Dynamic assessment and its impact on pre-intermediate and high-intermediate EFL learners’ grammar achievement

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Abstract: Dynamic Assessment (DA) is an implicit kind of assessment that most teachers and learners engage in during class time. Although there exists a body of research on the promising effects of DA, the studies have not compared the results across proficiency levels. This study examined the effect of interventionist approach to DA on Iranian English as a Foreign Language (EFL) learners’ grammar achievement at two proficiency levels of pre-intermediate and high-intermediate. To this end, 58 learners, in four intact groups namely pre-intermediate (31 students) and high-intermediate (27 students), were selected and randomly assigned to two quasi-experimental and two control groups. The data were collected through pretests, posttests, and semi-structured interviews. Using a pretest-mediation-posttest design, the participants in the quasi-experimental groups received mediation for eight sessions, whereas the control group participants were taught conventionally. Based on the results, when treated separately, there was a significant effect for the type of assessment, but not for proficiency levels. However, the interaction effect of type of assessment and proficiency level was significant, which meant that the effect of DA on grammar achievement was higher for pre-intermediate learners than it was for high-intermediate learners. Hence, DA could have a potentially...
positive and dramatic influence on EFL learners’ grammar achievement, although
the success of learning varied across proficiency levels.

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Keywords: dynamic assessment; non-dynamic assessment; grammar achievement; pre-intermediate learners; high-intermediate learners

1. Introduction
Over the past three decades, DA has received a great deal of attention in language assessment and educational sciences (e.g., Elliot, 2003; Leung, 2007; Lidz, 1991; Poehner, 2008; Sternberg & Grigorenko, 2002). Dynamic Assessment, a term coined by Luria in 1961 (as cited in Poehner & Lantolf, 2010), is a kind of assessment which engages the teachers continuously. According to Ebadi et al. (2018), “in DA, a two-way interactive relationship is developed between the teacher and the learner whereby both parties could initiate questions” (p. 3). Since instruction and assessment are viewed as two aspects of a single entity, the teacher can intervene and help the learner to reach the task objectives.

This mode of assessment is “instantaneous and cyclical: Assessment-decision-instruction-assessment-decision-instruction” (Bachman & Palmer, 2010, p. 28). It is an “implicit” kind of assessment in which both teachers and learners may be unaware that a sort of assessment is occurring (Bachman & Palmer, 2010, p. 28). Lantolf and Poehner (2008) believe that in DA, “assessment and instruction are a single activity” (p. 273) in which intervention is offered to diagnose and improve learner development at the same time.

Although a large body of research has been accumulated on the effectiveness of DA in teacher–student interactions, the DA of grammar achievement presented through teacher interventions and mediations in the classroom has received scant attention in the research literature. As Modarresi and Alavi (2014) have asserted, “there is considerable evidence for the usefulness of the theoretical construct of DA in grammar instruction” (p. 5). In the previous studies of DA, a few studies have considered the effect of DA on learners’ grammar achievement (Daneshfar et al., 2018) or on various aspects of grammar such as tenses, modals, and conditionals. Therefore, the current study sought to investigate the effect of DA on grammar achievement of Iranian EFL learners at two different proficiency levels.

2. Literature review
Based on Sociocultural Theory (SCT), DA supports “a new understanding that cognitive abilities are developed through socially supported interactions” (Shepard, 2000, p. 7). As Poehner et al. (2015) put it, from Vygotsky’s perspective, “most assessments, because they do not allow for external forms of mediation during the procedure, can only hope to reveal the Zone of Actual Development (ZAD) but not the Zone of Proximal Development (ZPD)” (p. 3). The concept of ZPD, which is defined as “the distance between the actual developmental 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”, has been taken from Vygotsky (1978, p. 86) and adopted by DA.

As Van der Veen et al. (2016, p. 329) have put it, DA “represents a view on assessment and teaching in which instruction or feedback is intertwined with assessment or testing.” In DA, as Fulcher (2010) put it “rather than just a provider of feedback, teachers are the ‘mediators’ in classroom interactions” (p. 72). According to Grigorenko (2009), there are three basic assumptions on which diverse DA methodologies are based. Anton (2012) has summarized these assumptions as follows:

First, traditional testing may fail to capture the level of cognitive development of learners from dissimilar cultural backgrounds. Second, the focus of assessment should be not only what learners can do now, but also what they may be able to do tomorrow. Third,
assessment should be integrated with intervention and should have selecting or modifying intervention as a goal. (p. 107)

Poechner and Lantolf (2005) have identified two general approaches to DA: Interventionist and interactionist. Interventionist DA is based on “Vygotsky’s quantitative interpretation of the ZPD” and is currently put into practice through “a pretest–treatment–post-test experimental approach; providing item-by-item assistance” (Poechner & Lantolf, 2005, p. 239). According to Leung (2007), “the pre- and posttests can involve the use of ‘static’ instruments. The dynamic quality lies in their use in conjunction with intervention” (p. 260). Interactionist DA, on the other hand, originates from Vygotsky’s second, qualitative, interpretation of the ZPD, “one that foregrounds instruction-learning over measurement” (Poechner & Lantolf, 2005, p. 239).

Moreover, Sternberg and Grigorenko (2002) have described two DA formats: Sandwich and cake. In the sandwich format, “treatment is administered following a pretest (used to establish a baseline measure) and a posttest (used to evaluate the effectiveness of the treatment),” whereas, in the cake format, “mediation is offered during the administration of the assessment, usually whenever problems arise” (p. 27).

Regarding previous studies of DA and its effect on grammar achievement, various findings have been obtained. For instance, Anton (2003) used DA for the placement of students in advanced levels on the basis of accuracy in the use of sentence-level grammar and vocabulary in a university undergraduate Spanish program. Based on the results, those learners who were able to revise under prompting were placed at advanced level, and those who failed were considered to be at lower levels and were accordingly placed in various courses.

In a local study, Jafary et al. (2012) studied the influence of DA on syntactic development of 60 Iranian college preparatory EFL learners. The results revealed that there was a significant increase in the performance of subjects in experimental group who received mediation in DA involving “some strategies like looking for clues, eliminating the answers that do not fit, and comparison strategies” (p. 153) compared to the control group participants who received deductive instruction on grammatical rules for 12 sessions.

Likewise, Malmeer and Zoghi (2014) investigated the DA of grammar with various age groups. Using an interactionist model of DA on Iranian intermediate adult (n = 40) and teenage (n = 40) learners, they concluded that the adult EFL learners benefited from DA more than the teenagers. The teachers “offered feedback, gave explanation, asked them to explain why they chose the wrong answer, and provided them with different techniques mostly through think aloud” (p. 1710). Moreover, they concluded that DA was advantageous to both age groups. In the same year, Ahmadi and Barabadi examined the effect of Computerized Dynamic Assessment (CDA) on 83 Iranian EFL learners’ knowledge of grammar. The findings of the study revealed that the use of CDA can improve both the test takers’ grammatical ability and learning potential.

Investigating English relative pronouns through the interactionist model of DA based on the sandwich format, Majdedin et al. (2015), unlike Malmeer and Zoghi (2014), found that the teenagers (n = 30) would benefit from the interactionist DA more than the adult learners (n = 30). In the second phase (mediation), the researchers “gave feedback, explanation through interaction and provided them hints from implicit to explicit” (Majdedin et al., 2015, p. 62). Furthermore, the findings of this study illustrated a significant difference between the pre-test and post-test scores of both groups, showing the improvement of scores in English relative pronouns tests after DA mediation.

Mohammadimoghadam (2015) studied the effects of DA mediation on a beginner EFL learner’s grammar, focusing on English tag questions. In this case study, the student’s first answers were regarded as her “grammar static score. If her answers were wrong, mediations from most implicit
to most explicit were given, and the results were used as mediated scores and a learning potential score” (p. 101). The results of this study indicated a significant difference in the learner’s knowledge of tag questions because of DA intervention.

Exploring the effect of DA on 58 pre-intermediate Iranian EFL learners’ acquisition of English tenses, Abbasi and Fatemi (2015) found that the learners in the dynamic group not only performed better than those in the control group in terms of the acquisition of English tenses but also they held positive attitudes toward learning through DA. In this study, “at the heart of the process, during 12 sessions of treatment, five weekly posttests were administered to the students” (Abbasi & Fatemi, 2015, p. 228).

Sharafi and Sardareh (2016) also investigated the effect of dynamic assessment on 46 adult EFL learners’ grammar learning at elementary level. The results of the study revealed that dynamic assessment had a considerable impact on elementary EFL learners’ learning of prepositions of time and place. Similarly, a recent study by Daneshfar et al. (2018) showed the effectiveness of DA in the mastery of grammar knowledge among Third Grade Secondary School EFL learners.

3. Research questions
As noted, none of these studies has compared the effect of DA on grammar achievement of EFL learners in different proficiency levels. Hence, the current study investigated the effectiveness of DA in grammar achievement of Iranian EFL learners at two different proficiency levels by addressing the following research questions.

(1) Is there any significant difference between pre-intermediate and high-intermediate EFL learners regarding their grammar achievement when a DA procedure is used?
(2) Is there any significant difference between dynamic assessment and non-dynamic assessment regarding pre-intermediate EFL learners’ grammar achievement?
(3) Is there any significant difference between dynamic assessment and non-dynamic assessment regarding high-intermediate EFL learners’ grammar achievement?
(4) How are the perceptions of pre-intermediate and high-intermediate learners divergent or convergent regarding their grammar achievement when a DA procedure is used?

4. Method
This study used a mixed-methods design as both quantitative and qualitative data were collected. In particular, the design of this study is Sequential Explanatory Mixed Methods Design as “first quantitative data are collected and analyzed; and then, to further explain the findings from the first phase, qualitative data are collected and analyzed; finally, integrated interpretations are drawn based on the quantitative and qualitative data” (Hashemi & Babaii, 2013, p. 833).

4.1. Participants
Fifty-eight Iranian EFL learners, consisting of only males, at a language institute in Tehran, Iran, participated in this study. They were selected from two proficiency levels, namely pre-intermediate (31 students with the mean age of 15) and high-intermediate (27 students with the mean age of 17). All the participants had studied general English at the Adult Department of the institute for at least two years. Their classes were held two sessions a week for 21 sessions, with each session lasting for 1 h and 45 min.

Due to strict rules at the institute, we could not select our sample randomly and, hence, four intact classes were chosen forming two quasi-experimental (consisting of pre- and high-intermediate learners who received DA intervention) and two control groups (consisting of pre- and high-intermediate learners who received Non-Dynamic Assessment (NDA), i.e., the conventional methodology of the institute). Therefore, convenience sampling was utilized to collect the data. The two quasi-experimental classes were taught by one of the researchers of the study, with English teaching experience of over 10 years at...
different institutes, whereas the two control groups were taught by two of his colleagues who had been teaching English for around ten (the pre-intermediate class teacher) and 20 years (the high-intermediate class teacher).

4.2. Instruments

4.2.1. Grammar tests
Learners in all four groups took the grammar tests as their pretests and posttests. For both pre- and high-intermediate learners, the 20 grammar questions provided at the end of their workbooks were chosen as their pretests. These questions consisted of all the grammatical points covered in the students’ books at those levels. The pre-intermediate pretest was composed of only multiple-choice tests, whereas, the high-intermediate pretest consisted of both multiple-choice tests and 10 sentences asking the learners to identify the incorrect part out of the four underlined parts.

The participants’ posttests were the final exams all the learners should take and pass as a prerequisite for the next level. The grammar sections, consisting of 20 items designed based on the content of the course, were corrected and scored by one of the researchers for the purposes of the study. Like pretests, the pre-intermediate test was composed of only multiple-choice tests, whereas, the high-intermediate test consisted of both multiple-choice tests and sentences asking the learners to determine the incorrect words or phrases from the four underlined parts.

4.2.2. Interview protocol
In this study, semi-structured interviews were conducted with six participants of the quasi-experimental groups who consented to attend the interview sessions. The interview protocol used in this study consisted of 11 questions (Appendix) on the usefulness of DA approach for their grammar mastery. The participants were interviewed by one of the researchers one-on-one separately in about 15-min-long sessions. The interviews were done by informing the participants about the purpose of the interview and the fact that their responses would be used for research purposes only. All the interviews were audio-recorded and then transcribed to find any recurrent themes.

4.3. Data collection procedure
In order to conduct this study, the following four phases were followed.

Phase 1. Pretesting: After getting the participants’ consents, at the outset of the study, the students in both quasi-experimental and control groups took the pretests. The purpose of pretesting was threefold: To check the students’ level of grammar achievement prior to the course, determine the areas of difficulty in the quasi-experimental groups, and to examine whether the learners in the quasi-experimental and control groups were homogeneous regarding their level of grammar achievement. Learners’ pretests were corrected and scored (on a scale ranging from zero to 20) and then they were given back to the learners.

Phase 2. Treatment (Intervention): Based on the students’ incorrect responses in the pretest, the areas of difficulty at the two proficiency levels were specified (see Table 1) which were then dealt with separately using DA techniques from session 13 to session 20, i.e. eight class sessions, in which about 20 min per session were allocated to DA intervention.

This is in line with the guideline offered by Haywood and Lidz (2007), claiming that “the incorporation of DA into the assessment needs not to add a tremendous amount of time to the process. Indeed, there are many times when only 20 to 30 minutes are needed” (p. 35). The DA intervention included the following:

- Discussion sections to deal with individual areas of difficulty
  - Teacher’s comments and explicit explanations
Teacher’s hints/prompts and implicit explanations

○ Teacher’s questions about why they had chosen the wrong answer

○ Teacher’s providing opportunities for students to self-correct

○ Teacher’s providing opportunities for peer correction.

All through the mediation stage, the teacher attempted to prevent the students’ negative feelings that they usually reported experiencing “when they are required to undergo regular assessment in order to demonstrate mastery of content or competency to pass to the next level of instruction” (Poehner, 2008, p. 3). To this end, the teacher tried to downgrade the role of the final exam, focus on the individual problematic areas providing just the help each student needed, provide students with sufficient feedback, and elicit several examples from their areas of difficulty. The learners in the two control groups received no mediation and grammar was taught to them according to the predetermined syllabus and conventional methodology of the institute.

To do so, the researcher, who taught the two quasi-experimental groups, worked consciously as not just a provider of feedback but the “mediator” in classroom interactions in order to examine the role of DA. However, the students in the control groups were taught conventionally, i.e. according to the long-established methodology of the institute, based on which grammar rules should be taught mainly deductively through explicit explanation of the grammatical rules.

Phase 3. Posttesting. In session 21, the students in both groups took the posttests, the purpose of which was twofold: first, to measure the possible differences in the grammar achievement of the learners in the groups, and second, to compare the differences between the learners of the two proficiency levels. The posttests were corrected and scored on a scale ranging from zero to 20.

Phase 4. Interview Protocol. In a three-month period after the posttest, six (four from pre-intermediate and two high-intermediate) learners were interviewed, all of whom consented to do the interviews and provide the researchers with qualitative and retrospective information about the effectiveness of the DA approach. The researchers developed 11 questions, which took each interviewee about 15 min to respond. The interviews were semi-structured as there were “specific core questions determined in advance,” but at the same time “some elaboration in the questions and answers” was included (Seliger & Shohamy, 1989, p. 114). All the interviews were audio-recorded and then transcribed to find the recurrent themes.

4.4. Data analysis

Two statistical techniques were used for quantitative data analysis in this study. First, to check the homogeneity of the learners concerning their grammar knowledge, two independent samples t-tests were run between the two quasi-experimental and control groups for the two proficiency levels of pre- and high-intermediate. Second, a two-way Analysis of Variance (ANOVA) was employed to find
answers to the first three research questions. Regarding the qualitative data analysis, axial coding was used for the data obtained from the semi-structured interviews to examine, compare, and contrast the data to gain the broad categories and themes (Strauss & Corbin, 2007).

5. Results

5.1. Homogeneity of the groups

As mentioned above, to check if the learners were homogeneous with regard to their grammar knowledge, two independent samples t-tests were run between the two quasi-experimental and control groups for the two proficiency levels of pre- and high-intermediate. The t-test for the pre-intermediate learners revealed that there was no significant difference in the scores for the quasi-experimental group (M = 13.67, SD = 1.9) and the control group (M = 12.70, SD = 2.46), t(29) = 1.23, p < .23 (two-tailed) (Table 2).

The t-test for the high-intermediate learners also indicated that there was no significant difference in the scores for the quasi-experimental group (M = 12.93, SD = 2.37) and the control group (M = 12.08, SD = 3.92), t(17.24) = .66, p < .52 (two-tailed). In this study, the significance level was set at p < .05 (Table 3).

Therefore, it can be concluded that in both pre- and high-intermediate groups, the learners were homogeneous with regard to their grammar knowledge prior to the study.

5.2. Descriptive statistics for the groups’ pretest and posttest grammar scores

Table 4 shows the basic descriptive statistics of the two groups’ pretest and posttest grammar scores. It is clear that in all groups, except for the NDA pre-intermediate group, the posttest scores indicated at least a two-point increase compared with the pretest ones.

Although the NDA pre-intermediate group showed only .1 increase in the posttest scores, the NDA high-intermediate group showed the most increase in the posttest scores among all four groups (M = 15.08, SD = 2.77).

5.3. Quantitative research results

To answer our first three research questions, a two-way between-groups ANOVA was conducted to examine the impact of dynamic assessment and proficiency level (the two independent variables) on the learners’ level of grammar achievement (the dependent variable). Each independent variable had two levels (groups): DA versus NDA, and pre-intermediate versus high-intermediate. Based on the results, there was a statistically significant main effect of type of assessment (DA vs. NDA), F(1, 54) = 4.32, p = .042, with a relatively large effect size (Partial Eta Squared = .07) (Table 5). However, there was no statistically significant main effect of proficiency level, F(1, 54) = .79, p = .38. The interaction effect of DA and proficiency level was also statistically significant, F(1, 54) = 5.24, p = .026. What this actually means is that the effect of DA on grammar achievement was different for pre-intermediate learners than it was for high-intermediate learners. Moreover, the effect size was large (Partial Eta Squared = .09), indicating that 9% of the variance of grammar achievement scores is explained by the interaction effect (Pallant, 2016).

Figure 1 provides us with some information about the nature of this interaction effect. It clearly shows that for high-intermediate learners DA had no effect. However, for pre-intermediate learners, DA had a dramatic effect.

One interesting point that these data demonstrate is that we earlier concluded that DA significantly influenced grammar achievement; however, the interaction effect tells us that this is true only for pre-intermediate learners not for high-intermediate ones. This indicates “how misleading
|                  | F    | df  | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
|------------------|------|-----|-----------------|-----------------|-----------------------|-------|-------|
| Equal variances assumed | 2.58 | 29  | .11             | -.65            | .97                   | -1.89 | 2.61  |

Table 2. Independent Samples t-test for the Homogeneity of Pre-Intermediate Groups

Levene's Test for Equality of Variances

95% Confidence Interval of the Difference

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Table 3. Independent Samples t-test for Homogeneity of High-intermediate Groups

| Levene's Test for Equality of Variances | t-test for Equality of Means | 95% Confidence Interval of the Difference |
|----------------------------------------|------------------------------|------------------------------------------|
|                                        | F               | Sig. | t   | df  | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Equal variances assumed                | 4.96            | .03  | .69 | 25  | .49             | .85             | 1.21                | -1.66 | 3.36  |
| Equal variances not assumed            | .66             | 17.24| .51 | .85 | 1.28            |                |                     | -1.86 | 3.56  |
Table 4. Descriptive Statistics of the Groups’ Pretest and Posttest Grammar Scores

| Type of Assessment       | Proficiency Level | Mean       | Std. Deviation | N  |
|--------------------------|-------------------|------------|----------------|----|
|                          |                   | Pretest    | Posttest       | Pretest | Posttest |    |
| Dynamic Assessment       | Pre-intermediate  | 13.67      | 15.93          | 1.9  | 3.12     | 15 |
|                          | High-intermediate | 12.93      | 14.93          | 2.37 | 2.52     | 15 |
|                          | Total             | 13.3       | 15.43          | 2.13 | 2.83     | 30 |
| Non-Dynamic Assessment   | Pre-intermediate  | 12.70      | 12.81          | 2.46 | 2.37     | 16 |
|                          | High-intermediate | 12.08      | 15.08          | 3.92 | 2.77     | 12 |
|                          | Total             | 12.39      | 13.78          | 3.19 | 2.75     | 28 |

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the main effects can be: It is usually the interactions between variables that are most interesting in a factorial design” (Field, 2009, p. 439).

5.4. Results for the qualitative research question
To answer our qualitative research question, the transcripts obtained from the six audio-recorded interview protocols were analyzed and interpreted. Based on the results of the qualitative data analysis, the following recurrent themes were pinpointed in the semi-structured interviews.

(a) Learners’ general positive views towards DA
(b) Learners’ involvement in DA interactions
(c) Teachers’ involvement of learners in DA interactions
(d) Learners’ general positive feelings during DA interactions
(e) Learners’ belief that DA was useful, dealing with specific grammatical areas
(f) Diagnosing and discussing the grammar problems
(g) Learners’ preferences for DA to be done in their future terms rather than the old NDA.

Here, the results of our qualitative data analysis are summarized in terms of the questions that were raised in the interviews.
In terms of their overall idea about DA, five learners (83%) held positive views using adjectives such as “useful,” “interesting,” and “new” to express their opinions. The following extract shows how a pre-intermediate learner felt that DA techniques and strategies were useful.

Well, I think that these techniques were very useful. Before this, our teachers tried to explain the grammatical points, but I didn’t understand the main point of some parts of grammar, but now by working on each point one by one I think I am learning better. (Participant C)

However, only one pre-intermediate learner believed that

It wasn’t that different from other techniques. Actually, I didn’t see any special difference between these and other techniques in my last terms. (Participant A)

In response to the question whether and how they were involved in DA interactions, four learners said “yes,” mentioning that the teacher “asked many questions,” and “asked for the reasons why I had chosen the wrong answer.” However, two pre-intermediate learners said “not a lot” and “a little.”

In terms of the one who involved them in DA interactions, both high-intermediate and pre-intermediate learners said the “teacher” and sometimes they themselves. They were also asked about how they felt while using this approach. Four learners mentioned feeling “fine”; one pre-intermediate learner said he had “no special feeling”; and one high-intermediate learner expressed his feelings as follows:

I felt that I was improving in grammar more and more. It was a very good experience to be involved in helping each other and trying to find the answers to some grammar problems. (Participant E)

The vast majority of the participants believed that the instructor interaction/mediation during the assessment helped them “a lot” to enhance their grammar, while only one pre-intermediate learner said “not very much.” As to which area(s), they benefitted from the DA interaction most, three pre-intermediate learners referred to adjective clauses. Other areas mentioned were reflexive pronouns, conditional type II, hope and wish clauses, and coordination. Both high-intermediate learners claimed that they benefitted most in the learning of active/passive voice followed by causative verbs and reported speech.

Concerning the differences between DA and other methods used in assessing their grammar during previous terms, 67% of the learners found the way they were assessed and discussing the grammar problems they encountered as the main differences, with one pre-intermediate learner contesting that the feedback they received about grammar and the teacher’s comments were different. In particular, 83% of the participants brought such reasons as learning from their mistakes and those of their classmates, being more interesting, self-correcting their mistakes, and discussing the reasons why they had such grammatical mistakes. The following extract shows one of the participant’s preferences for DA rather than NDA:

In fact, I prefer DA method. It’s more interesting. We talk about our problems and the teacher usually gives us some help to understand better. (Participant D)

With reference to which DA technique(s) they found more useful, in pre-intermediate group, three learners referred to diagnosing the areas of difficulty, and two learners referred to the teacher’s providing several opportunities for the students to self-correct, grammar discussions, teacher’s comments and explicit explanations, and the teacher’s questions about why they chose the wrong answer. They claimed that DA had helped them more to learn from their mistakes and that they were provided with more feedback and examples.
In high-intermediate group, both interviewees referred to the teacher’s identification of their mistakes and questions about why they chose the wrong answer as the most useful DA techniques. Although one learner highlighted the role of teacher’s hints and implicit explanations, the other one focused on the teacher’s comments and explicit explanations. Such reasons as having “a good chance to think about each problem” and the fact that they had to “give reasons for their choices” were presented by these learners. As for the application of this technique, no disadvantages were mentioned.

In response to the question whether DA gave them a feeling that they were going ahead faster in learning grammar, overall, three learners said “yes” pointing out that they learned the grammar points more quickly. Two of the learners, both of whom were pre-intermediate, held the view that nothing else had contributed to their grammar development as much as the DA sessions. They also referred to the explanations provided in their student books and the tests in their workbooks as useful sources.

Overall, all the learners except for one pre-intermediate learner expressed their preferences and willingness for DA to be done in their future terms rather than the old NDA.

6. Discussion

This study investigated the possible effect of DA on Iranian EFL learners’ grammar achievement at two different proficiency levels. To this end, four research questions were raised whose findings are discussed hereunder.

The results of the first research question, examining the difference between pre-intermediate and high-intermediate learners in terms of their grammar achievement when a DA procedure was used, showed that there was no statistically significant main effect of proficiency level. This effect possibly meant that, overall, when the type of assessment is held constant, i.e. DA is employed at both levels, there would be no difference in the grammar achievement of the learners across proficiency levels. In other words, other things being equal, pre- and high-intermediate learners seemed to gain equal grammar achievement. Furthermore, the mean scores in the learners’ posttest at both proficiency levels in the quasi-experimental groups indicated about a two-point increase compared to those of their pretests. The implication was that employing DA intervention could be beneficial for both lower and higher levels.

However, the findings of the second and the third research questions, which investigated the difference between the effect of DA and NDA on pre- and high-intermediate learners’ grammar achievement, showed a statistically significant main effect of type of assessment (DA vs. NDA). Furthermore, the interaction effect of DA and proficiency level was statistically significant, demonstrating that the effect of DA on grammar achievement was different for pre-intermediate learners than it was for high-intermediate learners. One unanticipated finding was that for high-intermediate learners there was no difference for DA in comparison with NDA high-intermediate control group whose posttest mean score was a little higher than that of the DA group. This observed increase, though slight, could be attributed to the NDA group teacher’s greater teaching experience especially at higher levels. Another possible explanation for this is that the techniques and procedures used in the NDA group might have had resemblance to those used in the DA group. However, for the pre-intermediate learners, DA had a dramatically positive effect.

It could therefore be assumed that lower level learners would benefit more from the integration of instruction and assessment and the employment of dynamic assessment than would higher level learners do at least when grammar was concerned. An implication of this is the possibility that scaffolding “which refers to those supportive behaviors by which an expert can help a novice learner achieve higher levels of regulation” (De Guerrero & Villamil, 2000, p. 51) and the teachers’ mediation could help pre-intermediate learners develop their ZPDs in grammar. Hence, it facilitated their learning of grammar, which is usually considered a boring and difficult task by the learners in general and lower level learners in particular.
The beneficial influence of DA in comparison with NDA procedures, confirmed by the findings of this study, seems to be in accord with previous studies into the effect of DA on other skills such as the following: (a) DA of listening (e.g., Alavi et al., 2012; Farangi & Kheradmand Saadi, 2017; Hidri, 2014; Shabani, 2014); (b) DA of reading (e.g., Ajideh & Nourdad, 2012; Birjandi et al., 2013; Mansouri & Nazari, 2014; Teo, 2012); (c) DA of writing (e.g., Aghaebrahimian et al., 2014; Nasiri & Khorsheid, 2015); (d) DA of vocabulary (e.g., Hessamy & Ghaderi, 2014; Saedii & Hosseinpour, 2013); (e) DA and pragmatic issues (e.g., Merghati & Ahangari, 2015; Tajeddin & Tayebipour, 2012); (f) DA of morphological awareness (Hamavandi et al., 2017); (g) DA of speaking skills (Ebadi & Asakereh, 2017; Estaji & Farahanynia, 2019).

The last research question sought to explore the ways pre- and high-intermediate learners’ perceptions were divergent and/or convergent regarding their grammar achievement when a DA procedure was applied. Based on the results, the majority of the interviewees held positive views toward DA and expressed their preferences for the DA techniques to be used in their future terms rather than the conventional NDA, with only one pre-intermediate learner believing that the DA procedure was not that different from other techniques that he had already experienced as an EFL learner. This learner expressed different views from the other three ones regarding almost all the items of the interview protocol, most of which were indicators of his negative and/or indifferent viewpoints. The general positive attitude of the participants toward DA is in line with the quantitative data, which also pointed to the significant effect of DA particularly for lower levels. Nonetheless, as for the negative attitude expressed by one pre-intermediate learner (though only representing a small percentage of the DA group), it might be the case that not all learners would benefit from newer techniques, who might think the traditional ones would be still more helpful. Therefore, it seems that individual differences might be at work in applying novel ways of teaching and assessing.

Most interviewees reported being involved in DA interactions through the teacher’s questions as to the reasons why they had chosen the wrong answers. A possible explanation for this might be that such teacher questions have encouraged the learners to think critically about the grammatical issues in question and by so doing involved them more in the process of learning grammar. In terms of the one who involved them in the classroom tasks, both high-intermediate and three pre-intermediate learners claimed the “teacher” and sometimes they themselves; no one referred to “his/her classmates”. This result might be explained by the fact that most EFL classes are currently held in a teacher-centered manner in which the teachers are usually the initiators followed by the students’ responses. Although this kind of support from the teacher is in line with Vygotsky’s notion of scaffolding and teacher mediation, it can be suggested that DA interactions be carried out in a way that promote further peer cooperation, especially between less and more competent learners.

As to the grammatical area(s) improved through DA interaction, three pre-intermediate learners referred to adjective clauses, and both high-intermediate learners mentioned active/passive voice. Although other areas were also pointed out, it seems likely that DA intervention would be advantageous to some specific areas of syntax more than other ones. It is probable that the grammatical areas, which were deemed by learners to be more complicated, are further in need of specific mediational strategies or other ways to deliver mediation. This finding supports the idea of some DA researchers to investigate a specific grammatical area. For instance, Abbasi and Fatemi (2015) examined the acquisition of English tenses through DA, Mohammadimoghadam (2015) studied English tag questions, and Majjedin et al. (2015) investigated English relative pronouns.

Whereas pretesting was the most useful DA technique based on the interviewees’ comments at both proficiency levels, teachers’ providing several opportunities for students to self-correct at pre-intermediate level and teachers’ questions about why they chose the wrong answer at high-intermediate level were reported as the second most useful DA techniques. In general, it seems that the learners at both lower and higher levels of proficiency benefitted from pretesting to find
their specific problematic areas and from focusing on each area individually and in a more detailed manner. Moreover, the pre-intermediate interviewees' emphasis on being provided with opportunities to self-correct could be due to the preference of lower-level learners to be corrected by themselves as it helped them more to learn from their mistakes. However, the high-intermediate interviewees' emphasis on teachers' questions about why they chose the wrong answers might indicate the preference of higher-level learners for critical thinking as it gave them a good chance to think about each problem. This preference was noted in one of the high-intermediate participant's remark as teachers' hints and implicit explanations, which can be another helpful DA technique. Teachers' comments and explicit explanations were mentioned by both proficiency level learners, which might indicate that most Iranian EFL learners were still accustomed to the traditional and more explicit ways of teaching grammar.

The participants further claimed that the use of DA had influenced their speed of learning grammar as a result of receiving more feedback and scaffolding from the teacher (mediator) and their peers. However, as mentioned before, learner variables such as their learning styles and personality types, among other things, should be taken into account, as some learners preferred more holistic and integrative ways of learning. Overall, based on the findings of this study, dynamic assessment was found a potentially positive influence when grammar was taken into account: a finding that was in line with the vast majority of the studies reviewed in the literature.

7. Conclusion and implications

The current study sought to investigate the effect of DA on Iranian EFL learners' grammar achievement at two proficiency levels of pre-intermediate and high-intermediate. Based on the results, there was a statistically significant effect of the type of assessment (DA vs. NDA), but not across proficiency levels, meaning that DA intervention has been beneficial for both pre-and high intermediate levels. The interaction effect of type of assessment and proficiency level was however statistically significant, which meant that the effect of DA on grammar achievement was different for pre-intermediate learners than it was for high-intermediate learners. In other words, DA has had a dramatic effect for pre-intermediate learners compared to high-intermediate learners, or pre-intermediate learners could benefit more from the DA intervention techniques including: Discussion sections to identify the learners' weaknesses, teacher's comments, questions, hints/prompts, and implicit and explicit explanations, and the students' self- and peer corrections. Finally, based on the findings of this study, DA could have a potentially positive influence on the learners' grammar achievement. More importantly, the majority of interviewees held positive views toward DA and expressed their preferences for DA techniques rather than the old NDA techniques.

Hence, EFL teachers can improve learners' mastery of grammar by disclosing their learning potential profiles, proving them accurate diagnostic feedback, involving them in DA interactions, pretesting, and discussing their grammar problems. In NDA approach, each learner's performance is compared with other learners; however, through dynamic assessment each individual's performance is compared with his/her prior performance. Through this approach, teachers can better understand the learner's grammatical problems and promote each individual's performance at a level beyond his/her current capability. To this end, teacher educators are required to present teacher training courses to develop teachers' familiarity with various DA types, mediational planning and modelling, DA procedure, as well as the benefits the DA approach has for promoting EFL learners' grammar achievement. Likewise, by identifying their strengths and weaknesses in grammar and receiving rich mediational experiences through DA, learners of all proficiency levels can benefit from the outcome of this study and improve their grammar gains.

The generalizability of the results of this study is subject to certain limitations. For instance, owing to the institute's restrictions regarding the number of students in each class, unequal number of students was involved in the quasi-experimental and control groups. By the same token, random selection of the participants was not feasible. Another limitation of this study
was the time limit set by the institute to carry out treatment and provide mediations. Hence, future studies of DA can be longitudinal, comparing the performance of high and low achievers across proficiency levels. This DA study can be also replicated with participants in EAP context to examine the change not only in their grammatical knowledge but also in areas and language skills other than grammar. As the response of each learner to the mediations and interventions varies from one another, future research is required to investigate the extent to which each learner has benefited from the interventions. Considering the individualized nature of mediation offered through DA approaches, by forming homogenous groups and providing standardized mediation, future researchers can take advantage of Group DA. Mediation through synchronous communication and in cyberspace can be also useful directions for further and future research on DA.
Appendix

**Interview Protocol**

(1) What is your overall idea about the new assessment technique (DA sessions)?

(2) Were you involved in DA interactions led by the teacher? How?

(3) Who involved you?
   - The teacher,
   - Your classmates,
   - You yourself

(4) How did you feel during DA interactions?

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(5) To what extent did the instructor interaction/mediation during the assessment help you enhance your grammar? Which area(s) benefitted from the interaction? Which areas did not?

(6) What specific differences did you notice between the new method of assessment (DA techniques/steps) and other methods used in assessing grammar during your last terms? Which one would you prefer? Why?

(7) Which method of interaction and/or DA techniques/steps did you find more useful? Why?

- Pretesting to find the areas of difficulty
- Discussion format sections to deal with individual areas of difficulty
- Teachers’ comments and explicit explanations
- Teachers’ hints/prompts and implicit explanations
- Teachers’ questions about why you chose the wrong answer
- Teachers’ providing several opportunities for students to self-correct
- Teachers’ providing some opportunities for peer correction
- Posttesting to check your possible improvement in grammar achievement.

(8) What advantages and disadvantages do you think this kind of assessment (DA) has had regarding grammar achievement?

(9) Did DA give you a feeling that you are going ahead faster in learning grammar?

(10) Do you think anything else has contributed to your grammar development in addition to dynamic assessment sessions? If yes, what were they? How did they help you?

(11) Do you prefer DA to be done in your future terms or the old static assessment?