



## **Dynamic Mediation for Removing Language Comprehension Problems: A Psychological Support for Listening Comprehension Mental Processing**

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### **Abstract**

Dynamic Assessment is an approach to assessment within Applied Linguistics which is stemmed from Vygotsky's Socio-Cultural Theory of mind, his concept of Zone of Proximal Development and Feuerstein's theory of Structural Cognitive Modifiability. This study is an attempt to pinpoint the sources of mental processing problems in listening comprehension and applies dynamic interventions to remove the problems and promote listening. Two male classes (each containing 5 upper-intermediate members) ranging in age from 19 to 24, were selected based on an intact group design. One class was selected as the control and another class as the experimental group haphazardly. The research was on the pre-test, mediation, and post-test paradigm. In the beginning, the two groups were pre-tested purposefully and their real time listening problems were detected through verbal and nonverbal recall protocols. Then, in the mediation phase dynamic group experienced different treatment sessions in two weeks to overcome the problems detected on the pre-test. The experimental group was instructed with mediations based on the Sandwich format of interventionist dynamic assessment while the control group received no intervention and was taught traditionally. Finally, all two groups were post-tested. The qualitative analysis showed that both groups suffered from various listening problems related to mental processing in comprehension. Result of quantitative analysis also revealed that the experimental group which was instructed dynamically outperformed the control group which was taught non-dynamically. The findings of this study suggest that dynamic interventions would not only affect the promotion of the EFL listening comprehension in educational settings but also have a significant effect on the performance of the dynamic group in comparison with the non-dynamic group.

**Keywords:** Dynamic Assessment (DA), Interventionist DA, Sandwich Format, Static Assessment (SA), Zone of Proximal Development (ZPD), Listening Comprehension

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## **Introduction**

Traditionally, learning has been viewed not as a variable to be changed during process based behaviors but as one which is static and unchangeable. This perspective had been going on until arising dissatisfactions with the way practitioners assessing learning abilities. In EFL contexts, learners view authentic listening tasks as the most difficult part and have found traditional approaches to testing tiring and frustrating. In addition, most listening parts are sometimes skipped as the result of dissatisfaction with assessment methodologies in implementing learning goals.

It was felt that, however, language exposure, aural task homework, and other conventional assessment practices to language comprehension are inadequate and argued by many scholars and practitioners who are involved in language learning. So, in early 1990s, assessment scholars focused more on the psychological aspects of language learning such as learners' problem solving capabilities, self-regulating behaviors and developmental performances than static level of their abilities. However, most of practitioners found their paths in the works of Lidz (1987), Haywood (1992), and Haywood and Lidz's (2007) to flourish a dynamic way of assessment.

Having a deep root in clinical psychology, the relationship between clinicians and clients, according to Haywood and Lidz (2007) is "dynamic, transactional and growing" and all interactions grow the seed for progression and growth (p. xiii). The concepts, covering and driving dynamicity in assessment from clinical psychology to educational psychology had been originated from psychologist Vygotsky's SCT (1978) and the concept of ZPD and also Feuerstein's (1990) theory of structural cognitive modifiability, which have appeared as an answer to the needs to integrate socio-cultural factors in understanding of cognitive development and learning potential (Tzuriel, 2000).

Vygotsky (1978) takes into account the vital role of society and culture in constructing and developing cognitive development. He believes that learning is a social process that occurs within social interaction with others. During social contexts and interactive processes developmental learning is formed and potential learning of a person is activated. Assessment in this approach has a different color and effective outcome comparing to other way assessment in the tradition. In Vygotsky's notion, ZPD is a key component which is related to both mediation in part of a more capable peer and internalization of concepts to develop and flourish cognition. The role of mediation is the very case in both theories and Mediated Learning Experience which is at heart of Feuerstein's theory is centered on mediation. According to Vygotsky (1978), "humans do not act directly on the physical world but rely, instead, on tools and labor activity, we also use symbolic

tools, or signs, to mediate and regulate our relationships with others and with ourselves” (p. 1).

Vygotsky proposed that to understand the cognitive development of a person one had better understand his/her social, cultural, and historical background (Tzuriel, 2000). He found the roots of higher mental functions of the child in social interactions with more experienced people who steer the child towards higher levels of mastery. The notion of ZPD appears in Vygotskian theory in three various contexts (Kozulin, 2004).

The first is the question of how to find out the emergent psychological functions of the child. The second proposes ZPD as an alternative to a standard psychometric testing. In the third, ZPD appears as a “space” of the interaction between every-day and scientific concepts (Kozulin, 2004, p. 6). Vygotsky (1978) defines ZPD as the gap between actual developmental level as determined by independent or by-own problem solving activity and the level of potential development as determined in the process of problem solving under the control or help of an adult or a peer or in pair with more capable people. Vygotsky (1978) refers to the first level as the functions that have already matured or what the child can do on his/her own, independently and to the second level as those functions or problems which they cannot deal with independently but only with collaboration with others and assistance. According to him ZPD defines those functions that have not matured so far but are about to be matured and are now in the early stage of development. In the area of learning and teaching another language, a teacher or more experienced source can provide the learner with “scaffolding” to back the student’s emerging understanding of knowledge domains or development of complex skills. On this basis, according to Ahmadpur & Yousefi (2016), language learning is the output of an interaction between the learners’ cognitive abilities and the linguistic context.

This idea was put into practice by many scholars in the area of Applied Linguistics (Belle, 1999; Gipps, 1994; Grigorenko & Sternberg, 1998; Baek & Kim, 2003; Poehner, 2005) to call for process based methods of assessment or alternative assessment and more completely dynamic assessment (Ableeva, 2010; Anton, 2009; Dunn & Lantolf, 1998; Haywood & Lidz, 2007; Lantolf & Poehner, 2011; Poehner & Lantolf, 2005; Rea-Dickins & Gardner, 2000; Torrance & Pryor, 1998). This idea has been taken into account one more time in this study to integrate assessment and teaching, obtain learners’ listening difficulties, pose a dynamic mediation within assessment and instruct learners to remove the language comprehension problems. This can be functioning as a psychological support for listening comprehension mental processing.

On this basis the following questions were addressed:

1. Based on the mental processing phases in language comprehension, what are the sources of the EFL learners' listening problems?
2. To what extent can dynamic interventions promote listening comprehension of EFL learners?
3. Is there any significant difference between dynamic and non-dynamic assessment of learners' listening performances?

### **Literature Review**

DA applications have been initiated in L2 research through the last two decades (e.g., Ableeva, 2010; Antón, 2009; Kozulin, & Garb, 2002; Poehner & Lantolf, 2005) and to date there have not been many researches on listening comprehension skill. They believe that, language acquisition and learning can be gained through interactions. This is what was referred to as the psychological aspect of education in which instruction results in learning if psychological functions or developmental potentials of learners are well managed. What makes the idea "psychological" and not simply "educational" is decisively its association with mental improvement (Chaiklin, 2003). This idea was implemented in different ways and approaches to dynamic assessments.

Lantolf & Poehner (2004) introduces two primary approaches to DA, *interventionist* and *interactionist*. According to Poehner (2005) these two approaches represent two general kinds of psychological mediation that DA researchers can provide in practice and can include a variety of supports, from standard hints to verbal interaction. In the latter model according to Poehner & Lantolf (2004) guidance comes from the interaction between the mediator or tester and the examinee, and is, therefore, sensitive to the learner's ZPD in a great deal. The former, they also continued, the guidance or help are of standardized, therefore emphasizing the psychometric features of the assessment procedure. So the difference between these two approaches to DA is in the way they provide help and scaffolding to the learners. Mediation is shaped as hints, prompts, and leading questions that differ in extent of explicitness (Lantolf & Poehner, 2010).

Based on these approaches, Ableeva (2010) investigated L2 listening comprehension on university level intermediate learners of French and found ten types of mediational strategies throughout the interactions she had with the learners. In this study, it was proved that dynamic assessment can inform the instructional process in conjunction with specific fields where learners need progress and in so doing allows for proper intervention to help learners deal with these problems. The results of the study report that through interactions in the ZPD, DA permits to establish not only the actual level of learners' listening ability but also to diagnose/assess the potential level of their listening development, while at the same time promoting this development.

Another study was done by Hidri (2014) aiming at addressing a need to examine and improve current assessments of listening of Tunisian university EFL test-takers. The study addressed the necessity to use DA in this context and at the same time it explored the classical mode of assessing listening comprehension. Aiming at comparing static and dynamic testing of L2 listening comprehension at university level sixty Tunisian EFL students were selected and they responded to a listening comprehension test with two parts, static and dynamic. Her study revealed that DA provided better insights into learners' cognitive and meta-cognitive processes than did the traditional static assessment and reported that raters were doubtful about the value of DA because they did not know it well.

In a parallel result, Wang (2015) reported that dynamic assessment is able to realize lower intermediate EFL learners' listening comprehension potentials and develop problem solving behaviors among these learners. It was also concluded that integrating assessment and listening instruction can implement dynamic assessment requirements to promote mental and future development.

Also, the applicability of dynamic assessment on other aspects of language learning has been proved in the literature. For example, Poehner (2005) conducted a "Dynamic Assessment of Oral Proficiency among Advanced L2 Learners of French". Six advanced undergraduate learners of L2 French were asked to orally form a set of narratives in French based on short video clips. The learners constructed the first narrative independently and the second narrative with support from the examiner. The outcome of these analysis were employed to design a six-week long DA program in which candidates met with the researcher for individualized training. He reported based on the findings of the study that DA is an effective means of understanding learners' abilities and helping them to overcome linguistic problems. The approach is especially relevant to L2 classrooms as a method for rendering formative assessment practices more systematic. Poehner (2005) also argued that DA should be taken seriously by Applied Linguistics researchers interested in language assessment, teaching, and learning.

Xiaoxiao and Yun (2010) also conducted "A Case Study of Dynamic Assessment in EFL Process Writing". The result obtained from this study represents two major objectives: 1) Learners' writing ability can be substantially and comprehensively improved; 2) Learners' motivation of writing can be markedly stimulated. However they found DA as it can affect the whole process of writing. They reported that since the mediation is made in the ZPD of learners, remarkable progress is likely to occur.

## **Method**

### **Pedagogical Experiment Design**

The purpose behind this research was two folded: 1) to investigate the source of real time listening problems of EFL learners regarding mental processing phases in

comprehension of aural language, 2) to demonstrate the extent to which dynamic meditations can support or promote listening ability. However, Goh's (2000) model of listening comprehension which links the individuals' problems with the three phases, perception, parsing and utilization and the interventionist approach of DA with a pre-test-intervention-post-test paradigm, following the Sternberg and Grigorenko's (2002) sandwich format were adopted. In this dynamic assessment approach meditational remedies are determined based of learners' problems before dynamic sessions standing between pre-test and post-test. Generally, this study adopts a Quasi-Experimental design to collet relevant data.

**Table1.** Design of Experiment

<b>Assessment</b>	<b>Task Description</b>	<b>Material</b>	<b>Objective</b>	<b>Form of Mediation</b>
Pre-test (Non DA)	1. Listening to short talks with multiple choice questions	Part A: 30 short talks (30 min)	To detect real time listening problems based on Goh's (2000) model and prepare appropriate psychological supports for learners in enrichment sessions.	None
	2. Listening to longer talks with several multiple questions	Part B:5 longer talks (30 min)		
	3. Listening to very long talks with multiple statements to be chosen.	Part C: 3 talks (20 min)		
Dynamic Sessions: Two weeks (two tutoring sessions each week)	1. One-on-one talks	A: Written problem statements	Providing psychological support for listening mental processing and removing related problems	Teaching intervention strategies by mediator in group format and one- on-one teacher- learner interactions
	2. Remedial strategies	B: Meditational Strategies for each problem		
Post-test (None-DA)	1. Listening to short talks with multiple choice questions	Part A: 30 short talks (30 min)	To observe the aftereffects of dynamic interventions and scaffolding	None
	2. Listening to longer talks with several multiple questions	Part B:5 longer talks (30 min)		
	3. Listening to very long talks with multiple statements to be chosen.	Part C: 3 talks (20 min)		

## **Subjects**

Since both interventionist and interactionist models of dynamic assessment can be carried out in a small-scale, 10 male participants met the requirements of the study. They were regular English language learners in two courses titled “American English File 3” at Soroush Language College, City of Yasouj, in the South-West of Iran. They were upper intermediate EFL learners and Persian native speakers ranging in age from 19 to 24 with no experience of studying in an English speaking country. One class was selected as control and another class as experimental group haphazardly. These classes were selected from intact classes, through a convenience sampling procedure due to the practical criteria of availability, easy accessibility and most importantly they were being taught language by the researcher and they were in the researcher’s own institute. Being “upper intermediate” refers to the number of semesters they have spent studying English at the Language College but to make sure they were homogenized at the beginning of the study with a placement test.

## **Instruments**

To conduct the present study the following instruments and materials were employed:

**Oxford Quick Placement Test (OQPT):** The paper and pencil version of the test was adopted which contains two parts. Because of the learners’ proficiency levels in this study only part one of this test containing 40 multiple choice questions was adopted. Based on the test’s guidelines, those who scored between 31 and 40 were viewed as upper-intermediate. This is while part two contains questions 41-60 and is taken for the higher level learners. This test is valid, reliable, and a highly effective instrument in grouping learners into appropriate levels. As its name goes, it is quick, time saving and validated in 20 countries by more than 6,000 students was administered as a time-saving and reliable English language proficiency test developed by Cambridge ESOL and Oxford University Press. These tests were chosen from these resources to overcome the issue of validity and reliability.

**Pre-test/post-test and Listening Homogeneity Test:** Since the listening material tasks should be valid enough, to meet this need, all were selected from the book *TOEFL Test Preparation Kit* (work book), second addition. The book is designed to test the learners’ ability to understand Spoken English in North America. Materials of this book as TOEFL test is produced by test specialists at Educational Testing Service who are experienced at teaching English to non-native speakers and testing. Each question in the test is checked many times according to ETS procedures for accuracy, authenticity, difficulty and fairness. This test was used one time as the pre-test and one other time as post-test in this research.

## **Procedure**

All assessment sessions and mediation programs took four weeks.

Week 1 – Non DA

Week 2, 3 – one-on-one negotiation, Enrichment Program Sessions

Week 4 – Non DA

In the beginning, a QOPT was administered to all participants to homogenize them in their language abilities. In the first week, all participants were asked to take part in the pre-test of the study in a traditional way. The test contained three parts, A, B, and C. Part A including 30 short conversation and talks between two people along with a question heard from a third party in the conversation. The conversations were played by the teacher and then after hearing the question they had 30 minutes to select the correct answer from the multiple choices written below each question.

The time affiliated to this part was 30 minutes. In part B, they listened to a longer conversation and had to answer several questions cited by another person in the audio recording. The numbers of the conversations in this part were 5 and each question was followed by four choices from which one right one must be circled by the test taker. This part also took 30 minutes to be done. In the last part of the listening test, part C, 3 conversations and talks were heard by the examinees, after that some related questions, each with four statements to be chosen as the right one, were presented in the part C of the test. The examinees took 20 minutes to complete this part. In all parts, the audios were not repeated at all. In this phase, there was no help or support in part of the examiner and the examinees work on their own and the researcher aimed at determining the actual knowledge of the student or the Zone of Actual Development (ZAD) in listening comprehension.

It was also to determine whether their listening proficiency levels do not vary significantly. In the same week, after finishing the pre-test administration, the test papers were gathered and the researcher scored the exam sheets individually based on TOEFL guidelines for scoring listening tests and then wrote down each individual's problematic areas and the wrong answers on another piece of paper. Two sessions on odd days were determined for the second week as face to face interactions and in third week for mediating experimental group while the control group received no mediation and were traditionally continuing. During two sessions of one-on-one interactions each learner wrote statements about the cause and quality of failures in the listening tasks in form of recall protocols. Most of the problems were common and repeated in each individual's face to face meeting among the listeners; only the new problems were recorded.

After analyzing the problems, based on Goh's (2000) model of listening comprehension the researcher linked the individuals' problems with the three phases, **perception, parsing, and utilization**. Next, in mediation programs (third week), for boosting the ability of the listeners in these three areas the researchers also introduced the 20 types of practices and strategies as dynamic intervention to support their mental processing phases and ZPDs (see table2 in Appendix) . These practices were perception practice and listening strategy practice (Cognitive, Metacognitive tactics & Social-affective tactics). In second session of mediation, each item in the strategy practice list was explained and the mediator instructed all useful strategies in listening comprehension with an eye on the learners' problems. The new words and all grammatical points, the strategy of reviewing the questions before listening to the audio, and the technique of note taking of the long conversations were also introduced as a remedy for answering the questions from

the researcher. Subsequently, students started to practice what they were taught in dynamic sessions.

In order to see the students' performance improvement as the result of the mediation and to make sure that whether the dynamic intervention procedures would have supported listening comprehension barriers of the mediated students, the individuals were required to participate in another parallel test in the fourth week.

### **Data Analysis**

This study followed a mixed method design, employing qualitative and quantitative approaches to report its results. Through reading recall protocols all new statement problems were highlighted, shortened by pen and were written on another sheet of paper. All problem sentences were linked to perception, parsing or utilization then tabulated. In addition, the extent of mediation and scaffolding effects on the DA group during intervention sessions was measured running a Paired sample t-test. Further, to mark the signs of DA learners' cognitive development and outperformance in comparison with non-dynamic/traditional ones an independent t-test was adopted. All analyses were done quantitatively using 19 version of Statistical Package for Social Sciences (SPSS) software.

### **Result and Discussion**

#### **Result of Qualitative Analysis**

In order to answer the first research question, all participants' oral and written recall protocols regarding their descriptions of problems during listening tasks were analyzed, summarized as short sentences and then linked to Goh's (2000) three-phase model. These problems are presented in table 2.

**Table 2.** Learners' Listening Problems and Phases of Listening Comprehension

<b>Source of Problem</b>	<b>Mental Processing Phase</b>
1. Not Understanding the main idea and what is spoken	Perception
2. Not Understanding new words and phrases	Perception
3. Forget the first part as they listen to the next parts	Parsing
4. Not Understanding and processing some grammatical structures	Perception
5. Missing some parts because of thinking about something else	Parsing
6. Speed of the audio and missing a lot of parts	Perception
7. Understanding all parts but can't get the meaning	Utilization
8. Understanding the text but when going over the questions forget the answer	Utilization
9. The speed and misunderstanding words and phrases	Perception
10. Not hearing the sound well	Perception

Table 2 represents the sources of real time problems that learners recalled in form of protocols after listening tasks in pre-test stage. The findings revealed 10 mental processing problems they experienced during their listening assessments. Most of the problems were related to perception phase with 6 problems in which

listeners failed to recognize language components well. This failure could be as the result of audio tools quality, inattention and unfamiliarity with new words and phrases among learners. This processing phase involves encoding the signals, i. e. written or verbal language or visual stimuli. Parsing with 2 problems occurred when listeners could not link all parts together to represent a complete understanding. Parsing processing is associated with converting the signals into a cognitive representation of the united message of these signals. Utilization difficulties also with 2 problems originated in learners' lack of ability in getting the intended message and failed to recall their understanding of the speakers. This phase involves the inferences listener makes to fulfill the interpretation meaningful, or use the cognitive representation to react to the stimuli (Goh, 2000).

Further, in protocol analysis, it was shown that learners were similar in facing difficulties. However, the frequency occurrence of each listening comprehension problem is indicated in the following figure.

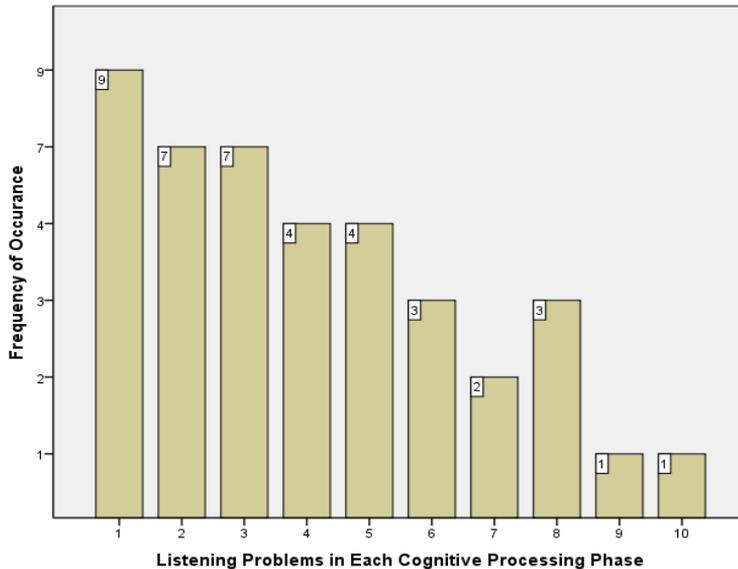


Figure 1. Frequency of Listening Problems Occurred During Aural Test

1. Forget the first part as listening to the next part
2. Understanding almost all parts but can get the message
3. Not understanding the main idea and what is spoken
4. The speed and misunderstanding of word phrases
5. Not understanding new words and phrases
6. Understanding the text but when going over the questions forget the answer
7. Speed of the audio and missing a lot of parts
8. Not Understanding and processing some grammatical structures
9. Missing some parts because of thinking about something else
10. Not hearing the sound well

Figure 1 graphically illustrated the frequency of each listening problem shown in table 2 in each processing phase during listening test.

Furthermore, the counts of the learners' mental processing problems and frequency occurrence of each statement problem which had been analyzed in table 1 and table 2 are summarized in following table.

**Table 3.** Counts and Frequency of Occurrence of the Listening Problems

<b>Problem</b>	<b>Counts</b>	<b>Freq. of Occurrence</b>
Perception	6	18
Parsing	2	10
Utilization	2	10
Sum	10	38

As can be seen from table 3, the perception processing stage in listening comprehension was the most problematic among others although the other stages were quite significant. These findings are quite similar to those of previous research by Nowrouzi, Tom, Zareian, and Nimehchisalem (2015) as they categorized Iranian tertiary level first-year EFL learners' listening problems based on the framework used in this study. They reported perception problems with a high level rate while the two others with moderate rates.

The findings also support the results drawn from Goh's (2000). In her study, 10 problems which occurred during the cognitive processing phases of perception, parsing and utilization were detected. He reported that five problems were linked to word recognition and attention failure during perceptual processing. There were also problems related to inefficient parsing and failure to utilize the mental representations of parsed input. However, to shed additional light on the way, the protocol analyses of these problems are presented to trace the sources of problems among learners.

### **Protocol 1: Failure in Perceptual Processing During Listening**

This is the most typical real time difficulty faced by the listeners that was associated with encoding the input they received from the speaker.

Student1: *I recognize the words I hear but cannot remember their meanings. This is why I cannot understand the audio.*

Student 2: *When listening to the audios a lot of unfamiliar words I heard. When I asked my classmates I found that I pronounced them wrongly; that's why I couldn't recognize them.*

Student 3: *I couldn't recognize some structures in the text. The speed was fast and I missed a lot of parts. Also, sometimes I couldn't hear the speaker well because it was noisy outside.*

It can be inferred from the statement above that the listeners could not perceive the meaning of words they heard due to several reasons. First statement represents the inadequate vocabulary storage of the listener while the second sentences show the incompetent word knowledge. In another part, listener seems to memorize the new words by sight and cannot recognize them by sound. Further, low communicative competence, especially linguistic skill of the listener in the last statement was inferred. Furthermore, external factors in the final segment of the last sentence showed to affect this processing phase.

### **Protocol 2. Failure in Parsing During Listening**

Failure in parsing was another problem reported by the listeners. It was repeatedly told that as soon as they went over the next part they would forget the last part.

Student 4: *When I listen to the audio I can recognize the new words but when analyzing the new segment I can't remember the last part.*

Student 5: *When I heard the segment I could not remember its information a short moment later because I feel obsessed.*

This part of problem is related to parsing processing and referred to by Zhang and Zhang (2011) as inadequacy of cognitive ability, i.e. attention and memory. Goh (2000) stated that this problem occurs due to the students' short-term memory limitations. As it can be inferred, the information in short memory is cleared when receiving the new information. Further, listeners cannot connect all segments together to represent a full understanding due to inadequate mental representation in parsing phase of comprehension.

### **Protocol 3: Failure in Utilizing during Listening**

This problem was encountered when the listeners couldn't get the intended message although they claimed that they understood most of the text.

Student 6: *I do not understand the intended message of the entire text, although I understand the text quite completely.*

Student 7: *I understand the text but when I want to answer the focus questions I am not sure I answer correctly. It seems I forget many things.*

In this phase, the listeners fail to make inferences on the intended messages the text carries out although they understand the meaning of the stream of words. They fail to make sense of interpreting the stimuli and extract a complete message. Goh (2000) placed the cause of this problem on lack of the learners' background

knowledge about the subject. In addition, it can be due to and incomplete linguistic or social knowledge of the learners (Hymes, 1979 as cited in Goh, 2000).

### Results of Quantitative Analysis

The main statistical analysis conducted in the quantitative phase of the study was t-tests (i.e. paired t-test and independent t-test) to examine the effect of dynamic mediation on the promotion of EFL learners' listening comprehension. The dependent variable is the mean score and performance development of learners on listening tests, while DA procedures (e.g: hints, teacher assistance, leading questions, strategy teaching and etc.) is independent variable. So, t-tests were chosen as the most appropriate analysis to compare performance on two groups (Mackay & Gass, 2006) as the aim of the study was to examine the effect of one independent variable on another dependent variable.

However, table 4 shows the descriptive statistics and independent t-test results in pre-test for control group and experimental group.

**Table 4.** Independent t-test Results for listening Scores of Control and Experimental Group in Pre-test

Groups	N	Mean	SD. Deviation	t	df	sig
Control Pre-test	5	62.80	9.68	.403	8	.697
Experiment Pre-test	5	60.60	7.43			

Based on the obtained results from independent t-test in table 4, it is clear that there is no significant difference in the scores for control (M = 62.80, SD = 9.68) and experimental group (M = 60.60, SD = 7.43) on listening static pre-test;  $t(8) = .403$ ,  $p = .697$ . These values suggest that the two intact classes were similar and homogenized in listening comprehension ability. This step paved the way to this prediction that any change in the performance of the experimental group will be as the results of applying the interventionist DA within the intervention sessions. Therefore, after intervention program the pre-test and post-test comparison was done to track the sign of development.

However, to investigate the probable improvement in non-dynamic cluster as the result of traditional teaching, the scores of this group in pre-test and post-test conditions were compared using a series of descriptive statistics and paired sample t-test in following table.

**Table 5.** Descriptive Statistics and Paired t-test Results for Listening Scores of control group in Pre- & Post-Test

Pairs	Pre-test		Post-test		95%Confidence Interval of the Difference		N	t	df	Sig. (2-tailed)
	M	SD	M	SD	Lower	Upper				
Control group Pre-test/post-test	62.80	9.67	61.00	9.66	-3.04169	.64169	5	-1.809	4	.145

As presented in table 5, there was not a significant difference in the scores of control group for listening test in pre-test (M = 62.80, SD = 9.67) and post-test (M = 64, SD = 9.66) time points;  $t(4) = -1.809, p = .145$ . It reveals that the control group did not much develop through traditional teaching program and acted quit the same in pre-test and post-test conditions.

In addition, in an answer to the second research question, the descriptive statistics and paired t-test were run to investigate the extent to which dynamic interventions promoted listening comprehension of EFL learners.

**Table 6.** Descriptive Statistics and Paired t-test Results for Listening Scores of Experimental Cluster in Pre- & Post- Test

Pairs	Pre-test		Post-test		95% Confidence Interval of the Difference		N	t	df	Sig. (2-tailed)
	M	SD	M	SD	Lower	Upper				
experimental group Pre-test/Post-test	60.60	1.94	90.40	4.61	-35.023	-24.57	5	-15.83	4	.000

Based on the values in the table 6, there was a significant difference in the scores of experimental group for listening test in pre-test (M = 60.60, SD = 1.94) and post-test (M= 90.40, SD = 4.61) conditions;  $t(4) = -15.83, p = .000$ . This difference shows that the experimental group acted better on the post-test than in the pre-test. Thus, this increased mean is the sign of improvement after dynamic interventions.

As can be seen from this analysis the experimental group was affected by mediation and their listening proficiency was promoted in the post-test. On the contrary, the control group who received no mediation and benefited from standard instruction did not change and performed in post-test as the same as in the pre-test. This positive effect not only proved the efficacy of one of the least employed format of interventionist DA (sandwich format) on the promotion of this language ability but also flourished novel ideas that DA procedures are all effective and tend to promote and ignite the potential development of learners in a better way than another.

In sum, the second question was met and interventionist dynamic assessment promoted listening comprehension ability of EFL learners to a significant extent.

This is to notify that interventionist DA especially Sandwich format of Sternberg and Grigorenko (2002) is rarely adopted by the researchers in this field. This was because, in Lantolf and Poehner (2004) and Bavali, Yamini, and Sadighi (2011) assumptions, it emphasizes the standardized properties of SA procedures and shares the features with this traditional way of assessment. Moreover, its pre-test-intervention-post-test training design that is pioneered by Buddof and his colleagues 1964-1973 is not particularly sensitive to individual's ZPD.

In contrast, Bavali et al. (2011), however, stood against this model of assessment and stated it suffers from a lack of construct validity as it doesn't address the assumption behind DA. He stated that in this model the tutor-examiner's assistance is not provided at the time of assessment but when learners are receiving instructions in typical teacher-centered classroom settings.

Hence, it is agreed that this type of training existed in this model of DA has the features of standardized assessment, however, it was proved in this study that it can affect the learners' ZPDs and develop their cognition toward learning and promote learners' listening comprehension abilities. This efficacy as the main goal of DA has also been proved many times in the studies related to this field. For example Ghaderi and Hessamy (2014) employed the Sandwich format of DA as the present study. They attempted to investigate the role of DA in the vocabulary learning of EFL learners. Paralleling with the results of the current study, their study showed that the experimental group outperformed the control group and this difference was significant. In other words, incorporation of DA as a supplementary procedure to standard testing has positive effect on both test performance and vocabulary learning of learners. This positive impact on learning promotion is what we consider a priority to digest DA as an alternative assessment to SA.

Furthermore, the findings of a huge body of researchers in dynamic assessment field (Amini, 2015; Hidri, 2014; Isavi, 2012; Poehner, 2005) stands behind the findings of this study, this is while none of them has investigated the effect of dynamic mediations based on the dynamic model used in this study.

In another attempt to answer the third question of the study, the post-test performances of the control group who treated non-dynamically and experiment group who, in contrast, treated dynamically, were investigated and compared with each other using an independent sample t-test.

**Table 7.** Descriptive Statistics & Independent Samples t-test of Control and Experimental Groups' Post-tests

Groups	N	Mean	SD. Deviation	t	df	sig
Control post-test	5	64.00	9.67	-5.306	8	.001
Experiment Post-test	5	90.40	5.50			

Based on the results gained from post-test, the independent t-test in table 7 indicates that there is a significant difference in the experimental mean score ( $M = 90.40$ ,  $SD = 5.50$ ) and control group mean score ( $M = 64$ ,  $SD = 9.67$ ) for the post-test of listening comprehension;  $t(8) = -5.306$ ,  $p = .001$ .

Thus, these values suggest that the experimental group in the post-test outperformed the control group. Further, the dynamic group with a close mean score to control group in the pre-test has made a significant progress after mediation sessions and its performance in post-test differed from that of pre-test and gained a

higher mean than that of pre-test. It means that control group's mean score did not change greatly in the post-test. So, it was proved that there is significant difference between listening performances of dynamic and non-dynamic group at the end of study.

Hence, this change in performance put in the practice the ideas of Sternberg and Grigorenko (1998) and Haywood and Lidz, (2007) that in DA those meditational strategies that are fit to the learners' ZPD are able to flourish new abilities with the help of mediators. This result taken in this study also accomplished the Tzuriel's (2000) statement who believes that the meditational strategies put within the DA procedure are more closely linked to learning processes in school and to other life contexts than are static ways, so it is assumed that DA gives better pictures on future changes of cognitive structures than do static tests.

The results related to these two questions are again in line with the study conducted by Khoshshima and Izadi (2014). These researchers compared two forms of DA and standard assessment of EFL learners' listening comprehension. The results revealed statistically significant listening improvement in favor of dynamic-supported and dynamic instructed assessment groups rather than standard assessment one.

In this regard, the results regarding the first question in this study also supported the results of a study by Taheri (2016). He examined the role of DA in developing the listening comprehension of EFL learners and determined the extent to which DA can foster listening comprehension development compared to non-dynamic. The results indicated that the dramatic improvement in independent listening performance of the DA group may be attributed to the administration of the enrichment program.

In addition, Ableeva (2010) conducted another study whose results supported the findings of present study. She found that DA is able to inform the instructional process regarding specific areas where learners need improvement and in so doing allows for appropriate intervention to help learners overcome these problems.

The results of the study indicate that through interactions in the ZPD, DA permits to establish not only the actual level of learners' listening ability but also to diagnose/assess the potential level of their listening development, while at the same time promoting this development. So, to put the result of the current research in a more valid frame it is in a direct accord with many other DA studies (Ajideh & Nourdad, 2012; Baek & Kim, 2003; Hidri, 2014; Kozulin & Grabe, 2002; Lantolf & Poehner, 2010; Poehner & Lantolf, 2005; Shabani, 2014; Shaki, Derakhshan & Sedigh Ziabari, 2016). They all called DA effective for language development and maturing mental cognition of learners.

In sum, the meditational strategies used in this experiment has a profound wellspring in Vygotsky's sociocultural concepts, i.e. the ZPD and his cognitive view of development. They can be brought into EFL educational contexts to ameliorate difficulties regarding learning skills.

## **Conclusion**

The result of the present study uncovered EFL metacognitive knowledge about themselves in listening comprehension in which a reflection of real time listening problems would be beneficial for betterment of language comprehension failures. This awareness of problems was better managed when had been flavored with new methods of language assessments like dynamic assessment in which strategy awareness, self-regulating behaviors and independent acting would be born. Based on the result of a bulky volume of other studies which bore proof on practicality of DA over other assessment methods the result of this study adds much value to this practicality. It not only affected learning through a novel path in favor of the learners but also provide the teachers with an insight toward the reflection of their method of testing from now on in the field.

This reflection can stand behind the assumption how testing methods paves the way to reach an ideal learning among interested language learners. On the other hand, it can call for a shift from psychometric methods of assessment to those which push learners toward their expected learning. Teachers, further, can benefit from the quality of using strategies and mediation of their students and generalize them to other settings in which listening are not a task of collaboration.

Thus, it can be claimed that DA, as a new method of thinking on language learning, is quite successful in enhancing listening development of students. With all these benefits, like all other studies this study suffers from some limitations to be done. The number of participants was small because there were not any other folks willing to take part. Another limitation is the non-random selection of the participants which according to Mackey & Gass (2006) it would be a case for the generalization of the results. However, the results can be of value in curriculum design of listening courses through enriching the syllabus designers with enough information on likely deficiencies faced in mediation sessions.

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## Appendix

**Table 8.** Instructed DA Mediated Strategies

1. Teaching new words and phrases	11. Listen for clarification
2. Teaching grammatical points	12. Ask for listening on purpose based on questions
3. Repeat audio especially difficult parts	13. Ask for listening carefully and focus
4. Write down content words of short talks	14. Ask for repetition and clarification
5. Explaining the contents of the talks	15. Use prior knowledge and context to predict new words
6. Reviewing the questions	16. Ask for being relaxed before and after listening
7. Teach how taking notes of parts related to questions	17. Ask for paraphrasing what speaker said to check comprehension
8. Reconstruct meaning using content words	18. Ask for re-play the audio to check answers
9. Pay attention to discourse makers and review	19. Translation to mother tongue the difficult parts
10. Pay attention to pause and tones	20. Ask for adjusting the CD player's voice before listening

### **Author's Biography**

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