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Investigating the Effects of Using Dynamic Assessment Procedures on the EFL Learners' Vocabulary Knowledge Development

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Abstract

This study seeks to provide insights into the process of vocabulary learning and promoting vocabulary knowledge by tracking its development in dynamic assessment (DA) procedures through thematic and microgenetic analysis. In order to meet the aim of this study, three male and three female EFL learners were chosen non-randomly based on their availability. All the participants were beginners with regard to their vocabulary knowledge. The participants voluntarily attended 15 DA sessions throughout each session a few new vocabulary items were presented using different techniques of teaching vocabulary. The participants received corrective feedback within their zone of proximal development (ZPD). They were provided with appropriate levels of help by moving gradually and using prompts through the regulatory scale from the most implicit to the most explicit assistance which emerged from the individualized mediation between the mediator and the learners. The results of the study indicated that using DA procedure can enhance the development of vocabulary knowledge among EFL learners.

Keywords: Vocabulary, Dynamic assessment, ZPD, Vocabulary knowledge, EFL

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1. Introduction

Vocabulary is one of the seminal components of language teaching and its significance in the field of language learning is clear to everyone. In the field of applied linguistics, a large quantity of research efforts has been dedicated to grammatical, phonological and orthographic aspects of language, while the lexical aspect has not been given the attention it deserves (Larsen-Freeman, 2003).

Vocabulary is also regarded as one of the most important aspects of language learning and communication. The underlying reason lies in this fact that, vocabulary conveys a great deal of the intended meaning of speakers and writers (Richards & Rodgers, 2001). In recent years, many researchers acknowledge the important role of vocabulary in promoting language skills (Erten & Tekin, 2008; Groot, 2000; Marzban & Amoli, 2012; Rahimi, Momeni, & Nejati, 2011).

It seems without sufficient knowledge of vocabulary; language learners would suffer from many difficulties regarding language use. "Without an extensive vocabulary and strategies for acquiring new vocabulary, learners often achieve less than their potential..." (Richards & Renandya, 2002, p. 255).

Vocabulary knowledge has a seminal importance in understanding the world and for language competence in both spoken language and in reading (Gupta & MacWhinney, 1997). Vocabulary considered as one of important language component which has a great influence on development of language skills. Some researchers indicate that lack of vocabulary leads to writing difficulty for foreign language learners (Astika, 1993; lee, 2003; Santos, 1988) and many scholars argue that vocabulary is one of the most important factors which determine writing quality (Leki and Carson, 1994; Raimes, 1985; Uzawa and Cumming, 1989). Speaking skill is influenced by vocabulary knowledge as well. Lack of vocabulary knowledge is a main hindrance for many EFL learners in developing their speaking skill (Boyle, 1984; Chang, 2007). Mehrpour and Rahimi (2010) reemphasized the role of vocabulary knowledge in developing reading skill. "Without grammar, little can be conveyed, without vocabulary, nothing can be conveyed" (Wilkins, 1972, p. 111). So, it can be claimed that, vocabulary is a building block for developing language skills.

Some researchers (e.g., McGraw, Yoshimoto, & Seneff, 2009; Nunan, 1999) believe traditional techniques (e.g., translation, explanation, teaching vocabulary in context, providing synonyms and antonyms for new vocabulary, and etc.) cannot help learners to strengthen their vocabulary knowledge. Based on the findings of their study, Ciftci and Uster (2009) came to this conclusion that presenting the target vocabulary

items in context and by definitions does not make a remarkable difference in terms of overall performance.

With regard to the deficiencies of aforementioned vocabulary teaching methods, and the positive results which have been reported to emerge out of using Dynamic Assessment (DA) procedures in developing language skills (Ableeva, 2010; Birjandi & Ebadi, 2012; Cioffi & Carney 2012; Naeini & Duvall, 2012; Poehner, 2005; Shabani, 2012; Zoghi & Malmir, 2013), this study seeks to apply DA procedures in the process of language learning.

2. Literature Review

DA is originated from Vygotsky's theory of cognitive development in general and the concept of ZPD and mediation in particular (Oskoz, 2005). Vygotsky (1978) defined the ZPD as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). ZPD has a common ground with the Sociocultural Theory of mind (SCT). SCT tries to describe the processes through which, learning and development occurs (Shabani, Khatib, & Ebadi, 2010). DA refers to the "interaction between an examiner-as-intervener and a learner as active participant, which seeks to estimate the degree of modifiability of the learner and the means by which positive changes in cognitive functioning can be induced and maintained" (Lidz, 1987, p. 4).

It must be taken into considerations that DA has both instructional and evaluative implications which are inseparable (Saeidi & Hosseinpour, 2013). In DA literature, the terms examiner and examinee are replaced by mediator and learner, respectively. Poehner (2008) argues that, cooperating with the learners during the completion of assessment tasks for gaining a full view of learners' capabilities is necessary. With regard to L2 context, in recent years some scholars have been trying to bring more attention to the application of DA procedures in such a context (Antón, 2003; Scheneider & Ganschow, 2000).

One of the fruitful outcomes of DA procedures is that the teachers would be provided with diagnostic information about the students. That is the teachers can provide the students with necessary feedback which in its turn can lead to the students' better performance. According to Poehner and Van Compernolle (2011) mediation as the main component of teaching, is instructional and can lead to the growth of learners' ability in the process of independent problem solving.

As Shabani, Khatib, and Ebadi (2010) put it, those tasks which the learners can accomplish via getting help from the other person can be

located inside the ZPD. So, the teaching should be occurring throughout this area. "As the learner accomplishes the task, his or her ZPD, or the gap between what he or she can do on their own and what he or she can only accomplish with assistance shrinks" (p. 238).

Schinke-Llano (1993, p. 121) argues that, "Vygotskian psycholinguistics is not only compatible with current second language acquisition theory but also extremely useful as a productive paradigm within which to conduct research and theory building". Before initiating DA based research in applied linguistics, it has been researched in psychology and education for a long time (Poehner, 2005). As Abdolrezapour, Tavakoli, and Ketabi (2013) put it, pedagogical implications of DA in applied linguistics have been neglected until recently.

With regard to L2 context, in recent years some scholars have been trying to bring more attention to the application of DA procedures in such a context (Antón, 2003; Scheneider & Ganschow, 2000). While discussing about DA procedures, it should be taken into consideration that DA focuses on process rather than product (Antón, 2003).

Lantolf and Poehner (2004) propose the terms interventionist and interactionist to describe two general kinds of mediation that DA researchers can make available. According to Thouesny (2010), the interventionist approach is used in computer-based assessment and is well adapted to large-scale assessment. The interactionist approach is more in line with Vygotsky's concept of the ZPD, mostly with regards to its qualitative orientation. "The interactionist approach to DA implies mediation emerging from interaction between examiner and examinee. This type of DA represents dialogic or cooperative interaction" (Ableeva, 2010, p. 108).

Sternberg and Grigorenko (2002) introduced two formats of DA procedures; cake format and sandwich format. Sandwich format consists of three stages; pre-test, instruction, and post-test. The schematic presentation of sandwich format is as follows:

It should be taken into consideration that in sandwich format both pre-test and post-test are of static nature. The learners' performance in pre-test and post-teat are compared in order to find out the usefulness of intervention.

In cake format mediation is administered during the assessment process itself. The cake format lends itself to individual administration (Poehner, 2005). During cake format DA "the examiner provides the examinees with hint-based instruction and determines how many hints an examinee needs to solve the item correctly" (Ableeva, 2010, p. 105).

A great deal of research has been done in order to investigate the effect of using DA procedures on language sub skills like reading, writing, vocabulary, and grammar (e.g., Cioffi & Carney, 1983; Pishghadam & Barabadi, 2012; Shabani, 2012). The results of these studies indicated the positive effect which DA procedures can bring about on promoting learners' performance. Zoghi and Malmeer (2013) investigate the effect of an interactionist model of DA on Iranian EFL adult learners' intrinsic motivation. The results show that incorporation of DA as a supplement procedure to classroom activities has a positive effect on EFL learners' intrinsic motivation.

Investigating the effect of dynamic assessment as an instructional tool on Iranian Intermediate EFL learners' vocabulary learning, Saeidi and Hosseinpour (2013) have chosen 60 students to be randomly assigned to control and experimental groups. Through making use of DA the students of experimental group were taught new words, while control group was exposed to static method of teaching vocabulary. The results of the independent t-test between the pre-test and post-test of control and experimental groups shows that DA can enhance vocabulary learning rate of learners.

Investigating the effect of DA on the development of passive vocabulary as a component of EFL on Iranian intermediate learners, Fatemipour and Jafari (2015) assigned 60 participants to two groups randomly. DA process was used in experimental group and traditional assessment was used in control group. The results indicate that DA procedures can help learners in developing passive vocabulary knowledge and in comparison with traditional method of vocabulary assessment it is more effective.

Reviewing the DA literature shows that, a good deal of research has been done on the effects of application of DA procedures in developing EFL learners' knowledge with regard to different language sub skills like reading comprehension, grammar, and writing (e.g., Cioffi & Carney, 1983; Pishghadam & Barabadi, 2012; Shabani, 2012). However, due to the lack of study on the application of DA procedures in vocabulary teaching and learning process on the one hand, and considering the important role of vocabulary knowledge in the process of L2 learning (Celce-Murcia, 2001; Richards & Renandya, 2002; Richards & Rodgers, 2001) on the other hand, conducting research in this field seems to be of utmost importance. Although a lot of studies conducted on investigation of effects of using DA procedures in the field of language learning in general and vocabulary development in particular but, to my best knowledge, no qualitative research has been conducted in order to investigate the effects of using interactionist DA in developing vocabulary. Another issue that remains unnoticed in DA research on vocabulary is that there is no research on effects of using DA on the EFL beginner learners in Iran to date. So conducting a research which targeted both of these two short coming seems to be necessary. The aim of this study will be realized through the following research question:

1.To what extent can a DA procedure enhance the development of vocabulary knowledge among EFL learners?

3. Method

This study tries to provide insights into the process of vocabulary learning and promoting vocabulary knowledge by tracking its development in DA procedures through thematic and microgenetic analysis. The research methodology of this study is grounded in a mixed methods approach allowing both qualitative and quantitative analyses.

3.1 Participants

The samples of this study were chosen non-randomly based on their availability. Three male and three female EFL learners voluntarily participated in this study. All the participants were beginners with regard to their vocabulary knowledge. They were of different age groups (ranging from 10 to 13 years old). All the participants shared the same native language. They were studying at primary schools and none of them took part in language classes at the time of the study.

3.2 Instruments

3.2.1. DIALANG Test

In order to determine the level of participants' vocabulary knowledge, DIALANG test was administered at the outset of the study. The test was administered individually. Based on the test results, DIALANG reports the level of the participants on a scale which divides language into 6 levels of proficiency, covering the full range of proficiency from beginner to advance levels. These levels are as follows: A1, A2, B1, B2, C1, C2, in which, A1 stands for the lowest level and C2 for the highest one.

3.2.2. Tape Recordings

Data collection tool in this study has been comprised of tape recording all DA and transcendence (TR) sessions. According to Ableeva (2010) TR sessions are similar to DA sessions; the only difference is that, TR sessions evaluate the participants' mastery of vocabulary items in new context.

3.2.3. Course Books

There are two books which were used in this study, the book First Friends 3 (Iannuzzi, S. (2014). *First friends 3*. Oxford: Oxford University Press) as the main book and the book Family and Friends 1 (Simmons, N. (2013). *Family and Friends 1*. Oxford: Oxford University Press) as a supplementary book. These books are comprised of two parts; class book and work book. New vocabulary items are introduced through class book. Work book includes different types of activities in order to check learners' knowledge with regard to different language skills.

3.2.4. Vocabulary Test

The researcher chose 80 words from books First Friends 3 and Family and Friends 1 in order to determine which words the participants are not familiar with. The aim of this test was to determine which words to be included in vocabulary instruction through DA procedures. Vocabulary Knowledge Scale (VKS) (Paribakht & Wesche, 1993) was used in order to determine familiarity/unfamiliarity of the words in vocabulary test. Given that the participants were beginners, VKS was translated into Persian.

3.3 Data Collection Procedure

At the outset of the study, DIALANG test was administered to all the participants individually. The aim of the administration of the DIALANG Test was to determine the participants' proficiency with regard to vocabulary knowledge. Results showed that, all the participants are at the level of A1 which means they are at the lowest level with regard to their vocabulary knowledge. These results approved the participants' homogeneity as well.

In order to determine unknown words, the vocabulary test, which has been developed based on VKS, was administered in the second session. As it has been mentioned earlier the aim of this test was to determine which vocabulary items to be focused on within DA sessions. Based on the results, 60 items out of 67 items which gained the score of one or two by all the participants has been chosen as the main items to be focused on within the DA sessions.

The participants voluntarily (with permission of their parents) attended 15 instruction sessions. Throughout each DA session a few new vocabulary items from the text book were presented. Within DA sessions, different activities and tasks from both class book and work book were chosen by the mediator in order to provide different levels of help within participants ZPD.

Within DA sessions, through using different techniques of teaching vocabulary (translation, exemplification, explanation, miming, providing

synonyms and antonyms, and etc.), participants were presented with new vocabulary items from their main and supplementary text books. In DA sessions the participants were presented new items from their text books; however, through using work books and test books, participants had to complete different tasks and activities which were related to vocabulary items in TR sessions. According to Ableeva (2010) and Poehner (2005) the tasks in TR sessions should be more difficult in comparison with the tasks in DA sessions. In order to make sure that the tasks in TR sessions were more difficult than tasks in DA sessions, care has been exercised to present the participants tasks of work books and test books as much as possible.

Through a dialogic interaction between the mediator and the participants, those 60 aforementioned vocabulary items were presented dynamically in DA sessions, that is, the mediator provide the participants with different levels of help ranging from the most implicit to the most explicit in order to help them develop their vocabulary knowledge.

In each unit of the text books a number of vocabulary items have been presented. According to the results of the vocabulary test (VKS), some of these items were unknown for the participants. The mediator presented all the vocabulary items (known and unknown) and through collaborating with the participants tried to elicit the meaning of the items. New words usually were presented accompanying a picture in the text books. At the first step the mediator tried to elicit the meaning from the participants through attracting their attention to the picture of the vocabulary item. If the participants' responses were not correct the mediator asked them to verify their responses. With the passage of time the participants were realized that whenever the mediator asks them to verify their response there is a possibility of making a mistake in the part of them.

If the previous presented levels of help couldn't help the participants in providing the meaning, the mediator may want them to guess the meaning of the item in question through the context. For example, the item 'run' has been presented accompanying a picture which shows a happy girl which is running in a park. One of the participants mistakenly provided the Persian equivalent of 'happy' to be the correct answer. The mediator wanted him to verify his answer. After failing to provide the correct response, the mediator arrested his attention to the different activities that have been done in the park like; jumping and climbing. The mediator explained that the happiness of the girl in the picture was due to doing an activity. The participant guessed the meaning of the item 'run' correctly based on the clues which the mediator and the pictures provided him with.

As it has been mentioned earlier, each unit of the text books was focused on presenting a group of items which have been related in some senses. In such a case the mediator tried to attract the participants' attention to the logical relation between the known items and unknown ones. For example, a unit of the text book presented the vocabulary items with regard to the different parts of the human body. A participant may suffer from difficulty in providing the meaning of the item 'finger'. In this occasion the mediator tried to arrest the participant's attention to the other presented items like; 'legs' and 'arms' in order to impulse the participant to infer a logical link between these items an 'finger'.

Providing synonyms or antonyms was one of the levels of help which the mediator provided the participants with. Whenever the most implicit levels of help could not bring about a success in providing the required vocabulary item, the mediator might have provided a synonym or antonym wherever possible. For example, if the participants could not provide the meaning of the item 'sad' the mediator might have told them the antonym of this item is 'happy'.

On some occasions where the participants failed to provide the required word despite of presenting different levels of help by the mediator, showing them a flash card was of great help. In such situations where there was no picture to guide the participants, making use of flash cards helped them to provide the required vocabulary item. While checking the spelling of the items, seeing the picture of the item in question helped the participants to provide the missing letter.

When less explicit levels of help failed to aid the participants to provide the required word, the mediator provided more explicit levels of help. One of the most explicit levels of help which the mediator offered the participants during DA sessions was providing the Persian translation of the stem. In these occasions the mediator translated all the items or sentences into Persian except the word in question.

There is always the possibility that despite of offering different levels of help, ranging from the most implicit to the most explicit, the participants could not provide the desirable response. In such occasions the mediator himself provided the required word and if it was necessary he added some extra information about the word like its pronunciation.

Although the aim of DA sessions was to promote the participants' vocabulary knowledge, but other language skills were taught more or less. As language skills are interrelated, working on each of them in isolation may not bring about resounding success. So, some grammatical points have been worked on along with vocabulary instructions.

TR sessions were implemented into instruction sessions in order to determine participants' growth with regard to their ZPD, after holding DA sessions. Within TR sessions each new vocabulary item has been

evaluated 2 times in order to find out participants' mastery of those items. These TR sessions were held two weeks later than the last DA session. This two-week time interval has been implemented in order to make sure that the participants can make use of new vocabulary items in new contexts. There was a week interval between administrations of two TR sessions. Each TR session was comprised of two separate sessions and 30 items were presented in each session. These two separate sessions were held at two separate days. According to Ableeva (2010), the purpose of TR sessions "is to uncover the learner's ability to use (or transfer) newly acquired knowledge to 'novel problems' or contexts" (p. 168). The different levels of help which the mediator offered during TR sessions were similar to those of DA sessions. The only difference between DA and TR sessions was that the tasks of TR sessions were relatively more difficult in comparison with DA sessions.

The mediation typology which emerged out of collaborative interaction between the mediator and the learners in DA sessions was summarized in table 1. According to Aljaafreh and Lantolf's Regulatory Scale (1994), the mediation moves begins with the most implicit forms of mediation and move towards the most explicit forms of mediation.

Table 1 Mediation Typology

- 1. Request for reading the stem or looking at the picture carefully.
- 2. Request for verification (Are you sure it is the correct answer?).
- 3. Asking the participants to guess the meaning of the word from the context.
- 4. Specify the word family which the unknown word is belong to or introducing another known word(s) from that word family.
- 5. Introducing synonym(s) or antonym(s).
- 6. Using flash cards.
- 7. Reading aloud the stem or offering the Persian translation of the stem.
- 8. Providing the correct response (if the 7 previous stages could not lead the learners to the correct answer).
- 9.9. Providing explanation about the word.

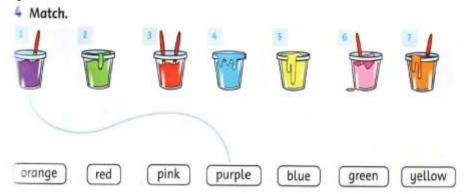
It is worth mentioning that, this mediation typology has been emerged out of data analysis and it does not include a prescriptive hierarchy of mediational moves. The mediation begins with the most implicit moves (request for reading the stem carefully) and moves toward the most explicit moves (providing the correct response). Through a dialogic interaction between the mediator and the participants, the mediator made use of all or some of these mediation moves during DA and TR sessions in order to promote the participants' learning with regard

to unknown vocabulary items. The following samples have been chosen to represent some kinds of mediation (Table 1) which have been offered by the mediator during DR and TR sessions.

-Request for reading the stem or looking at the picture carefully

This technique often has been used as the first resort to help participants in accomplishing the activities. In this phase the mediator asks the participants to look at the accompanying picture of the presented item in order to provide the word meaning. Sometimes due to factors like fatigue, lack of concentration, and carelessness, the participants couldn't provide the appropriate word or provided erroneous responses. In these cases, the mediator asked the participants to read the question stem once more time, but this time with more concentration. The following excerpt encompass a dialogue between the mediator and one of the participants (F2) through which the mediator helps the participant to provide the correct answer.

Episode 1 (DA1):



M: Ok, let's do the next activity.

F2: Yes, one two three four.

M: Look at the stem please

F2: Oh, I made a mistake; I had to match the colors with the pictures

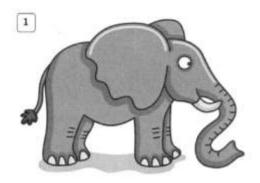
M: It's ok. Yes, you right

-Introducing synonym(s) or antonym(s).

This form of mediation was generally used when the item in question was an abstract word. The mediator provided synonym or antonym (or both) in order to help the participants to find the correct word. The following excerpt demonstrates such a situation.

Episode 2 (TR2):

2 Look and write.



The elephant's ears are big .

The elephant's nose is

(the participant filled the blank with the word 'little')

M: I think 'little' is not an appropriate word here, can you offer another word?

M2: Small?

M: Ok, let see, the word that can fill this blank is the opposite of the word 'short'

M2: Long? M: That's it

All the mediation moves (Table 3) offered different level of help by the mediator. Participants' responses to these different levels of help have been summarized in Table 2.

Table 2 *Learner Reciprocity Typology*

- 1. Unresponsiveness
- 2. Respond incorrectly
- 3. Request for verification
- 4. Request for more help
- 5. Problem solved
- 6. Reject mediator's assistance

Lidz (1991) offered the term 'learner reciprocity' in order to refer to the contributions of the learners to the performance. Poehner (2005) writes that,

Just as the mediation typology was organized according to the principle of abstract to concrete, capturing the degree of explicitness of each mediational move, the reciprocity typology is arranged according to extent to which each move represents the learners' ability to take on responsibility for their performance. (p. 183)

According to the data analysis, 6 different levels of reciprocity have been revealed (Table 2). These different levels of reciprocity have been ordered with regard to the learners' ability to take on responsibility for their performance. That is, interacting at a higher level reveals that, the learner can take more responsibility for his/her performance. Monitoring the learners' dialogic interaction with the mediator and contemplation of the patterns of mediation which emerges out of this interaction is of utmost importance. "Taking into consideration learners' interactions with the mediator and how these change over time is an important part of tracking development" (Poehner, 2005, p. 184). According to DA literature, the learners who require a flash card in order to present the expected word at one point but a request for verification at another, or who cannot provide the expected word at one point but can provide the expected word independently at another, these learners have developed (Ableeva, 2010; Poehner, 2005).

The following excerpts have been chosen out of the transcriptions in order to determine the participants' reciprocity with regard to different levels of help.

-Request for verification

Sometimes participants request mediator's verification in response to their attempts to overcome a problem. In such instances, the participants may ask the mediator whether their responses are correct or not. This usually happens when the participants are not sure about the correctness of their responses. The following excerpt shows such a situation.

Episode 3 (TR1):

3 Read again. Circle the correct words.

1 The beach is long / little.

2 On the beach you can play ice cream / bat and ball.

M: As you see you have to choose between two options

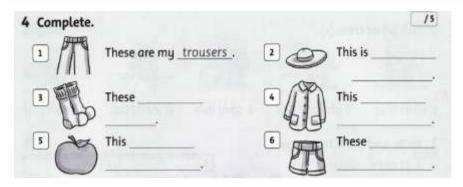
F3: bat and ball, yes?

M: That's right

-Request for more help

In some occasions the participants claim more help in the part of the mediator. In this case the mediator offers some helps but the participants need more in order to be able to fulfill the required tasks. The following excerpt shows such a situation.

Episode 4 (TR1):



(the participant had to complete the third item but she hesitated)

M2: Shoes

M: Ok, look at the picture again M2: They're shoes, aren't they? M: No, they aren't, look carefully

M2: Well, what are they?

M: We put on them but they aren't shoes

M2: Well?

M: We put on them before putting on our shoes

M2: Aha! They're socks

M: Yes!

4. Results and Discussion

In this study the data has been analyzed from a microgenetic perspective and thematic analysis has been used as the general methodological framework for data analysis. Boyatzis (1998) indicates that thematic analysis is a method in qualitative research which can be used for revealing patterns and themes in a particular phenomenon. The reason behind choosing microgenetic analysis was that it allows tracking of learner's development over time (Ableeva, 2010). "In this kind of finegrained analysis, researchers closely observe people at densely spaced time intervals to view minute processes that could be obscured during less-frequent and less-detailed assessments" (Pellegrino, Chudowsky, & Glaser, 2001, p. 100). Thematic analysis is used in qualitative research and focuses on examining themes within data (Daly, Kellehear, & Gliksman, 1997). This method emphasizes organization and rich description of the data set. Thematic analysis goes beyond simply counting phrases or words in a text and moves on to identifying implicit and explicit ideas within the data (Braun & Clarke, 2006).

In a nutshell, the data analysis consists of counting the number of mediation moves which the mediator made use of during DA and TR sessions in order to help the participants to accomplish the assigned tasks or activities through using correct vocabulary items. In another word the pattern of participants' responsiveness to different levels of help which have been offered by the mediator and the participants' reciprocity to these levels of help determined the participants' growth within their ZPD.

In order to answer the research question, the DA and TR sessions have to be analyzed. As it has been mentioned earlier, all the DA and TR sessions were audio taped. The transcriptions of tape recordings have been limited to Language Related Episodes (LREs). LRE has been described as "any part of a dialogue where students talk about the language they are producing, question their language use, or other- or self-correct their language production" (Swain, 2001, p. 287). Birjandi and Ebadi (2012) describe LRE as those parts of the dialogue which "contain linguistic problems that provide a record of the observation of moment-by-moment mediation within the ZPD" (p. 37). With respect to Poehner (2005) the LREs have been contemplated in order to evaluate the specific moves made by the mediator and the learners during their collaborations.

Through careful study of the transcripts certain recurring patterns of interaction between the mediator and the learners emerged. A fine grained contemplation of the transcriptions showed that, there are various types of moves that the learners go through within TR sessions. "It was argued that some types of mediation were more explicit than others, and that the degree of explicitness required is indicative of how close the learners are to independently controlling the relevant linguistic features of the L2" (Poehner, 2005, p. 200). So, the learners who need implicit mediation (e.g., asking the participants to guess the meaning of the word from the context) are more close to development in their ZPD comparing with those who need more explicit mediations (e.g., using flash cards).

The results of the transcriptions analysis have been summarized in tables 4.2 and 4.3. Table 4.2 represents the mediational moves during DA and TR sessions and Table 4.3 shows reciprocating moves during DA and TR sessions.

Table 3
Mediational Moves During DA and TR Session

Category	M1	M2				М3				F1		F2				F3			
	A A R R 1 2 1 2	A A R 1 2 1	T R2	DA 1	DA 2	TR 1	TR 2	DA 1	DA 2	T R1	TR 2	D A1	DA 2	T R1	TR 2	DA 1	DA 2	TR 1	TR 2
Mediation	7 2 7	9 1 4	6	23	16	11	0	31	20	13	1	21	15	8	0	7	16	11	2
Request for reading the stem or looking at the picture carefully			1	3	1	3	0	3	2	3	0	2	2	2	0	4	4	2	1
Request for verification Asking the participants			1	2	2	1	0	2	2	1	0	2	0	0	0	2	1	0	0
to guess the meaning of the word from the context			1	3	2	4	0	4	5	2	1	4	4	2	0	5	2	3	1
Specify the word family which the unknown word is belong to or introducing another known word(s) from that word family			1	5	3	1	0	5	3	3	0	4	5	1	0	3	2	3	0
Introducing synonym(s)			2	4	3	2	0	4	1	2	0	4	2	2	0	4	4	3	0
or antonym(s) Using flash cards			0	2	1	0	0	2	1	0	0	2	1	0	0	2	1	0	0
Reading aloud the stem or offering the Persian			0	1	1	0	0	2	1	0	0	1	1	0	0	3	1	0	0
translation of the stem Providing the correct response			0	3	1	0	0	6	4	2	0	2	0	0	0	4	1	0	0
Providing explanation about the word			0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0

According to Poehner (2005, p. 209), "a learner who requires fewer interventions or less explicit mediation at time 2 than at time 1 can be said to have developed". As it can be inferred from the analysis of the mediation moves, the participants have developed during DA and TR sessions because the number of offered mediational moves has been decreased with the passage of time.

A fine grained analysis of the results shows that the participants' use of explicit mediational moves decreased and they made use of more implicit mediational moves with the passage of time. For example, in DA1 8 explicit mediational moves (providing the correct response) was offered to M1, this number reduced to 5, 2, and 1 in DA2, TR1, and TR2 respectively. To the contrary his use of implicit mediatonal moves (request for reading the stem or looking at the picture carefully) didn't follow such a model (does not decreased with a steep slope). As it can be discovered from Table 1 he took benefit from 4 implicit mediational moves in DA1, 6 moves in DA2, 3 moves in TR1, and 1 move in TR2. In a nutshell, it can be claimed that, the participants' independent performance had improved, and as a result they required less assistance from the mediator.

Table 4
Reciprocating Moves During DA and TR Session

Category	M1 M2						M3					F1				F2				F3				
	D	D	T	T	D	D	T	T	D	D	T	T	D	D	T	T	D	D	T	T	D	D	T	T
	A1	A2	R 1	R 2	A1	A2	R 1	R 2	A1	A2	R 1	R 2	A1	A2	R 1	R 2	A 1	A2	R 1	R 2	A1	A2	R 1	R 2
Participant response	31	24	16	7	22	17	9	4	19	10	8	4	28	26	14	9	26	21	13	3	29	15	12	7
Unresponsi veness	12	6	2	0	4	3	2	0	6	2	2	0	6	5	0	0	6	2	0	0	8	5	2	0
Respond incorrectly	8	4	2	1	4	3	1	1	4	2	1	0	5	4	2	1	5	2	1	0	7	3	2	1
Request for verification	4	4	2	1	3	2	1	0	3	1	0	1	4	4	1	1	3	3	1	1	4	1	1	1
Request for more help	6	5	3	2	3	3	2	1	3	2	2	1	6	5	3	2	4	5	4	1	4	3	3	1
Problem solved	1	5	7	2	8	6	2	2	3	3	2	1	7	8	8	5	8	6	5	0	6	3	4	3
Reject mediator's assistance	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	3	2	1	0	0	0	1

The reciprocity typology is ordered according to extent to which each move demonstrates the learners' ability to take on responsibility for their performance. "Just as the mediation typology was arranged according to explicitness, reciprocity was described in terms of lowest to highest, referring to the extent to which the learners took responsibility for their performance" (Poehner, 2005, p. 199). For example, request for verification is a higher level of reciprocity than unresponsiveness because the former represents that the participants at least understood the mediation even if they are not able to use it independently to correct an error. Similarly, request for more help is at a higher level than respond incorrectly because it indicates that the participants are aware of their lack of knowledge to answer the questions (or complete the tasks) and so they claimed more assistance in the part of the mediator. Thus, these moves continue to the highest levels where the participants are able to answer the questions independently. At this point they even rejected mediator's help. Table 3 shows the reciprocating moves during DA and TR sessions.

An overview of the Table 2 shows that the participants' reciprocating moves were generally at a higher level in TR sessions comparing with DA sessions (i.e., 'request for more help', 'problem solved'). The participants showed constant improvement across the four mediated assessments with regard to their level of reciprocity. All of them performed relatively independently during TR2. They required very little interaction with the mediator and they demonstrated a high level of reciprocity. So it can be concluded that the participants have been developed within their ZPD. The results of the study indicated that using DA procedure can enhance the development of vocabulary knowledge among EFL learners.

5. Conclusion and Implications

Although efforts have been made to minimize the flaws of this study, the limitation with regard to the qualitative nature of this study still remains (Richards, 2003). The generalizability of the findings may be limited because the mediation is dependent upon the context and quality of the interaction between mediator and the learner (Kozulin & Garb, 2001, cited in Anton, 2003; Lavelli, Pantoja, Hsu, Messinger, & Fogel, 2005), so, there exists a possibility that the research yield different results in different circumstances. The small size of the sample may be considered as a potential limit of this study. Another shortcoming of this study is that, the results of DA and TR sessions cannot be reported in a manner typically expected of classroom teachers.

Further studies are needed to be done regarding the following research topics. Investigating the effects of using cake format DA procedures on the EFL intermediate/advanced learners' vocabulary knowledge development is a

promising research topic. In addition, investigating the effects of using DA procedures on the EFL learners' speaking skill development is highly fruitful.

The findings of this study may provide new and important insights into the theoretical framework of vocabulary learning and teaching and it hopes to alleviate some burden of L2 vocabulary learning. To the best of my knowledge there is no qualitative study on using interactionist DA in developing vocabulary knowledge to the date. This study provides a framework for undertaking interactionist research on DA. This study can help researchers in designing DA studies and implementing mediation during a DA procedure especially with regard to vocabulary development.

DA can help both learners and teachers in the process of language learning and teaching. Through mediated Language Experience (MLE), the teachers can help learners to overcome problems. Teachers can benefit from mediation and reciprocity patterns which have been emerged out of this study, in vocabulary teaching activities. That is, they can make use of different levels of help as prompts to help the learners to overcome problems. It implies that, through interacting with the learners, teachers give feedback to help the learners identify their errors and correct them.

In sum, teachers can provide learners with a scaffold (Wood, Bruner & Ross 1976) that may allow them to improve subsequent performance. Using DA procedures helps teachers to be more tolerant with regard to committing errors in the part of the learners. According to Lantolf and Poehner (2004), DA can be used both as a method of providing a picture of an individual's abilities and as a method of developing those abilities through some kind of mediation. DA can assess and promotes development at the same time. Through implementing the results of DA, teachers can adjust their instruction to learners' developmental needs.

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