

Concurrent Group-Dynamic Assessment of Intermediate EFL Learners' Receptive and Productive Vocabulary Size

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ABSTRACT: Although research studies on dynamic assessment (DA) yielded promising results to the field of language teaching, scant research attention has been paid to examining the effectiveness of group dynamic assessment (G-DA) in relation to vocabulary development. To this effect, the present mixed-methods study was designed to inspect the potential of concurrent G-DA in enlarging receptive and productive vocabulary size of 56 Iranian intermediate EFL learners. The study used two modalities: the control group, which was taught the selected lexical items through traditional procedures such as using word lists; and the experimental group, which was offered group-based supportive prompts for doing vocabulary exercises within the G-DA framework. The results of a series of independent-samples t-tests indicated the significant effect of G-DA in enhancing receptive and productive vocabulary size of EFL learners. The qualitative data underscored the role of group mediation in increasing learners' motivation to increase vocabulary uptake within the G-DA framework and maintaining their positive attitude toward G-DA.

Key words: dynamic assessment, group-dynamic assessment, vocabulary knowledge, receptive vocabulary size, productive vocabulary size.

Evaluación dinámica de grupo concurrente del tamaño del vocabulario receptivo y productivo de los estudiantes EFL intermedios.

RESUMEN: Aunque los estudios de investigación sobre la valoración dinámica (DA) arrojaron resultados prometedores en el campo de la enseñanza de idiomas, se ha prestado escasa atención al examen de la eficacia de la valoración dinámica de grupos (G-DA) en relación con el desarrollo del vocabulario. A tal efecto, el presente estudio de método mixto se diseñó para inspeccionar el potencial del G-DA concurrente para ampliar el tamaño del vocabulario receptivo y productivo de 56 estudiantes iraníes con nivel intermedio de inglés como lengua extranjera. El estudio utilizó dos modalidades: el grupo de control, al que se le enseñaron los vocabularios seleccionados mediante procedimientos tradicionales como el uso de lista de palabras; y el grupo experimental que recibió apoyo grupal para hacer ejercicios de vocabulario dentro del marco G-DA. Los resultados de una serie de pruebas t de muestras independientes indicaron el efecto significativo de G-DA en la mejora del tamaño del vocabulario receptivo y productivo de los estudiantes de inglés como lengua extranjera. Los datos cualitativos enfatizaron el papel de la mediación grupal en mejorar la motivación del

alumnado al incrementar la adquisición del vocabulario en el marco de GDA y mantener su actitud positiva hacia el G-DA.

Palabras clave: evaluación dinámica, evaluación dinámica de grupo, conocimiento de vocabulario, amplitud del vocabulario receptivo, amplitud del vocabulario productivo.

1. INTRODUCTION

As a way to unify teaching and assessment, dynamic assessment (DA) has recently been the focus of attention by many researchers (Davin, 2013; Davin & Herazo, 2020). DA is grounded in Vygotsky's (1978) Sociocultural Theory (SCT) of Mind which argues that learning is a social process. In particular, DA argues that instruction and assessment should not be seen as separately distinct entities. In fact, as noted by Poehner (2008), the dialectic integration of teaching and assessment is based on Vygotsky's notion of zone of proximal development (ZPD).

Vygotsky (1978) termed the distance between an individual's current independent problem-solving and assisted performance as ZPD. Assistance can be offered through mediation by a teacher or more experienced peers to help individual learners gain autonomy in handling more challenging linguistic tasks (Davin & Herazo, 2020; Poehner, 2008). Poehner (2009) asserts that it is less feasible for a teacher to have individual interactions with all learners in classroom settings. Regarding the possibility of developing a group ZPD (Vygotsky, 1998), Poehner (2009) introduced the notion of group-dynamic assessment (G-DA) as a socially mediational tool to facilitate interaction within a classroom context. Henceforth, G-DA provides learners with mediational interactions to conceptualize not only individuals' ZPDs but also a group ZPD (Poehner, 2009). Thus, G-DA can have a considerable potential for developing a group ZPD to facilitate vocabulary learning. Nonetheless, group-based DA is still in its early stages (Alavi et al., 2011).

Measuring vocabulary size performs a diagnostic function informing what further steps should be taken to teach new words (Nation, 2011). However, assessing learners' receptive and productive vocabulary size based on the principles of G-DA has received scant attention, particularly in an English as a foreign language (EFL) context. As G-DA helps language teachers adapt their classroom instruction to their learners' emergent abilities (Poehner, 2009), it may improve their word learning rate to foster the language learning process. Recently, Bahramlou and Esmaeili (2019) have noted the potential value of G-DA to facilitate vocabulary learning. Yet, further empirical data is needed to explore whether vocabulary development can be achieved within the G-DA framework. Additionally, investigating learners' attitudes towards vocabulary development within the G-DA framework can inform teachers how to structure classroom interactions with the aim of fostering vocabulary learning. Student-teacher interactions form an important part of DA methodology (Hidri, 2019). In addition, Alemi et al. (2019) highlighted the need for conducting future qualitative studies to explore learners' attitudes towards concurrent G-DA and their response to the graduated feedback to understand their reciprocity with the mediator and their peers. Therefore, this study aims to investigate the role of concurrent G-DA of vocabulary knowledge in developing EFL learners' vocabulary gains. Moreover, this study seeks to investigate learners' attitudes to G-DA of vocabulary knowledge.

2. LITERATURE REVIEW

2.1. Theoretical underpinnings of G-DA

The theoretical underpinnings of DA suggest that learners' cognition can be modified through participating in socially-mediated activities (Davin & Herazo, 2020). Teaching, as a socially-embedded activity, brings the opportunity for developing learners' cognition within their ZPD. The ZPD allows us "to delineate the child's immediate future and his dynamic developmental state" (Vygotsky, 1978, p. 87). DA is defined as the integration of assessment and instruction into a unified activity with the aim of promoting learner development (Poehner, 2008). In DA, teachers can assess learners emerging abilities within their ZPD and provide tuned prompts to develop those specific abilities through cognitive or metacognitive mediation (Davin & Herazo, 2020).

A teacher's interaction with an individual is naturally more controllable than dealing with a group of learners. Due to limitations in time, resources, and support for each individual, teachers often cannot deliver individual interactions in classroom settings (Davin & Donato, 2013). That is why Poehner (2009) introduced the notion of G-DA, which includes the same principles of DA. However, G-DA differs from DA in terms of the provision of group-based mediation within the classroom context. In G-DA, the teacher broadens the focus of mediational intervention to developing a group ZPD by foregrounding supportive prompts within the scope of a group of learners (Poehner, 2009). Thus, in G-DA, the collaborative mediation has been enacted to engage the entire class in social interactions (Poehner, 2009).

Furthermore, Poehner (2009) provided a twofold classification of G-DA; concurrent and cumulative. The former refers to a situation in which the teacher interacts dialogically with the entire group. Simultaneously, primary and secondary interactants are engaged to set the stage for the following contributions. In the latter approach, learners "take turns engaging directly as primary interactants with the teacher, with the understanding that each subsequent one-to-one exchange will have the advantage of building on earlier interactions that the class witnessed" (Poehner, 2009, p. 477). It is time-consuming and difficult to mediate between the learner and the learning task (Bahramlou & Esmaeili, 2019) in DA. That is why Poehner (2009) regarded G-DA as an effective alternative to traditional DA.

2.2. G-DA in language learning studies

Exploring the possibility of constructing a group ZPD, Gibbons (2003) investigated how teachers can support their English as a Second Language (ESL) students in developing spoken language to control the written curriculum-based registers. After qualitative data analysis, Gibbons (2003) found that the teacher's intervention to the whole class yielded a remarkable progress in learners' employment of academic terminology. Following a pre-test-mediation-post-test approach to DA, Kozulin and Garb (2002) administered an EFL test of reading to a group of immigrant students. The findings revealed a significant improvement in learners' performance in reading test and led Kozulin and Garb (2002) to explicitly assert the potential of a group of learners to make the best use of mediation.

Subsequently, Davin (2011) investigated the implementation of a group-based DA program in a Spanish language classroom and figured out that all learners benefited from

peer-mediation as their dependency to mediation decreased gradually. In another group-based interventionist DA project, Davin and Donato (2013) studied 17 young L2 Spanish learners in small groups to examine whether primary learners mediated their classmates in doing an intended writing task. Although learners' establishment of various mediational moves were not ideally appropriate, the process of peer scaffolding appeared effective. Because peer scaffolding resulted in the learning of specific procedures needed for successful completion of the intended task, Davin and Donato (2013) concluded that working in small groups might offer learners the possibility of receiving extra support.

In the context of Iran, Alavi et al. (2011) conducted a longitudinal study to examine the applicability of G-DA in detecting the mediational strategies for teaching listening to a group of 15 undergraduate EFL university students. They reported a sharp decline in the use of both implicit and explicit mediational assistance at the post-test phase which was a sign of their growing autonomy and maturing self-regulation. In addition, the process of mediating a group of learners promoted the group ZPD because novice learners were encouraged to take part in classroom discussions. The authors considered this increased tendency towards English discussions as a linguistic benefit. Given that vocabulary knowledge is one of the important, albeit difficult, areas of language learning (Schmitt, 2010), it would be beneficial to help language learners have a positive attitude towards vocabulary learning.

2.3. Vocabulary knowledge

Vocabulary knowledge is an integral component of foreign language learning (Kavanoz & Varol, 2019). A great deal of research has recently explored different aspects of vocabulary knowledge (Fernández Dobao, 2014; González-Fernández & Schmitt, 2020), among which undivided attention has been given to assessing vocabulary size (Amirian & Azari Noughabi, 2018; Schmitt et al., 2020; Kavanoz & Varol, 2019). Vocabulary size is "an important aspect of language knowledge that is essential for effective use of the language" (Nguyen & Nation, 2011, p. 86) and assessing it has been understood to help design language programs. Moreover, researchers have continually been concerned with evaluating the rate of vocabulary development to diagnose learners' problems in vocabulary learning (Nation & Coxhead, 2014) and design appropriate materials for vocabulary enhancement (Beglar, 2010).

In spite of developments in the field of vocabulary assessment, assessing the vocabulary knowledge of EFL learners based on the tenets of G-DA has been less explored. The only exception is the study of Bahramlou and Esmaeili (2019) who investigated the effect of G-DA on word learning through lexical inferencing among 45 intermediate EFL learners in Iran. The participants, assigned in three groups, read six texts written for intermediate EFL learners and then answered comprehension questions for each text. The results indicated that the group who engaged in lexical inferencing of target words (one vocabulary exercise for each word) outperformed the other groups who did not receive a combination of G-DA and vocabulary exercises. Bahramlou and Esmaeili (2019) also found that G-DA and vocabulary exercises were equally efficient for enhancing EFL learners' word learning through lexical inferencing. Although their study had promising results, there is still the need to conduct further studies on G-DA of vocabulary knowledge.

Encouraging learners to adopt a positive attitude towards vocabulary learning can be of importance. Learners' attitude has always been a concerning issue in vocabulary assessment

(Nation, 2007). Previous studies on learners' attitudes towards vocabulary learning have mainly focused on the use of technology. Learners' positive attitude towards vocabulary learning via computer technology has been well-documented in the literature (Esit, 2011). Yet, investigating learners' attitudes towards alternative assessment procedures such as concurrent G-DA can contribute to the fields of language teaching and language assessment.

In spite of the positive role of G-DA in enhancing EFL learners' lexical inferencing (Bahramlou & Esmaeili, 2019), scant attention has been paid to unveil whether G-DA can facilitate vocabulary development. In addition, reviewing the literature indicated that investigating learners' viewpoints about G-DA has remained an untouched area of research. It would be promising to recognize how learners feel about G-DA intervention in order to inform EFL teachers about effective alternatives to traditional assessment practices. Therefore, the current study seeks to explore whether concurrent G-DA exerts any influence on the vocabulary size of intermediate learners in an EFL context. This study is guided by the following research questions:

1. Does concurrent G-DA have a significant effect on the receptive/productive vocabulary size of intermediate EFL learners?
2. What are learners' attitudes toward the role of concurrent G-DA in vocabulary development?

3. METHOD

3.1. Participants

This study was conducted at a private English Language Institute in an Eastern Province in Iran. A total of 56 intermediate EFL learners whose age ranged from 14 to 18 participated in the study. At the time of conducting the study, they were evaluated as intermediate-level learners based on the placement test carried out in the institute. In effect, the participants were selected randomly out of 129 students of the same level. All the participants had the experience of at least six years of studying English as a school subject at state schools and four years of English learning at language institutes. They were assigned to two groups; experimental ($N= 28$) and control ($N= 28$), while each group contained 14 males and 14 females.

English is taught at public and private sectors in the context of Iran. At public schools, secondary and high school students have an English language course (known as Prospect and Vision) which is compulsory for all the students. The main focus of the English course is to enhance learners' communicative competence. In addition, the students who can afford the payment fee can attend English classes at private language institutes. The materials, evaluation norms, and instructional practices at public schools are different from private language institutes that put greater emphasis on improving learners' conversational skills and vocabulary learning.

The current research follows a triangulation mixed-methods design in which the interpretation of the findings is based on both quantitative and qualitative data (Creswell & Clark, 2017). Collecting and analysing qualitative data through focus-group interviews in this

study will be helpful for contextualizing and enriching the quantitative findings (Ivankova & Creswell, 2009). Five learners from the experimental group were purposefully selected through homogeneous sampling (Dörnyei, 2008) to delve more deeply into their experience of concurrent G-DA program.

3.2. Instruments

3.2.1. *Bilingual vocabulary size test*

For the purpose of the present study, Persian Bilingual Vocabulary Size Test was used. The test contains 100 multiple-choice items with 10 items from each 1000-word family level. In the bilingual versions, items are translated into L1 allowing less-proficient learners to participate (Elgort, 2013). The bilingual version is based on the original Vocabulary Size Test (VST), developed by Nation and Beglar (2007). VST, whether in monolingual or bilingual format, is respected as one of the most recent and reliable instruments in measuring total written receptive vocabulary size of learners of different proficiency levels (Beglar, 2010; Elgort, 2013; Nguyen & Nation, 2011). As stated by Karami (2012), Persian bilingual version of VST is a reliable instrument for measuring EFL learners' receptive vocabulary size.

3.2.2. *Lex30*

To examine the overall development of learners' productive vocabulary size, Lex30 was used. Introduced by Meara and Fitzpatrick (2000), Lex30 is regarded as a word association test which shares some of the benefits of free and context-limited productive tests. Lex30, as stated by Meara and Fitzpatrick (2000), employs a lenient scoring procedure and opens up an opportunity for triggering a large number of vocabulary items. There is credible evidence that supports Lex30 as a reliable and valid measure of productive vocabulary size (Fitzpatrick & Clenton, 2010; Walters, 2012) which has the potential to function as a diagnostic tool (Fitzpatrick & Clenton, 2010).

3.2.3. *Focus-group interviews.*

To explore learners' attitudes towards the role of G-DA in developing their vocabulary size, focus-group interviews were conducted. According to Winke (2017), focus groups are used for robust data collection because they are purposefully targeted at revealing participants' attitudes and perceptions. In this study, through focus-group interview, participants were asked to express their viewpoints about the concurrent G-DA program they had experienced. In addition, the focus-group interview lets us gather data in order to identify how the participants felt about the role of concurrent G-DA programs in developing their vocabulary knowledge.

3.3.3. *Procedures*

Initially, participants' written consent was obtained for carrying out the study. At pre-test phase, Oxford Quick Placement Test (OQPT), Lex30, and Persian bilingual VST were administered at separate sessions. OQPT was used to confirm the homogeneity of learners

of both control and treatment groups. This test of language proficiency encompasses two main sections to evaluate vocabulary, grammar, and reading comprehension. In this study, learners were asked to answer only the first part (40 items). The reliability index of the OQPT calculated through Cronbach's alpha was 0.84 which was acceptable for the purpose of the current study.

As form-meaning tests of vocabulary (such as VST) do not indicate whether learners are familiar with productive aspects of words, Lex30 was used as a battery of assessing learners' productive vocabulary size. The results of learners' performance were then carefully analysed to establish a content framework for intervention. This is similar to what Kozulin and Garb (2002) did for their DA project on reading.

Analysing the frequency of responses revealed that learners did not respond correctly to the VST items which pertained to less frequent word family bands (e.g., 5000, 6000, 7000, 8000, and 9000 word-families). Given that G-DA has to "engage the group in an activity that no individual is able to complete independently" (Poehner, 2009, p.477), 25 items (5 from each frequency band), which had not been answered correctly by any of the learners, were selected for vocabulary tasks in both groups. In addition, the items of VST did not provide sufficient context which made it less possible for learners to do the designed tasks individually. Therefore, the experimental group received the G-DA mediation to do the designed vocabulary tasks. As well, in the case of Lex30 which has stimuli words (from the highest frequency bands) and no item or stem, enhancing productive vocabulary size and learning words from lower-frequency bands is a difficult task for learners. The G-DA mediation engaged the experimental group in doing productive vocabulary activities that required the learners to receive prompts and peer scaffolding.

Next, the teacher designed a series of vocabulary tasks (in multiple-choice format) with the target words and asked learners to do the tasks. When the learners could not do the tasks individually, similar to the procedure followed by Davin (2013), the teacher provided the mediation through a continuum of prompts (from the most implicit to the most explicit) and engaged learners as primary and secondary interactants while they were reformulating an answer to an at-hand vocabulary task. In intervening sessions, 30 minutes of the class time was devoted to concurrent G-DA mediation. The group-based mediational strategies used by the teacher were based on the typology given by Ableeva (2010) as represented in Figure 1.

To provide prompt within learners' ZPD, the teacher attempted to offer graduated and contingent feedback (Poehner, 2008). In effect, graduated feedback provides learners with "... the minimum level of guidance" they require "to successfully perform a given task" (Aljaafreh & Lantolf, 1994, p. 468) and the contingent feedback should be provided "when it is needed and withdrawn as soon as the novice shows signs of self-control and ability to function independently" (Aljaafreh & Lantolf, 1994, p. 486).

Providing prompts within the framework of G-DA was intended to promote a group ZPD in the class in order to facilitate learners' development of receptive and productive vocabulary size. Moreover, the prompts motivate the learners to reflect on linguistic productions and recheck linguistic concepts which lead to the development of their "self-regulation of language use" (Davin & Herazo, 2020, p. 200). When one learner made an error, a peer interacted cooperatively to correct the earlier inaccurate performance. Notably, toward the end of the project, the difficulty level of intended vocabulary tasks increased gradually as the items were selected from less frequent bands.

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1. Accepting Response
 2. Structuring the text
 3. Replay of a passage
 4. Asking the Words
 5. Identifying a Problem Area
 6. Metalinguistic Clues
 7. Offering a Choice
 8. Translation
 9. Providing a Correct Pattern
 10. Providing an Explicit Explanation
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Figure 1. Typologies of mediational strategies (Ableeva, 2010, p. 260).

The following protocol shows an example of a concurrent G-DA discussion where the learners' recognition of the word "deficit" is evaluated while they were doing a related vocabulary task.

S1: ... I think option "b" (went down a lot in value) is correct.

T: (the teacher thinks how to mediate) Are you sure about your choice?

S1: Mm... To be honest, I doubt.

T: OK. Then, why don't you look at the word "company" in the sentence?

S2: Is it related to company?

T: I guess so.

S2: Thus, "deficit" is related to finance. But it should not be something positive.

T: What do you mean? Is it a negative word?

S3: Yeah. Because between the sentences, we have the word "however".

T: Such a clever student! Then, the company ... (pause)

S4: ... is not in a good situation. Maybe because they do not have enough money.

S2: That's it.

S1: Then. Option "a" (spent a lot more money than it earned) is correct, isn't it?

T: Perfect. That is "deficit". It's lack of required money. When you want to answer such an item, try to look at the whole sentence, especially the connectors such as "however", "although", and "nevertheless". It would be helpful.

As shown, when one student made a mistake in answering the first question (Turn 1), the mediator acted in a way to make the learner hesitate. Since it did not work, the mediator tried to offer a more explicit prompt (Turn 4) by elaborating the text and highlighting the

immediate context. In concurrent G-DA, students' interaction would be helpful for each other (Turn 7). After the instructor had offered a more explicit hint (Turn 8), another student, as a secondary recipient of mediation, interacted positively (Turn 9). This pattern was repeated in Turn 11 where another student benefited from secondary mediation. Next, the first student self-corrected himself (Turn 13) by choosing option "a". Finally, the instructor confirmed the first student's answer and explicated in detail how learners should pay attention to the immediate context to perform successfully in such vocabulary tasks.

Overall, while the experimental group received 12 G-DA intervention sessions where vocabulary items that had been answered incorrectly at pre-test phase were considered as the base for treatment, the control group did not experience such an approach to vocabulary assessment. The control group were taught the same infrequent vocabulary items conventionally. They were provided with a list of the target words for each session. Then, the teacher taught the new vocabulary by explaining the meaning and providing some examples. Learners were also encouraged to look up the meanings of new words in dictionaries. Finally, the learners were assigned the task of writing sentences that included the target words. Quizzes were also used each session to evaluate learners' vocabulary learning.

Afterwards, Lex30 and Bilingual VST were administered at post-test. One day after the treatment, five participants were interviewed in a focus-group session to elicit their attitudes on concurrent G-DA. Lau (2017) stressed the need for gathering qualitative evidence for independent learning programs since participants' reflections could be used to evaluate the effectiveness of such programs. To collect the qualitative data, the participants were asked to express their understanding of concurrent G-DA intervention and peer-group mediation. Based on the similarities of their responses, thematic analysis was done to identify the emerging themes out of data.

3.4. Data Analysis

In the quantitative phase, a series of independent-sample t-tests were conducted through SPSS (version 23) to compare the performance of the two groups. Initially, OQPT was conducted to examine the homogeneity of groups in terms of language proficiency. Descriptive statistics for OQPT are presented in Table 1 (in Appendix). The Shapiro-Wilk test was conducted and the obtained p value was $0.60 > 0.05$ which ensured data normality. In addition, the results of independent-samples t-test (shown in Table 2 in Appendix) indicated no significant difference between the performance of the experimental group ($M= 22.92$, $SD= 2.70$) with that of the control group ($M= 23.07$, $SD= 2.95$) in OQPT; $T(54) = -0.18$, $p= 0.85 > 0.05$, ensuring the homogeneity of the sample.

The comparison of the performance of experimental group ($M=18.10$, $SD=4.21$) with the control group ($M=17.89$, $SD=3.63$) on the bilingual VST indicated no significant difference in learners' receptive vocabulary size at pre-test, $T(54) = -0.20$, $p=0.83 > 0.05$. Additionally, initial data analysis verified the similarity of the experimental group ($M=27.96$, $SD=5.92$) and the control group ($M=28.10$, $SD=4.28$) in terms of productive vocabulary size as the results of an independent-sample t-test was not statistically significant; $T(54)= 0.10$, $p=0.91 > 0.05$.

In addition, the recorded interviews were transcribed verbatim to identify the learners' viewpoints about concurrent G-DA implementation. The transcriptions were imported to MAX-QDA (version 10) to carry out thematic analysis. In thematic analysis, open-ended responses

are initially coded and then sorted into subthemes which are subsequently cross-analysed, reviewed, and named as the main themes (Braun & Clarke, 2006). Finally, data excerpts from interviews are provided to report the results.

4. RESULTS AND DISCUSSION

This mixed-methods study was designed to explore the role of concurrent G-DA in developing Iranian intermediate EFL learners' vocabulary size. The results of quantitative and qualitative data analysis are presented below.

4.1. Quantitative Data Analysis

Descriptive statistics for learners' receptive vocabulary size at post-test stage are presented in Table 3 (in Appendix). As Table 4 (in Appendix) indicates, there was a statistically significant difference between the performance of the control group ($M=27.03$, $SD= 8.19$) and the experimental group ($M= 38.14$, $SD= 7.50$) at post-test; $T(54)= -5.28$, $p=0.00<0.05$, suggesting the effectiveness of concurrent G-DA intervention in developing EFL learners' receptive vocabulary size. To estimate the effect magnitude, Cohen's d as the measure of effect size was calculated and appeared to be 1.41 ($r= 0.57$), warranting that concurrent G-DA has been an effective treatment for boosting learners' receptive vocabulary size.

Descriptive statistics for productive vocabulary size at post-test phase are shown in Table 5 (in Appendix). To explore whether learners' productive vocabulary size improved, an independent-samples t-test was run. As indicated in Table 6 (in Appendix), there was a substantial difference between the performance of the experimental group ($M= 45.78$, $SD= 9.58$) and the control group ($M=30.82$, $SD= 9.03$); $T(54)= -6.00$, $p= 0.00<0.05$, confirming the superiority of the experimental group over the control group in terms of productive vocabulary gains. The calculated Cohen's d was 1.60 ($r= 0.62$) which is considered large. This finding indicated that G-DA has been significantly effective in enlarging EFL learners' productive vocabulary size.

The quantitative findings indicated that establishing a G-DA framework which conflates vocabulary assessment with vocabulary teaching could be beneficial for developing EFL learners' receptive and productive vocabulary gains. It is interpreted that concurrent G-DA interventions can raise learners' awareness of the target words, help them identify their strengths and weaknesses, and encourage them to benefit from peer mediation with the ultimate goal of enhancing their receptive and productive vocabulary size. We believe that the effectiveness of G-DA is not only due to learners' attention to the target words but also due to creating a supportive environment where errors are treated as signs of enthusiasm for learning and scaffolded interactions as symbols of willingness to experience cooperative vocabulary learning.

Regarding the first research question, the findings of this study verified that the concurrent G-DA intervention was significantly effective in developing vocabulary knowledge of Iranian intermediate EFL learners. This corroborates the idea of Bahramlou and Esmaeili (2019) about the effectiveness of implementing G-DA for vocabulary learning. Similar to Fernández Dobao (2014), the current study stressed the crucial role of group-based mediation

in vocabulary learning. Although, finding the ideal number of participants in groups was not the subject of this study, Fernández Dobao's (2014) comparison of pair interactions with small groups demonstrated small group communication leads to better L2 vocabulary acquisition since it involves increased exposure to and opportunities for engaging with lexical items.

In sum, the quantitative findings support that there is a real possibility of developing a group ZPD (Lantolf & Poehner, 2011) within the G-DA framework which facilitates learners' vocabulary development. As well, the findings further support the implementation of G-DA for developing a group ZPD in classroom setting (Poehner, 2009). These results are in accord with previous studies (e.g., Alavi et al., 2011) indicating that G-DA can be an alternative means for unifying assessment and teaching (Davin, 2011) to increase language learners' vocabulary gains (Bahramlou & Esmaeili, 2019). Therefore, it can be concluded that group-based mediation in classroom context is helpful (Davin & Donato, 2013) for developing EFL learners' vocabulary knowledge.

4.2. Qualitative Data Analysis

Qualitative data analysis was conducted with the aim of recognizing the major themes regarding learners' attitude toward concurrent G-DA.

4.2.1. Positive attitude toward concurrent G-DA

The analysis revealed learners' positive attitude toward the intervening moves offered by the mediator based on the principles of G-DA. The following extract reflects their attitude:

This kind of testing was motivated us to actively participate in class. When we worked in group, we had no stress. Also, the teacher always offered intervention to my classmates who made a lexical error. (Participant 5)

One of the participants considered learners' engagement in assessment procedure as a motivating factor and stated:

This approach to assessment was remarkably interesting. I think G-DA motivated learners to actively participate in the class. This may lead us toward a new understanding of vocabulary assessment and learning. (Participant 3)

There was a consensus among the learners that the instructor's understanding of their problems and providing appropriate prompts helped them gain high levels of motivation to handle the subsequent challenging tasks. In addition, as the learners noted, their peers' active participation in doing vocabulary tasks and correcting their lexical errors helped the whole class benefit from G-DA intervention. Consequently, learners expressed favourable attitudes to concurrent G-DA. This is in support of Davin (2011) who stressed the positive nature of successful implementation of a G-DA project.

4.2.2. Mediator's pivotal role

The mediator's utilization of various implicit and explicit mediational strategies through G-DA paradigm has led students toward the internalization of new vocabulary. One of the participants pointed to the key role of the teacher in G-DA interventions and expressed:

The teacher creatively provided feedback and guided us to learn vocabulary through collaboration. While he was correcting my classmates' mistakes, I learned new words. I believe his mediation is necessary for us to succeed. (Participant 4).

As the following extract indicates, a teacher should not only utilize mediational strategies but also encourage learners to adopt a positive attitude towards team work. In this way, the teacher can enhance the quality of G-DA treatment and facilitate students' vocabulary development.

The teacher initially created a friendly atmosphere by encouraging team work. After provision of prompts by the teacher, we learned the meaning of new words within our group and tried to produce new sentences with the words to show that we learned new lexical items. (Participant 2).

In support of Lantolf and Poehner (2011), the significance of teachers' mediation in concurrent G-DA treatment resonated among the interviewees. Furthermore, learners have mentioned the key role a teacher could play in practicing theoretical principles of G-DA to maximize learning opportunities. This idea is in line with Kumaravadivelu's (2006) discussion of macro-strategies who noted that "maximizing learning opportunities also entails a willingness on the part of teachers to modify their lesson plans continuously on the basis of ongoing feedback" (p. 202). In effect, offering prompts would aid learners undergo changes to achieve more vocabulary gains within a group framework.

4.2.3. Motivation and learner autonomy

The key role of concurrent G-DA in motivating learners and enhancing their autonomy was a recurrent theme. Regarding the cooperative atmosphere of G-DA program, interviewees agreed that they were not worried when they made a mistake. One of the participants expressed:

After treatment sessions, I felt I have achieved more levels of independence in extending my vocabulary knowledge. Teacher's intervention during vocabulary assessment gave me motivation to do the task correctly on the first try. (Participant 3)

Another issue was related to learners' confidence in language learning. All the participants believed that G-DA was not a stressful experience. One of the participants expressed group-based DA could raise learners' confidence. He said:

Actually, I had lost my confidence in language learning. Surprisingly, when I participated in G-DA program, I regained my self-confidence. Learning vocabulary in this way motivated me to use the words in speech and writing. (Participant 4)

As the participants mentioned, through G-DA, they learned how to make the best use of an erroneous utterance, choice, or word selection. This aligns with the existing results of previous studies. According to Haywood and Lidz (2006), the notion of motivation is undistinguishably interrelated with the concept and practice of DA in that motivated learners will be capable to handle tasks better while maintaining their positive attitude towards assessment. This echoes the idea that learners become more autonomous when teachers implement DA (Davin & Herazo, 2020). Besides, mediators can maintain learners' enthusiasm for receiving feedback in a G-DA enterprise. Thus, receiving feedback from any source in the classroom might be helpful for learners (Fulcher & Davidson, 2007) to become autonomous in vocabulary learning.

4.2.4. *Mediation in concurrent G-DA*

The participants considered the prompts and leading questions helpful, even for less-proficient learners, in identifying the source of the problems. In addition, the participants noted that they benefited from the mediator's explicit explanation for each new word after the correct response had been offered by the learners.

I suppose the intervention was helpful for different learners in terms of the prompts, the process, and the practice. I think final explanation of new words, their meanings, and their associations would be useful to all learners. (Participant 1)

In particular, the significance of the supportive language of prompts, the suitable frequency band of new words, and the proper time of mediation were highlighted. This finding suggests that mediation in concurrent G-DA should be gradual and supportive. One of the participants noted:

Our instructor subtly attuned feedback. He knew how many tasks were needed to be included in each session. Through questioning, he identified the words we did not know. Next, he designed each session based on a certain number of new lexical items. The mediation was smooth and supportive. (Participant 3)

This finding enjoys support from Kumaravadivelu's (2006) explication of the helpfulness of providing instructional intervention at the proper time for the purpose of improving language learning objectives. However, according to Davin et al. (2017), it is a challenging task to provide contingent and gradual prompts based on learners' unexpected, emergent needs. As well, Poehner and Lantolf (2010) underlined that guiding toward desired objectives will be a demanding task for teachers, unless they deal merely with one language learner.

4.2.5. *Peer-mediation and whole-class development in concurrent G-DA*

The interviews indicated that engaging group members in doing a vocabulary task had been highly beneficial. The following excerpt indicates how one of the participants benefited from the treatment.

While we were carrying out tasks in group, we listened to the teacher who was offering prompts to other learners. Actually, we used them as triggers to find the correct answer. (Participant 2).

The findings also revealed that peer-mediation was one of the key features of concurrent G-DA which facilitated the process of vocabulary learning. The following extract suggests that mediation, whether by a teacher or peers, can have a significant role in learners' vocabulary development.

I think, learners could offer feedback to each other and simultaneously learn from each other. When a teacher offers prompt to a learner, he is mediating the whole class. Offering such developmental chances is not possible unless learners are engaged in group work for learning new lexical items. (Participant 1).

Similar to Alavi et al. (2011), this study revealed that concurrent G-DA treatment construes cooperation among learners. The idea of whole-classroom cooperation has always been supported since "a particular feature of the classroom context is collaboration between learners" (Fulcher & Davidson, 2007, p. 29). Based on this finding, cooperative peer mediation seems to complement teacher mediation in G-DA programs. The positive influence of peer mediation in the classroom context (Davin & Donato, 2013) was supported by the findings of this study.

In sum, regarding the second research question, the qualitative results suggested that when EFL learners are provided with informative prompts within the framework of G-DA, they take, adopt, and maintain a positive attitude towards improving their vocabulary knowledge. Also, it was shown that concurrent G-DA could be substantially helpful in enhancing learners' motivation for vocabulary development. In addition, the key role of teachers as mediators in inspiring learners' autonomous and cooperative vocabulary learning and ZPD promotion was highlighted.

5. CONCLUSIÓN

This study intended to explore the role of concurrent G-DA in enhancing vocabulary gains of learners. The findings highlighted the significant effect of concurrent G-DA on improving Iranian EFL learners' receptive and productive vocabulary size. Moreover, the qualitative results showed the positive attitude of EFL learners to G-DA. In addition, the findings indicated the role of G-DA in motivating learners as well as the undeniable role of the mediator in offering tuned mediational strategies. The effectiveness of peer mediation in fostering a whole-classroom development was also highlighted. An implication is that G-DA can be administered to groups of EFL learners in the classroom context to develop their vocabulary knowledge.

The findings of this study can inform and improve classroom vocabulary assessment by demonstrating how concurrent G-DA could be implemented in classroom settings for the development of both receptive and productive vocabulary. Another implication is that EFL

learners prefer to receive group-based mediation in the classroom in order to promote their vocabulary development. Finally, based on the findings, EFL teachers are recommended to do concurrent G-DA of vocabulary knowledge in order to explore language learners' ZPD, gain a comprehensive understanding of their learners' developing abilities, and support them in enhancing their vocabulary size.

This study has some limitations that need to be acknowledged here. One of the limitations of the current study was that only a small subgroup was interviewed in the focus group. Additionally, qualitative data was not triangulated through classroom observation. Thus, further research needs to be undertaken that addresses the issue using different data collection procedures. In addition, future studies are required to substantiate the findings on the applicability, feasibility, and desirability of G-DA implementation in different contexts. Finally, further studies are required to include longitudinal data and measure retention rates in order to explore the validity of G-DA for learning or formative assessment.

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APPENDIX: Statistical test results*Table 1. Descriptive statistics for Oxford Quick Placement Test*

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Score	Control	28	22.928	2.707	0.511
	Experimental	28	23.071	2.955	0.558

Table 2. Independent-samples t-test for Oxford Quick Placement Test

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
						Lower	Lower	Upper
Score	Equal variances assumed	0.224	0.638	-0.189	54	0.851	-1.661	1.375
	Equal variances not assumed			-0.189	53.589	0.851	-1.661	1.375

Table 3. Descriptive statistics for receptive vocabulary size at post-test phase

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Score	Control	28	27.035	8.194	1.548
	Experimental	28	38.142	7.506	1.418

Table 4. Independent-sample t-test for receptive vocabulary size at post-test phase

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
							Lower	Upper
Score	Equal variances assumed	0.134	0.71	-5.28	54	0.000	-15.31	-6,89
	Equal variances not assumed			-5.28	53.59	0.000	-15.31	-6,89

Table 5. Descriptive statistics for productive vocabulary size at post-test phase

Groups		N	Mean	Std. Deviation	Std. Error Mean
Score	Control	28	30.821	9.039	1.708
	Experimental	28	45.785	9.589	1.812

Table 6. Independent-samples t-test for productive vocabulary size at post-test phase

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
							Lower	Upper
Score	Equal variances assumed	0.027	0.871	-6.009	54	0.000	-19.957	-9.971
	Equal variances not assumed			-6.009	53.81	0.000	-19.957	-9.970