socio-cultural theory of language proposed by Vygotsky, and CT which is an improvement of discourse analysis theory. In the present study it has been tried to assess the critical reading ability of the students through DA procedure. In spite of lack of a unanimous or all-inclusive definition of critical thinking, the topic of CT is not a new concept. Tung and Chang (2009) stated since the 1990s developing critical thinking skills has been a primary goal in higher education. However, no attempt has been made to evaluate critical thinking according to a DA procedure. This study has tried to examine the feasibility of assessing critical reading within a DA framework. It proposes that current static testing should be enhanced with DA as a tool for both teaching and testing. But before continuing any further, we should make a distinction between dynamic and static assessment.

2. Review of Related Literature

2.1. Dynamic and Static Assessment

Development of new theories such as ZPD in language teaching paved the ground for development of new methods in language testing, and a closer connection between these two fields. Static models of assessment with their attention focused on current level of knowledge and skills were no longer satisfactory. As Cioffi and Carney (1983) put it, static non-dynamic approaches are the best choice for evaluating the students' skill knowledge, but these procedures are far from perfect when estimating the learning potential. It should, however, be pointed out that in spite of all their shortcomings static tests did their part by paving the ground for the more flexible approach to testing known as DA. As Mardani and Tavakoli (2011) stated, DA is not as a substitution for standardized test but as a complementary invention. It focuses on student's learning potential for learning. Put it in other way, if ZPD focuses on the capacity and the level of potential development, then DA zero in on learning potential. It includes planned mediation and assessment of effects of that mediation on succeeding performance (Campione & Brown, 1990). Sternberg and Grigorenko (2002) refer to three methodological and practical differences between DA and NDA. First, NDA focuses on past achievement whereas DA reflects at the future development. Second, in NDA examiner adopts a neutral role, but in DA examiner mediates in the assessment. Finally, in NDA there is no immediate comment, but in DA feedback is given to students during a mediated procedure- and this is the heart of DA. According to Lantolf and Thorne (2006) being dynamic or no-dynamic depends on whether mediation is incorporated into the assessment process or not. In other words, fill-in-the-blank, multiple-choice, and many other forms of test in themselves may or may not be dynamic. All depends on the way mediation is incorporated.

2.2. Methodologies to Dynamic Assessment

There are a number of approaches that fall under the term DA because mediation can be applied in a number of ways. Lantolf and Poehner (2004) believe that there are two general approaches to DA, interactionist and interventionist. Interactionist approach is basically inspired by Vygotsky's thinking for dialogic interaction. According to Mardani and Tavakoli (2011), in this approach, mediation arises from the interaction between the mediator and the learner, and is therefore highly sensitive to the learner's ZPD. Imagine this scenario: a student is working on a reading comprehension multiple-choice item. He wisely identifies two incorrect options but when it comes to identifying the right answer between the other two options he gets stuck he cannot do that. Here you, as the mediator, steps in and tries to give hint. If the student cannot figure out the right answer more direct hints or support are provided until he gets to the right answer. Interventionist DA, on the other hand, remains closer to certain forms of static assessment and their concerns over the psychometric properties. Poehner (2008) states that the crucial specification of interventionist DA is the use of standardized administration processes and forms of assistance in order to produce effortlessly quantifiable results that can be used to make comparisons between and within groups, and can be contrasted with other measures and used to make predictions about performance on future tests. In addition to this dualistic grouping other researchers such as Sternberg and Grigorenko (2002) have described *sandwich* and *cake* classification of mediation. In sandwich model, a mediation phase is "sandwiched" between pre-test and post-test that are administered in a non-dynamic manner. The *cake* format, however, speaks of a procedure in which mediation is offered during the administration of the assessment, usually whenever students face a problem. During this time mediator seize the chance and while present his mediation in a deliberate manner.

2.3. Empirical Studies on EFL Dynamic Assessment

In the last couple of decades a number of researchers have focused their attention on DA especially on the practicality and applicability of this approach in educational settings. But the bad news is that from this large body of research a small portion of research has been allocated to the application of DA in EFL contexts (Lantolf and Thorne, 2006). In a study Anton (2003) implemented DA as a placement procedure. Participants were asked to construct orally a past-tense narrative after watching a short video clip. During that time learners received no feedback or mediation. They were then shown a second clip and asked to repeat the task, but this time with the help of a mediator who offered suggestions, posed questions, made corrections and helped them think through decisions making. After approximately six weeks of instruction, the participants were re-administered the original independent and mediated narration tasks in order to check their progress. Kouzlin and Grab (2002) studied the EFL reading comprehension of adult at-risk immigrants. The results of their study point out that the DA procedure is practical and effective in obtaining data on students' learning

potential. It is confirmed that students with a similar performance level demonstrate different, and in some cases dramatically different ability to learn and use new text comprehension strategies. One exciting feature of this study is the method of presenting the outcomes of the DA procedure. Instead of making a qualitative report of each learner's performance for all stages of the study, they presented the learners' abilities with a single score which they themselves called Learning Potential Score (LPS) which is the difference between the learner's pretest and posttest scores.

Ajideh and Nourdad (2012) studied the effect of DA on EFL reading comprehension in different language proficiency levels. For this quasi-experimental study they selected 197 Iranian university students and put them in six groups of this study. The results of MANOVA test discovered that dynamic assessment had both immediate and delayed effect on reading comprehension of learners in all proficiency levels but the proficiency groups did not differ significantly in their taking advantage of this kind of assessment. Roseberry and Connel (1991) have also integrated DA into language studies. The results of their study indicated that addition of intervention was effective. Jacobs (2001) conducted his study. The results of which showed that inclusion of a dynamic component to preschool program developed the knowledge of preschool children. Bendar and Kletzian (1990) applied a pretest-intervention-posttest format to 29 students from grade 9 to 12 and they saw development in their reading. Ableeva (2007) using a DA procedure in assessing listening comprehension of university level L2 learners of French uncovered the source of comprehension problems. He found that in one case student shifted to a single lexical item and in another one to cultural knowledge. This revealed that learners' abilities were more developed than one would have surmised from unmediated performance.

3. Method

3.1. Participants

10 senior EFL learners of both genders at a private English Language Institute, the hometown of the researcher, were selected based on the available sampling. This sample was small but it was decisively chosen so that rich qualitative and quantitative data for each participant could be gathered. The subjects have come from middle socio-economic background, and all of them have studied English at least for 4 years and now they have enrolled in this institute for a pre-IELTS course with the aim of improving their general English proficiency. In order to participate in this course they have to pass the placement test of the institute. The TOEFL proficiency test was administered and only those whose score was one standard deviation above the mean were selected. Each of the ten focal students was assigned a number and throughout the study we referred to the number of each student rather than their names.

3.2. Materials

Instruments used in this study are classified into two groups: instruments used only for the testing and data gathering purposes include TOEFL, EMI, Teaching Logs and New Tasks. Instrument used for teaching purposes or mediation phase include information page, and UF/Quantitative test. Concerning the last mentioned instrument, it should be made clear that though it is a test but it was used as a teaching material. That is the mediator implemented the test but not with the purpose of data gathering. It was implemented just to make students familiar with CT and then in the following sessions students and mediator reviewed the test items. So it can be claimed that rather than being a testing instrument it was a teaching tool in the hands of mediator.

3.3. Design

This study was designed based on a concurrent mixed method: Quantitative + qualitative. Capital Letter (Q) donates priority of quantitative and the plus sign represent concurrent data collection. The QUAN part of the study is implemented in the following order: (Pre-test) (Intervention) (Posttest). After pretest there is an intervention. The mediation (or intervention) in this stage follows the interventionist approach.

3.4. Procedure

3.4.1. Pilot study

DA has been criticized for failing to demonstrate reliability and validity. But the fact is that in general DA proponents are not interested in these indices. They believe that concept of reliability is derived from the ontology of traditional assessment, where outside factors are tightly controlled in order to control contamination of test takers. But DA has a quite different view towards reliability by accounting of the role of outside factors (like a mediator). Therefore, as Lantolf (2009) asserted the definition of reliability should be *“redefined within the ontology of the social individual and the ZPD”* (p. 365). It means that, what seemed to be extraneous and outside factor, is now welcomed. Poehner (2008) asserts that with some notable exceptions, DA researchers hardly attempt to establish psychometric features such as validity and reliability of their procedures. Proponents of interventionist DA sometimes establish these indices. Having this fact in mind, however, researcher conducted a pilot study with a group of 15 students similar to the subjects of the main study. They were chosen because they were at the same proficiency level, with nearly the same socio-economic background and they were enrolled for a similar course. The aim of the pilot study was to calculate the reliability and validity indices of the instruments of the study. The results of the pilot study are presented in Table 1.

Table 1: Reliability Indices

	N of items	Mean	Variance	KR-21
TOEFL	100	42	122	0.81
EMI (test of awareness)	26	82	1129	0.87

It should be noted that KR-21 never overestimates the reliability of a test, but it seriously underestimates and distorts the reliability of the test. Because all indices are underestimating the true reliability, they can be safely interpreted. Concerning validity it should be pointed out that the small sample size shows that this study is not that much concerned with generalizability rather deep understanding of individual is more important. Therefore, instead of external validity, the researcher paid attention to the content validity and it was evaluated by a panel of experts. Two experienced colleagues were asked to compare the content of the tests with the purpose of the DA program. They were also asked to check the appropriateness of the content, length, and level of difficulty of the tests.

3.4.2. Main Phase of the Study

This phase was based on the mixed method design. The quantitative part of the study with the general design of pretest-mediation-posttest format or what Best (2006, p. 224) defined as “A-B-A design” aimed at answering the first research question:

Q1: Can dynamic assessment help students develop awareness toward critical reading?

The focus of this part of the study was to reveal variability and change in participants’ awareness or interest toward critical thinking. For this purpose two types of data were gathered. The first group of data was manifest in the results of the UF/EMI and the other in the form of “teaching log”. The questionnaire (UF/EMI) was based on the Likert Scale, providing 5 alternative responses for the item probing beliefs about critical thinking: [strongly agree (5)], [agree(4)], [undecided(3)], [disagree(2)], [strongly disagree(1)]. To assess the awareness of students toward CT, at the end of first session students were asked to take the EMI questionnaire to home, complete it, and then return it the next session. The same instrument was given to them one more time near the end of course. Then results of both of them were compared through a t-test to see how their attitude or awareness toward CT had changed after DA training. The results of this part are presented in next parts.

In addition to implementation of the questionnaire, the mediator, following Tung and Chang (2009), recorded the class events in his “teaching log”. The teaching log was the mediator’s observation of class events and changes. After each mediation session the mediator wrote down in a “teaching log” his observation of students’ responses, interactions, and commented on students’ behaviours and their willingness or awareness toward critical thinking. This log let him have a general picture of every student’s level of progress in terms of their attitude/awareness toward CT and presented a more true-to-life portrait of students. Review of the teaching log revealed interesting finding which are presented in next chapter.

To sum up this part, mediation provided through DA procedure is considered the independent variables and performance onUF/EMIand the results of Logs are the dependent variables. The exact ordering of procedures consists of A (pretest), B (mediation), and A (posttest). Details of each part are given below.

A. Pretest

This phase started right with the implementation of EMI. It was conducted one week before the start of the DA program. Right from the very first session, students were explicitly told that one objective of the course is to teach them how to read critically. To achieve this objective, part of the class time was assigned to integrate CT into the course. The time was not very fixed but it usually fluctuated between 15 to 20 minutes. The purpose of this non-dynamic pre-test was to:

- Establish the present level of students' awareness to critical thinking, or their zone of actual development (ZAD)
- Prepare mediation based on the results of the pre-test items
- Familiarize students with concepts and components of CT

After students completed the tests they were collected by the researcher for analysis.

B. Mediation

The main materials used during mediation were the *information page* and *UF CT Quantitative test*. Following Kozulin and Grab (2002) the researcher developed a comprehensive *information page* and gave a copy of it to every student in the class. The information page included a definition of each CT skills plus an example to clarify the intended skill. During mediation session the three skills were introduced and taught. Moreover, as it was mentioned earlier, the Quantitative test was also implemented during mediation phase. As it was mentioned earlier the aim of implementation of the test was not data gathering or testing but it was merely implemented to make students familiar with concepts of CT. That is, it was mainly used as a teaching instrument. Next part gives a detailed description of mediation. The general instructions during mediation are as follows:

C1. Day 1 of mediation

Day first the class was mostly teacher-fronted and there was no interaction. He announced that from now on each session we will work around 20 minutes on CT. During the first session of intervention the concept of critical reading was introduced to students and they were told that a central aim of their reading course was to help them develop their power of critical reading; the researcher offered a few definitions of critical reading and critical thinking and stressed the importance of critical thinking strategies during reading, and then provided one simple example of each of the critical thinking skills. After the introduction, the teacher-made "*information page*" was given to students. The handout had four parts, an introduction about critical thinking and critical reading followed by three parts each one elaborating on one sub-skill. For each and every sub-skill a tangible explanation was provided to make the points as understandable as possible for all students. The purpose of first day of mediation was to present a general picture of the CT strategies and make students familiar with ABC of critical thinking.

C2. Days 2, 3, and 4

When students got familiar with the all sub-skills of CT, the teacher and students together reviewed the test items of Quantitative test. The next three sessions were conducted via the Interactionist DA which was based on dialogic interaction. This reviewing part continued for the next three sessions. During these three sessions the mediator adopted the interactionist DA which was based on dialogic interaction. He proceeded each session by asking some question designed to elicit from the students the CR strategies required in order to answer the question. The aim, as mentioned earlier, was to teach strategies.

D. Post-test

Two weeks after the mediation sessions, the same test was used for post-test. In order to minimize the effect of test familiarity, test items were rearranged in two different ways, so that the two tests would not look very much alike. Furthermore, the students were not told that the same test would be used for pre and post-test. Though at first it may seem to violate the issue of ethics and human consent, but there was no other choice. Moreover, the interval between the two administrations was long enough to minimize this test effect. After administration of post-test the results of pre and post-test were compared. First a paired-samples t-test was applied to show the degree of improvement from pre to post test.

In addition to implementation of the EMI questionnaire, the mediator, following Tung and Chang (2009), collected a series of qualitative data in form of description of his observation and recorded the class events in his "teaching log". The teaching logs were the mediator's observation of students' interactions, behaviors, changes, and whatever else that had happened during the mediations sessions. Generally there are two possible method of recording the log, one is direct observation and the other is reflection on what has been observed. Because the mediator had already been engaged in other activities like teaching and giving feedback in form of staged prompts it was not possible to do the direct observation therefore the latter one was applied. The advantage of the reflective log was that after the event was over the observer had enough time to reflect of what he had seen. Therefore, after each mediation session the mediator wrote down in his "teaching log" his observation of students' responses, interactions, and commented on students' behavior and their willingness or awareness toward critical thinking. What was important in transcription of the logs was that the researcher had to write down his observation as soon as possible before his observation fade away from his memory. As it has been said during research question one, the first day of mediation was somehow formal and the core CT strategies were introduce but during this day there was no interaction between students and mediator. It was in the next three sessions that dialogic interaction began. Here the observations of mediator for the following three days are presented.

E1. Teaching Log One

Today students were sitting at circle, their normal class activities were over and as it was practiced earlier the fifteen to twenty minutes of the class time which was allocated to CR began. As a result of the first day instruction today students had a better picture in their mind of what CR is and what kind of strategies did it need but their knowledge was not enough to encourage them to initiate an interaction. Even when mediator started to review the first three or five question no one was willing to participate in the activity. The mediator had to call on specific students but even these students were not verbose enough. The mediator, though, tried to encourage the whole class to participate in the activities. Little by little students got control of the interactions and tried to answer or express their ideas, though some of them were wrong. According to a general definition of *awareness* which labeled it as internal interest in solving problem, the first log could be summarized by saying that during these sessions students showed no special level of awareness. What is looked for in the following logs is the tangible change in students' awareness to get engaged in CR.

E2. Teaching Log Two

Today, the second day of mediation ended happily. Like previous session, after the class ended the details of what had happened were transcribed. In this session the mediator could feel and see the interest of students in doing CR. When the class started some of the students tried to be fun by saying statements such as "can we do CR first?", "can we spend all the class time on CR?" Though at the surface level they seemed to be like fun but in fact these statements showed that they were engaged and focused on the task at hand and they were like good signs for mediator. After the routine class activity ended the CR activity started with a special excitement. Excitement which could be seen even in the way they flipped the pages of their pamphlets or pretests.

E3. Teaching Log Three

This day was quite satisfactory from the perspective of the mediator who had observed the behavior, engagement, and interest of students during these three sessions. This session the class was mostly dominated by the students and mediator provided less prompts. Students got engaged in CR more than the other two previous sessions. So, it could be claimed that at this point they had awareness to CR. These three logs helped the mediator to have a general picture of class progress in terms of their attitude/awareness toward CT and presented a more true-to-life portrait of students. Review of the teaching log revealed interesting finding which are presented in next chapter.

Q2: To what extent are students able to use critical reading skills learnt in group dynamic assessment to new tasks?

In fact what made the researcher to propose this question was the fact that he was not sure about students' ability in applying these newly learned strategies to new context and for unseen texts. Atkinson (1997), for instance, asserts that "*thinking skills do*

not appear to transfer effectively beyond their narrow context of instruction” (p. 71). Therefore, proving that DA is an appropriate approach for effective teaching of thinking skills in a manner that they remain beyond the here-and-now context of the classroom is an important issue. As a result new tasks were designed to show that thinking skills that were taught and assessed through this approach can transfer beyond the ‘here-and-now’ demands of a given activity under a multitude of differing conditions. In other words, the purpose of this question is to offer insight into the ability of students to transfer newly learned skill at a different context from the original classroom setting. To answer this question, therefore, two new tasks were designed details of which are presented below.

F. New Task Development

Because the mediator wanted to check the ability of learners in applying the newly taught skills in real context, the mediator designed two parallel tasks. The tasks consist of two texts which were similar in length and level of difficulty. One text was used for pretest and the other for new task or posttest. Each text was followed by a series of prompting questions each question addressing one of the intended skills. The evaluator was also provided with a rubric. The questions were the same for both tasks. The first task was given to the students one day before the start of DA program and second one ten day after the DA program (as new task).

G. Scoring the Tasks

To score the tasks, an experienced colleague with a PhD in TEFL was invited and necessary explanations were given about the rubric to familiarize him with the prompting questions and scoring procedure. Moreover, to ease the scoring procedure he was told to highlight or underline specific sentences that pertain to the items found on the score sheet. The rubric was taken from California Qualitative CT and it was developed so that it could be applied for assessing the critical thinking skills demonstrated while critiquing an editorial found in a newspaper, magazine or internet. Each question was measured on a 5-point scale using the rubric. Finally, scores of all construct were summed to produce a general score for every individual on each task. Finally the scores on the two tasks were compared. Results are presented in the following chapter.

4. Results

4.1. The First Research Question

Q1: Can dynamic assessment help students develop awareness toward critical reading?

As it was stated awareness is something quite different from a skill or ability. While a person may have the ability to do something they may not have the awareness or inclination to do it. Measuring the awareness a student show during the course of

instruction is important. Therefore, in addition to incorporating CT strategies through mediation, the study had another by-product which was related to assessing awareness toward critical thinking which was assessed through EMI questionnaire. To assess the awareness of students toward CT, at the end of first session students were asked to take the EMI questionnaire to home, complete it, and then return it the next session. The same instrument was given to them one more time near the end of course. The results of overall awareness to CT were calculated based on a 5-point Lykert scale: First, based on the responses to the questionnaire we calculated their general belief in this way:

- (26×5= 130 strongly agree),
- (26×3= 78 neutral attitude),
- (26×1= 26 strongly disagree)

Generally, the score of an individual would fall between 26 and 130. Above 78 would tend to have awareness toward CT and below 78 tended to have a low awareness toward CT. As it can be observed in Table 2. The mean score of the student even at the pretest was higher than that of average score (78) we have expected. But what is important is the amount of change in posttest was even greater than that. But, in order to have an accurate estimate of change between the two groups the results of both of them were compared through paired-samples t-test to see how their attitude or awareness toward CT had changed after DA training. Table 2 shows the results.

Table 2: Paired t-test

	Paired Differences					T	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair1 EMIpre EMIpost	-18.7	11.1	3.51	-26.6	-10.74	-5.31	9	.00

As can be observed, the amount of t-observed value at 9 degree of freedom is greater than the critical t-value of 2.26. To put it simply, $t = 5.31, df = 9, p < .05$. Thus, the third null hypothesis as “DA has no significant effect on awareness toward critical reading of EFL students” is rejected and it can be concluded that DA procedure has a significant effect on awareness toward critical reading of students. The descriptive statistics for the two groups are presented in Table 3. It shows the descriptive statistics of students’ pretest and posttest score on EMI.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EMIpre	10	77.00	120.00	93.3000	14.16608
EMIpost	10	95.00	127.00	112.0000	10.18714
Valid N (list wise)	10				

As it was mentioned in the methodology, after each mediation session the mediator wrote down in a teaching log his observation of students' responses, and interactions to have a general picture of every student's level of progress in terms of their attitude toward CT. Reviewing the logs also revealed the following findings:

- that the class as a whole became more self-confident and willing to express their idea when analyzing a text from critical perspective.
- considering the progressive nature of CT/CR, the class as a whole had a progressive change towards developing awareness to CT/CR but not for everybody and with the same level
- Developing awareness to CT/CR is a purposeful human phenomenon which is can be accomplished best through teaching-assessment methods like DA which allow for dialogic interaction and does not separate assessment from instruction.

4.1. The Second Research Question

Q2: To what extent are students able to use critical reading skills learnt in group dynamic assessment to new tasks (or new tasks)?

Response to question number two required the researcher to design two parallel tasks. As it was mentioned the first task was implemented one day before the program and the second task was implemented ten day after. The reason that the second task was implemented ten days after the program was to allow for enough time lapses to make sure that students have gained the ability to keep their newly learned skills fairly beyond the here-and-now conditions of mediation. After implementing the two tests, scores were calculated in the following way: each question was measured on a 5-point scale using the rubric. The score of 5 indicate that the student has answered the question clearly and his response is focused on topic. Score of 4 shows the writing is mostly focused on topic. Score of 3 shows the response is somewhat focused. Score 2 shows a minimal level of focus, and score of 1 shows that the response has little or no focus on topic. Then, scores of all construct were summed to produce a general score on each task. Finally a paired-sample t-test was run to compare the scores of the two groups. Table 4 shows the results.

Table 4: Paired Sample Test

Paired Samples Test		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Lower	Upper								
Pair 1	Pre Post	-4.00	1.763	.5577	-5.261	-2.73	-7.171	9	.000

As can be observed, the amount of t-observed value at 9 degree of freedom is greater than the critical t-value of 2.26. To put it simply, $t = 7.17$, $df = 9$, $p < .05$. Thus, the fourth null hypothesis as "Dynamic assessment has no significant effect on new task performance" is rejected and it can be concluded that DA procedure has a significant effect on new tasks

which were realized in form of critical reading tasks. The descriptive statistics for the two groups are also presented in Table 5.

Table 5: Descriptive Statistics for Paired Samples

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	7.6000	10	1.42984	.45216
	posttest	11.600	10	1.77639	.56174

5. Discussion and Conclusion

In this study it was tried to shed light on the possibility of implementing DA in a critical reading course for EFL students. So, a group dynamic assessment program was developed with the aim of making students interested in CT, especially teaching critical thinking skills through DA. This is an important issue because at it was stated earlier, in spite of the fact that CT skills are necessary to meet the demands of a rapidly changing world, they have not been given enough attention in the educational system of Iran. Among other barriers to the development and inclusion of CT in our educational program, we can refer to lack of a consensus definition of CT, and unfamiliarity of instructor with the concept of CT. As a result of these limitations, the researcher tried to incorporate CT skills in a reading course and assess students' progress in this regard. The most practical and feasible way to incorporate CT skills in a reading course and assess these skills simultaneously was to implement a DA program through which the researcher was able not only to teach CT skills but to assess them. The findings of this study are in consistency with the finding of previous outstanding researchers such as Kuzlin and Grab (2002) for instance. Previous researches have provided evidence for the positive effects of DA on performance of students. Based on the results it can be discussed that DA is more than just a formative assessment. As we have seen the aim was to promote development. Thus, one possible explanation for the positive effect of DA on reading comprehension is that it is more than just a sheer form of assessment. DA is a pedagogical approach which is supported by theories of mind and development. It is an approach which stresses the unity of assessment and instruction. Adding DA to the testing setting reduces the stress, gives learners extra confidence and they feel that there is someone who cares about them when they get stuck.

This study attempted to test the possibility of assessing CR via DA. In other words the specific aim of the study was to assess the effect of dynamic assessment of critical reading. Although in this research we saw a change in the performance of our student, we should not always expect immediate results in the performance due to mediation. Mediation usually results in a change in behavior and sometimes it may need time before the behavior is well established. Moreover, DA is highly influenced by its reliance on the meditational skills of the examiner. Put together, we should remember that even if we see no dramatic change it should not be interpreted as an indication of the lack of development; instead it impacts learner development in a longer period of time. In addition to the statistical findings of this research there are a

number of advantages in implementing DA that justify the research. One of the major advantages of DA which justify its implantation is its fairness. It should be pointed out that DA should be an integral part of the assessment but not its entirety, because no one approach can provide adequate answer to all questions. In this study a sample of 10 students were chosen. Future research can investigate the same research project with more subjects or with different genders. In this study we used the sandwich model of mediation. Other researcher can implement other models of mediation. Research on DA has mostly focused on expert-novice interaction, but future research can work on the peer-peer relationship. And finally, here we worked only on three skills of CR, while further research can open new avenues of research into other areas of CT and their effect other skills such as listening, writing, vocabulary acquisition and so forth.

References

- Ableeva R. (2007). Assessing Listening for Development. In R. Alanen and S. Poyhonen (eds.) *Language in Action. Vygotsky and Leontievian legacy today*. Cambridge Scholars Publishing, pp. 352-379.
- Ajideh, P. & Nourdad, N. (2012). The Effect of Dynamic Assessment on EFL Reading Comprehension in Different Proficiency Levels. *Journal of Language Testing in Asia 2012*, 2:101-122.
- Anton, M. (2009). Dynamic assessment of advanced foreign language learners. Paper presented at the American Association of Applied Linguistics, Washington, DC, March, 2003.
- Bendar. M. R., and Kletzien, S. B. (1990). *Dynamic assessment for reading: A validation*. Paper presented at the National Reading Conference, Miami, FL.
- Best, J. W. (2006). *Research in education (10th ed.)*. Boston: Pearson.
- Bijandi, P., & Naeini, J. (2007). Ta'sire raveshe hamyari bar tafakor enteghadiye zabanamuzane Irani. *Roshd Foreign Language Teaching Journal*, 84 (3), 22, 10-15.
- Campione, J. C. & Brown, A. L. (1990). Guided learning and transfer: Implications for approaches to assessment in Diagnostic Monitoring of Skill & Knowledge Acquisition, Ed. Frederiksen, et al., Lawrence Erlbaum Assoc., Mahwah, NJ.
- Cioffi, G. and Carney, J. (1983). Dynamic assessment of reading disabilities. *The Reading teacher*, 36, 764-768.
- Davin, K. J. (2011). *Group Dynamic Assessment In Early Foreign Language Learning Program: Tracking Movement through the Zone of Proximal Development* (Unpublished doctoral dissertation). Pittsburgh University, USA.
- Jacobes, E. L. (2001). The effect of adding dynamic assessment component to a computerized preschool language screening test. *Communication Disorder Quarterly*, 22(4), 217-226.

- Kareshky, H. (2005). *Jayegah-e tafakor-e nagh-ghaddarbarnameha-ye darsi-ye reshteha-ye olum-e tarbiyati*. Paper presented at the first seminar of Analyzing and Composing the System of Educational Sciences. University of Ferdowsi, Mashad.
- Kozulin & Garb (2002). Dynamic assessment of EFL Text Comprehension of At-Risk Students. *School Psychology International*, Vol 23, I, pp 112-127.
- Lantolf, J. P. (2009). Dynamic assessment: The dialectic integration of instruction and assessment. *Lang. Teach*, 42:3, 355–368.
- Lantolf, J. P. & M. E. Poehner. (2004). Dynamic Assessment: Bringing the Past into the Future. *Journal of Applied Linguistics* 1: 49-74.
- Lantolf, J. P. and S. L. Thorne. (2006). *The Sociocultural Theory and the Genesis of Second Language Development*. Oxford: OUP.
- Lidz, C. S. & Gindis, B. (2003). *Dynamic assessment of the evolving cognitive functions in children with typical and atypical development*. In A. Kozulin, V. Ageyev, S. Miller, & B. Gindis (Eds.). *Vygotsky's theory of education in cultural context* [pp. 99-116]. New York: Cambridge University Press.
- Maleki, H. (2005). *Barnamehrizi-ye taffakormehvar*. Paper presented at the seminar of Production of Science in Education. The Organization of Islamic Azad University Schools, Tehran.
- Marashi, H., & Jodeiri, S. (2006). *On the relationship between critical ability of Iranian intermediate EFL learners and their writing performance*. Paper presented at the first language and linguistics seminar, Islamic Azad University, Central Tehran Branch.
- Mardani, M., M. Tavakoli (2011). Beyond Reading Comprehension: The Effect of Adding a Dynamic Assessment Component on EFL Reading Comprehension. *Journal of Language Teaching and Research*, 2: 3, 688-696.
- Poehner, M. E. (2008). *Dynamic Assessment: A Vygotskian Approach to Understanding and promoting L2 development*. USA. Springer Science.
- Poehner, M. (2009). Group dynamic assessment: Mediation for the L2 classroom. *TESOL Quarterly*, 43(3), 471-491.
- Poehner, M. E. and Lantolf, J. P. (2005). Dynamic assessment in the language classroom. *Language Teaching Research* 9, 3, pp 233-265.
- Roseberry, C. A., and Connel, P. G. (1991). The use of an invented rule in the differentiation of normal and language-impaired Spanish-speaking children. *Journal of Speech and Hearing Research*, 34, 596-603.
- Sternberg, R. J. and E. L. Grigorenko. (2002). *Dynamic Testing. The Nature and Measurement of Learning Potential*. Cambridge: Cambridge University Press.
- Tagliber, L. K. (2000). Critical Reading and Critical Thinking: the State of the Art. *Ilha do Desterro* (38), p.15-37.
- Tung, C. & Chang, S. (2009). Developing Critical Thinking through Literature Reading. *Feng Chia Journal of Humanities and Social Sciences*.(19) p.287-317.
- Wallace, C. (2003). *Critical reading in language education*. Houndmills, Basingstoke, Hampshire, UK: Palgrave Macmillan.

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Alternative Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).