The Effect of Dynamic Assessment of Toulmin Model through Teacher- and Collective-Scaffolding on Argument Structure and Argumentative Writing Achievement of Iranian EFL Learners

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Abstract

Considering the paramount importance of writing logical arguments for college students, this study investigated the effect of dynamic assessment (DA) of Toulmin Model through teacher- and collective-scaffolding on argument structure and overall quality of argumentative essays of Iranian EFL university learners. In so doing, 45 male and female Iranian EFL learners taking part in the study were randomly assigned into three groups (two experimental groups including the teacher- and collective-scaffolding and one control group), each consisting of 15 learners. Toulmin Model of argumentation was used as an instructional tool in this research. The necessary data were collected through a pre- and post-test argumentative essay. During the experiment, the dynamic assessment groups wrote and revised their essays in response to teacher's or peers' supportive dialogue and zone of proximal development (ZPD) sensitive feedback on the argument structure of their essays; whereas, the control group did not receive such mediation and they were evaluated on their own independent performance. The results of statistical analyses carried out on post-test scores on argument structure and overall quality of the essays pointed out to the outperformance of the teacher- and collective-scaffolding groups on both variables. Furthermore, follow-up Post-hoc analyses revealed no significant difference between the teacher- and collective-scaffolding groups in terms of the overall quality of the argumentative essays. However, the statistically significant difference between the two experimental groups with regard to the argument structure indicated the outperformance of the teacher-scaffolding over the collective group. The obtained results support the fact that autonomy and improvement cannot be thrust upon learners, rather they need to be assisted wisely towards independence.

Keywords: Dynamic Assessment, Toulmin Model, Teacher-Scaffolding, Collective-Scaffolding, Argument Structure, Argumentative Writing Achievement

1. Introduction

Recently, the construct of academic writing has begun to change in a way that allows learners to demonstrate their ability while fully engaged in writing process through generating ideas, structuring, drafting, revising, and editing in response to feedback (Seow, 2002; Johnson, 2008). Furthermore, the most recent view of learning to write emphasizes the role of social interaction, recognizing that "negotiation and collaboration aid the internalization of cognitive and linguistic skills, thus leading to improved writing ability" (Lockhart & Ng, 1995, p.606). Dynamic Assessment (DA) has its roots in the concept of development in Vygotsky's Zone of Proximal Development (ZPD) that stresses the integration of instruction and assessment. Vygotsky (1986) argues that language is fundamentally social, generated, and organized through continual negotiation of meaning among individuals. His argument suggests that providing novice writers with the experience of how various individuals respond, individually or interactively, to their written texts is an important element of teaching writing. Xiaoxiao and Yan (2010, p. 25) define DA as "a way of assessing the true potential of children that extends the interactive nature of learning to the process of assessment." Dorfler, Golke, and Artlet (2009, p. 77) define DA as "an approach to gaining insight into the current level of competence as well as into how this competence can be influenced by specific educational interventions". According to Lantolf and Throne (2006, p. 399), "dynamic assessment is a procedure that unites the goals of better understanding a learner's potential through structured sets of interactions and fostering development through those interactions."

Scaffolding as a construct associated with ZPD refers to adult "controlling those elements of the task that are initially beyond the learner's capability, thus

permitting him to concentrate upon and complete only elements that are within his range of competence" (Wood, Bruner, & Ross, 1976, p.90). Originally this term was used to describe the purposefully attuned assistance from adults to children; however, much Second Language (L2) research indicates that scaffolding can take place among peers collaboratively working in groups or pairs. Donato (1988) proposed the term "collaborative-scaffolding" to refer to learning occurring through peer interaction. Donato (1994, p. 46) claims that in collective-scaffolding "the speakers are at the same time individually novices and collectively experts, sources of new orientations for each other and guides through this complex linguistic problem-solving."

Furthermore, the skill of argumentation has been long viewed as an essential skill in academic settings of various levels (Nemeth & Kormos, 2001). Yet, Varghese and Abraham (1998) document the considerable difficulty students have in arguing to advocate their own viewpoints on a complex issue. The reason, they believe, is lack of sufficient and proper instruction on argumentation because the narrative and expository genres are the predominant ones for most English as a Second Language (ESL) or English as a Foreign Language(EFL) situations. In the light of this need for argumentative skills, students should be taught how to form ideas and argue for their own ideas. According to Greenwald (2007), a central step in the educational process should involve exposing students to a juxtaposition of different views and challenging them to choose their own beliefs and construct their own ideas. The next step is for students to learn both how to put an argument into words and how to critique others' arguments. Within the context of English as the First Language (L1), Toulmin Model of argument structure, proposed by the British philosopher Toulmin (1958, 2003) has been widely used in teaching and researching

argumentative writing. According to Toulmin, every argument is composed of three main elements: claim, data (evidence), and warrant. A claim is the thesis the writer supports or the position statement he or she argues. Data refer to evidence that supports the claim. Warrants are concepts, often taking the form of some rules, definition, or guiding principle that the writer cites to join data to claim. It is emphasized that not all these three elements are always explicitly stated in an argument. Toulmin (2003) goes on to add three additional second-level elements to a more complex version of his argument model including qualifier, backing, and rebuttal (counterargument). A qualifier registers the degree of force that the writer believes his or her claim holds. Backings are credentials that justify the warrants when readers are not willing to accept them at face validity. And a rebuttal anticipates certain objections and lists conditions in which warrant does not apply. When preparing argumentative writing, writers should be aware of the arguments against which they build their claims, and of the counterarguments that are likely to emerge. Toulmin's main purpose was to provide a useful and practical scheme for analyzing an argument. However, some teachers and students find his model as a basis and framework for argumentative text and structure organization.

2. Review of Literature

2.1. Dynamic Assessment

The dynamic assessment has its theoretical underpinnings in Vygotsky's writing on the ZPD. Vygotsky (1998, p. 201) questions "the prevalent view on independent problem solving as the mere valid indication of one's mental functioning". By depicting what an individual can do in the future, he provides

an insight into the person's future development. Trying to integrate assessment and instruction in a dialectical way, DA has gained a substantial interest of teachers in ESL/EFL writing classrooms, helping individuals become more efficient in their learning. Lantolf and Poehner (2008) advocate DA as indicating the learner's current ability and simultaneously promoting development via specific mediations or hints assisting him/her to overcome learning impediments. The interesting point is that unlike static assessment in which learners' correct responses are indicative of their current ability, DA focuses on the learners' errors and problems in terms of the individual's ongoing development resorting to ZPD-sensitive feedback to promote learning.

In the available Literature, DA has revealed promise in addressing some of the concerns related to static traditional assessment. Xiaoxiao and Yan (2010) conducted a case study using a simple framework of process writing according to the principles of DA. Teacher negotiation and assistance were provided in different stages of topic-choice, idea-generation, and structuring and revision. The obtained results provided support for the dialogic way of teaching in the realization of the central objectives: Learners' writing ability was substantially improved and learners' motivation was markedly stimulated. In the same line, Miao and Lv (2013) constructed a dynamic assessment writing framework integrating the three stages of the writing process into pre-writing, mediation, and post-writing dynamic assessment model. They examined the differences between the experimental and control group in terms of writing scores and writing products including accuracy, complexity, fluency, and local and global coherence. The results indicated that the dynamic assessment benefited the growth of ESL writing ability and provided effective and practical implications for ESL classroom instruction. Ghahremani and Azarizad (2013) investigated

the effect of using a simple DA model on learners' writing ability in terms of writing content and organization. The DA model covered topic selection, idea generation, and structuring, revising, intentionality, reciprocity, and transcendence. The results reiterated the great role of the dialogic way of teaching in improving learners' writing ability. Nasiri and Khorshidi (2015) zoomed on the effect of DA of formulaic sequences on the learners' overall writing quality. The students were exposed to structural hints regarding formulaic sequence use and were provided with ZPD-sensitive feedback. The data analysis revealed that DA could benefit EFL learners' formulaic sequences production in their writing skills.

As far as internet-mediated DA is concerned, Zhang (2013) concerning the theories of DA constructed an internet-mediated DA mode with specific interventional activities for Chinese tertiary EFL writing classes. The DA mode included a web-based writing teaching system, the adoption of an online automated scoring system, and the design of procedural scaffolding techniques. Zhang suggests that DA theory might be brought into the scene to promote learners' writing ability and duly the development of their English competence in the long run. Li (2013) reports a case study exploring the process of wiki-based collaborative writing in a small group of EFL learners. Scaffolded interaction was provided while learners were co-constructing texts in the wiki space. The findings showed that the participants were actively engaged in the mutual and reciprocal interaction in content discussion, social talk, task management, and language negotiation. The participants were found to have scaffolded each other's' writing efforts through multiple writing change functions such as addition, deletion, rephrasing, reordering, and correction. In a rather recent research, Ebadi and Rahimi (2019) used a sequential exploratory mix-methods

approach to shed light on the short and long term effect of online DA on EFL learners' academic writing skills through one-to-one individual and online synchronous DA sessions over Google Docs. The findings indicated writing development in all four areas of task achievement, coherence and cohesion, lexicon, and grammatical range and accuracy.

Another line of research on DA has focused on the participants' perceptions and reflections on DA effectiveness. Aghaebrahimian, Rahimirad, Ahmadi, and Khalifpour Alamdari (2014) investigated the effectiveness of incorporating DA principles on advanced Iranian EFL learners' writing ability and learners' reflections on DA effectiveness. The results confirmed that DA significantly improved learners' writing performance and that the participants advocated DA for its positive and long-lasting effects on their process of writing. Adokh and Rafiee (2017) investigated EFL learners' and teachers' perspectives on the process and practicality of a DA interventionist model in a writing course. The results revealed that student participants had rather positive opinions about DA effectiveness while teachers mostly agreed on the low applicability of DA principles in the Iranian context.

It can be noted that DA, unlike static assessment which focuses on the performance itself, concentrates on the conditions under which performance can be changed. The type of interaction and negotiation between and among individuals and the effect of this interaction on learner's performance can result in the most comprehensive reflection on learning potentials and mediation provides an opportunity for such development.

2.2. Argumentative Writing

Writing logical arguments and opinions are an important form of college- and career-readiness. Hillocks (2005) criticizes that teaching writing has mostly focused on teaching different forms of writing such as parts of paragraphs, parts of essays, the structure of sentences, and the elements of style. Hillocks (1995) views argument as a basic structure of discourse filtering everything we say and write. In line with Hillocks (1995), Newell, Vanderheide, and Olsen (2013) believe that incorporating the teaching and learning of argumentative writing within the curriculum provides avenues for rethinking the writing role.

Introducing students to the art of argumentation demands familiarizing them with the basic terms and an understanding of the components of argument as well as the processes through which examination of evidence becomes the burgeoning of a claim. In the past two or three decades, teachers and instructors have resorted to a newer treatment of argument structure developed by Toulmin (1958, 2003). Toulmin's basic classification includes the claim, evidence, warrant, backing, qualification, and rebuttals.

An overview of the related literature indicates that Toulmin Model has been used either as a framework for analyzing the argumentative essays or as an instructional tool for familiarizing learners with developing rich argument structures. As far as the former is concerned, Crammond (1998) investigated the differences among student writers at three grade levels (6, 8, and 10) and between expert writers and students. She assessed whether and to what extent student and expert essays included argument structures of claim, data, warrants, and constructed rebuttals. Crammond concluded that all participants, except one eighth and one sixth grade student, included one or more argument structure in their essays. Anyhow, it was discovered that writers in her study did

not make effective use of warrants. Furthermore, expert texts consisted entirely of argument structures and that experts created texts with a larger number of arguments and their essays were characterized by greater argument density. Qin and Karabacak (2010) conducted a descriptive study to analyze argumentative pieces of writing developed by Chinese EFL learners. The analysis of essays based on Toulmin Model indicated that an average paper included at least one claim supported by four pieces of evidence. They also found that though the utilization of counterargument claim, counterargument evidence, rebuttal claim, and rebuttal evidence act as significant predictors of the overall quality of the essays, there were far fewer samples of these elements in learners' papers.

As mentioned before, some researchers have resorted to Toulmin Model of argumentation as an instructional tool. Qin (2013) examined the effectiveness of Toulmin Model as an instructional tool for teaching argumentative writing in an EFL context. A range of activities including explicit instruction, awareness-raising, and identification of argument elements were utilized. The obtained results indicated that the students' argumentative writings enriched and comprised a more complex argument structure. Furthermore, the students reported that the course had empowered them to write better argumentative essays in the future. Greenwald (2007) after some semesters teaching argument in the first-year composition settings, was convinced of the importance of teaching students to write an argument and to think critically to develop rational arguments. He decided to focus on Toulmin Model of argumentation. The results of instructing this model emerged three basic conclusions. The first one indicates the difficult and challenging nature of teaching and learning arguments. Despite the great effort at teaching argument, students showed minimal improvement. The second conclusion expresses the fact that the

students had less difficulty with writing an argument than identifying the different elements of an argument. The third drawn conclusion states that claim is the easiest argument component for the students to handle and understand. Yeh (1998) studied the effectiveness of instructing two Toulmin-based heuristics on learners' argumentative writing. Yeh found that students learned principles rather than rote procedures for argumentation and were able to transfer and adapt their knowledge to a range of other topics. Lunsford (2002) used Toulmin Model as an instructional tool for teaching argumentative essays in a major university's summer composition program for high school students and concluded that Toulmin Model is an effective tool for writing instruction besides being a useful framework for evaluating writers' written products.

Yet, some research articles have incorporated the effect of scaffolded mediation of Toulmin Model on the quality of learners' writing. For example, Wilson (2014) examined the effectiveness of scaffolded instruction of Toulmin Model on problem-solving processes and the quality of writers' written products. The results indicated that the participants were able to move beyond knowledge telling to knowledge transforming, moving back and forth between problem spaces of content and rhetoric, thus being more effective in handling the audience-related task demands of warranting claims and providing convincing supporting data. Anyhow, the intervention instruction of Toulmin Model did not prove effective in empowering the participants to handle the writing task more effectively. Shabani (2018) explored the effect of a group-based format of DA in a writing context through providing prompts, hints, and scaffolding during all writing stages. The obtained results revealed the outperformance of group-DA. The qualitative results of the micro genetic analysis confirmed the effectiveness

of group-DA in diagnosing the sources of learners' writing difficulties and its role in promoting the abilities in the level of maturation.

As the literature review indicates introducing students to the art of argumentation through familiarizing them with the basic terms and elements is of paramount importance. The considerable cognitive demands of argumentative writing for students and the assessment burden on the shoulders of teachers demand much more effective instruction and assessment procedures to facilitate the writing and evaluation processes. Furthermore, the existing gap in the literature with regard to the role of DA in promoting writing text structure and comparing the effect of individual and collective scaffolding in argumentative writing sheds light on the significance of this study. Therefore, this study aims to investigate the effectiveness of dynamic assessment of Toulmin Model through teacher- and collective-scaffolding on argument structure and argumentative writing achievement of Iranian EFL learners. In this regard, the researcher tries to provide answers to the following research questions:

1. Does dynamic assessment of Toulmin Model through teacher- and collective scaffolding have any significant effect on the argument structure of Iranian EFL learners?

2. Is there any significant difference between the effectiveness of the dynamic assessment of Toulmin Model through teacher- and collective-scaffolding on the argument structure of Iranian EFL learners?

3. Does dynamic assessment of Toulmin Model through teacher- and collective-scaffolding have any significant effect on the overall quality of Iranian EFL learners' argumentative writing?

4. Is there any significant difference between the effectiveness of dynamic assessment of Toulmin model through teacher- and collective-scaffolding on the overall quality of Iranian EFL learners' argumentative writing?

3. Method

3.1. Participants

The participants taking part in this study were 45 male and female Iranian EFL students aged between 21 and 28 majoring in English Literature and Translation at the University of Sistan and Baluchestan. It should be mentioned that there was no randomization and the participants were selected according to convenience sampling from the learners who were already available.

3.2. Instrumentation

3.2.1. Toulmin Model of Argument Structure

Stephen Toulmin's model of constructing and analyzing a persuasive argument for objectively analyzing and weighing points for and against an argument was used as an instructional tool to help learners overcome the natural difficulties adherent to developing arguments. As mentioned before, Toulmin breaks an argument down into six main parts.

3.2.2. Pre-test and Post-test Argumentative Essay Writing

In order to investigate the effectiveness of the dynamic assessment shown through the performance of the control and experimental groups, the students were asked to write argumentative essays at the beginning and at the end of the

course, functioning as pre- and post-test of this study (for topics see Appendix A). The topics were selected from the Opposing Viewpoints Resource Center (OVRC) database (http://www.gale.cengage.com/pdf/facts/ovrc/pdf).

3.2.3. Scoring Scale

The Multiple Trait Scoring proposed by Hamp-Lyons (1992) was used for assessing the overall quality of students' writings. To develop scoring criteria and standards based on the Hamp-Lyons (1992), a group of three experts rather than a single one were employed to take into account the specific context and a range of levels appropriate to the context. The readers decided on six criteria (the nature of ideas, reasonable context, development of specifics, text structure, control of the language use, and communication effectiveness), all of which were both scored and ideally reported. The actual scoring involved two readers for each text, with a third reader if those two disagreed. Then two/three readers' scores were summed and averaged to arrive at the final, single-number score for research use.

For evaluating the argument structure of essays Toulmin-McCann rubric devised by McCann (1989) was utilized to assess essays for the presence and use of Toulmin-related elements. This scoring rubric evaluates the existence and quality of claims, data, warrants, propositions, oppositions, and responses to opposition on scales of 0, 2, 4, and 6 for the first three criteria and scales of 0, 1, 2, and 3 for the last three elements. Therefore, it yields a maximal score of 27 for a rich argumentative essay. Like the overall quality, to come up with final and single-number scores the two/three raters' scores were summed and averaged.

3.3. Procedure

After randomly assigning the participants into three groups each consisting of 15 learners, in order to check the homogeneity of the groups at the outset of the experiment, all groups were asked to write an argumentative essay, functioning as the pre-test in this study.

Then during the first session, Toulmin model of argumentation was introduced to students of all groups and one sample argumentative essay written by an expert was analyzed within the classes by teacher's help. The students were asked to analyze another essay based on Toulmin model the other session within the class by themselves.

Then throughout the three-month semester, all students were required to write 4 argumentative writing assignments on the assigned topics (see Appendix B). Like the topics for the pre- and post-tests, these topics were selected from the Opposing Viewpoints Resource Center (OVRC) database. In the control group, the students' writings were gathered by their teacher and the students received feedback on the overall quality of their essays as well as the argument structure of their writings in the form of some written comments. The key difference between the control and the experimental groups was that in the experimental groups the participants received supportive dialogues during the process of writing either from the side of their teacher or a small group of their peers and there was a focus on the close integration of instruction and assessment. In other words, following Lantolf and Poehners's (2004) interventionist model, the dynamic assessment groups wrote their essays while they received teacher's or peers' support especially regarding the argument structure whereas the control group did not receive such mediation and they were evaluated on their own independent performance. The instructor tried to

offer ZPD-sensitive feedback and displayed a preference for having the students identify problems themselves and self-correcting them without waiting for the instructor's directive to do so. In the collective-scaffolding group, the learners were asked to analyze the argument structure of their peers' pieces of writing and to comment and provide support on the argument structure of their essays.

Finally, at the end of the course, all participants were asked to write an argumentative essay, functioning as the post-test, to investigate the effect of treatments on their argument structure and argumentative writing achievement. The scoring procedure for the post-test was quite similar to that of the pre-test. Control and experimental groups were compared on the basis of their mean scores. Furthermore, it should be mentioned that alpha was set at .05 for all statistical analyses.

4. Results

In line with the posed research questions of the study, 4 null hypnoses were formulated. To test each hypothesis, the relevant data were collected and analyzed. In what follows, the obtained results are presented.

4.1. The Argument Structure

Before running the statistical analyses, the collected data were checked for the assumption of normality of distribution to make sure of running One-way ANOVAs. Table 1 reports the obtained results.

Table 1. *Tests of Normality*

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PreTest	.080	45	.200[*]	.976	45	.478
PostTest	.115	45	.163	.974	45	.404

As Table 1 presents, since the significance levels of Shapiro-Wilk test which is mostly used for small sample sizes (<50 samples) are larger than .05 for both pre- (p= .478> .05) and post-test (p= .404> .05), it can be safely concluded that the data were normally distributed. Then, at the outset of the experiment, a One-way ANOVA was run on the pre-test scores on the argument structure to check whether the participants were homogenous with regard to the argument structure of their essays. The results are reported in Table 2.

Table 2. *ANOVA Results for Pre-test Scores on Argument Structure*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.578	2	.289	.041	.960
Within Groups	293.200	42	6.981		
Total	293.778	44			

Based on the obtained results, $F_{(2, 42)}$=.041, p=.960>.05 shows that there is no significant difference regarding the argument structure of the essays among the three groups at the beginning of the study. Therefore, it can be safely concluded that the three groups were homogeneous at the outset of the experiment. Addressing the first research question of the study, concerning the effect of dynamic assessment through teacher- and collective-scaffolding on the argument structure of the essays, a One-way ANOVA was performed on our three groups' post-test scores. Table 3 reports the results.

Table 3. *ANOVA Results for Post-test Scores on Argument Structure*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	533.644	2	266.822	17.507	.000
Within Groups	640.133	42	15.241		
Total	1173.778	44			

An F-ratio of $F_{(2, 42)}=17.507$, p=.000<.05 points out that the first null hypothesis of the study is rejected due to a statistically significant difference among the groups. To find the location of the differences and to test the second null hypothesis of the study, a Post-hoc Turkey HSD test was carried out. The results are presented in Table 4.

Table 4. *Multiple Comparisons on Argument Structure*

	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Turkey HSD	Control Group	Teacher-Scaffolding	-8.400[*]	1.426	.000
		Collective-Scaffolding	-4.867[*]	1.426	.004
	Teacher-Scaffolding	Control Group	8.400[*]	1.426	.000
		Collective-Scaffolding	3.533[*]	1.426	.045
	Collective-Scaffolding	Control Group	4.867[*]	1.426	.004
		Teacher-Scaffolding	-3.533[*]	1.426	.045

The mean differences reported in Table 4 indicate that there is a statistically significant difference between each pair of comparisons. The most significant difference lies between the teacher-scaffolding and control group with a mean difference of M=8.400, p=.000<.05. Based on the mean differences, the three groups can be ordered in this way with regard to the argument structure of their essays: (1) teacher-scaffolding (2) collective-scaffolding (3) control group. However, as presented in Table 4, there is also a significant difference between the teacher- and collective-scaffolding with a mean difference of M=3.533,

p=.045<.05. Therefore, it can be safely concluded that the second null hypothesis was also rejected.

4.2. The Overall Quality

Concerning the effect of dynamic assessment on the overall quality of the essays, first, a One-way ANOVA was run on the pre-test scores on the overall quality of the essays. The results are reported in Table 5.

Table 5. *ANOVA Results for Pre-test Scores on Overall Quality*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.878	2	.439	.077	.926
Within Groups	240.233	42	5.720		
Total	241.111	44			

As Table 5 reveals, an F-ratio of F (2, 42)=.077, p=.926>.05 shows that there is no significant difference in terms of the overall quality of the essays of the three groups at the beginning of the study. Therefore, it can be safely concluded that the three groups met the condition of homogeneity.

Anyhow, to evaluate the effectiveness of the treatment on the overall quality of the essays and to test the third hypothesis, another One-way ANOVA was run on participants' post-test scores. The results are depicted in Table 6.

Table 6. *ANOVA Results for Post-test Scores on Overall Quality*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	94.078	2	47.039	12.983	.000
Within Groups	152.167	42	3.623		
Total	246.244	44			

As the results of Table 6 show, an F-ratio of F (2, 42)=12.983, p=.000<.05 indicates a statistically significant difference among the three groups; therefore, the third null hypothesis of the study was strongly rejected. Anyhow, to find the location of the differences and to test the fourth null hypothesis of the study, a Post-hoc Turkey HSD test was carried out. The results are presented in Table 7.

Table 7. *Multiple Comparisons on Overall Quality*

	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Turkey HSD	Control Group	Teacher-Scaffolding	-3.0333[*]	.6950	.000
		Collective-Scaffolding	-3.1000[*]	.6950	.000
	Teacher-Scaffolding	Control Group	3.0333[*]	.6950	.000
		Collective-Scaffolding	-.0667	.6950	.995
	Collective-Scaffolding	Control Group	3.1000[*]	.6950	.000
		Teacher-Scaffolding	.0667	.6950	.995

The mean differences reported in Table 7 indicate that there is a statistically significant difference between each experimental group and the control group. The most significant difference lies between the collective-scaffolding and control group with a mean difference of M=3.100, p=.000<.05. Based on the mean differences, the three groups can be ordered in this way with regard to the overall quality of their essays: (1) collective-scaffolding (2) teacher-scaffolding (3) control group. However, as presented in Table 7, the mean difference of M=.066, p=.995> .05 indicates that the difference between the collective- and teacher-scaffolding is not significant. Therefore, it can be safely concluded that the fourth null hypothesis was confirmed.

5. Discussion

This study was mainly concerned with investigating the effect of dynamic assessment through teacher- and collective-scaffolding on argument structure and the overall quality of argumentative pieces of Iranian EFL writers. The findings provide evidence for the effectiveness of ZPD wise feedback and support and the fact that altering or individualizing assessment can propel learners toward more mastery. The outperformance of the two experimental groups can be attributed to the dynamic nature of assessment instead of just assessing the completed products. In the experimental groups, the assessment entailed helpful insights and interventions when problems surfaced. The findings on the first research question emphasize the teachers' responsibility to make the students familiar with argument structure and introduce them to the argument notions and the great role and contribution of argument structure in developing an effective and rich argumentative essay. What has emerged from this study is that knowledge of argument structure can provide a foothold for the students to see how to manipulate language to achieve their specific purposes as writers. This indicates that one of the main reasons for the weak argument structure among EFL students is the fact that they are not instructed on the elements of an argument. In most cases, even the instructors themselves may not be aware of and familiar with argument structure elements.

The findings concerning the dynamic assessment of argument structure support and are in line with Qin (2013), Yeh (1998), and Lunsford (2002) who evaluated Toulmin model as an effective instructional tool enriching the students' argumentative essays in terms of including more complex argument structures. However, Greenwald (2007) came up with the idea that students showed minimal improvement due to the demanding and challenging nature of

argumentation. However, the significant outperformance of the teacher- over collective-scaffolding group may have been due to students' unfamiliarity with argument structure and the difficult task of eliciting and analyzing the argument structure of their classmates' essays. As Tudge (1999) stated, student mediators need to have knowledge and expertise at a more advanced level than the students themselves to be able to function as successful as teacher mediators. The results are in line with the only available literature, Riazi and Rezaii (2011) who compared the effect of teacher- and peer-scaffolding on EFL students' writing ability and concluded that teacher-scaffolding appeared to be more successful and that teachers used more mediating behaviors.

Concerning the third question regarding the effect of scaffolding on the overall quality of the essays, the findings provide evidence for the contribution of genre knowledge to writing quality and that awareness of a particular genre in addition to communicative aims serves as the basis of generating ideas in the process of writing (Chenoweth & Hayes, 2003). The findings are in line with Olinghouse and Wilson (2013) who reported that even word choices of the students improved as their genre knowledge increased and Lu (2010) and Graham (2006) who concluded that genre knowledge serves as an indicator of writing performance through contributing to an understanding of rhetorical moves and structuring the texts taking the unique purpose of writing into account.

The findings also support Uzun (2017) who investigated the relationship between genre knowledge and writing performance and concluded that the performance related to the content, organization, vocabulary, and language use in writing increased parallel to the level of genre knowledge. The results also indicate that both teacher- and collective-scaffolding proved effective in helping

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the students with just-in-time assistance, altering the assessment into a dynamic process, and a powerful teaching opportunity benefiting the learners. The findings, in general, are following Xiaoxiao and Yan (2010), Miao and Lv (2013), Ghahremani and Azarizad (2013), Nasiri and Khorshidi (2013), Zhang (2013), and Aghaebrahimian et al. (2014) who all confirm the significant role of DA in improving learners' writing performance.

6. Conclusion

Generally, it can be concluded that the assessment feedback most useful to the students is that which provides them with direct usable insights into their current performances. Moreover, the students should be reminded of the audience-awareness nature of the writing task, that is, what they write is to be read not just judged to be scored. It should be reminded that this study is not without limitations. First of all, due to the small number of participants, other researchers are recommended to replicate the study with larger samples. Furthermore, among different available models of argumentation, Toulmin Model was employed in this study. It would be beneficial to use other argumentation models to see whether similar results would be obtained or not. Another line of research can focus on comparing the effect of teacher- and collective scaffolding on other writing genres. Finally, tracking learners' microgenetic development by evaluating their pieces of writing between pre- and post-test can yield interesting findings and a more vivid picture of DA effectiveness.

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Appendix A

Pre-test Topic

Some people think that the internet has caused a lot of harm to young people. Others argue that the internet has brought a lot of benefits to young people. Where do you stand in this debate?

Post-test Topic

Some people believe that social networking makes us a better connected society. Some others claim that it kills communication. Which position do you support?

Appendix B

Assignment Topics

Assignment 1

Single-sex universities benefit students and are good for education. Do you agree?

Assignment 2

Some people argue that single people should be able to adopt children as easily as couples. Do you think the same way?

Assignment 3

Argue for or against home-schooling education vs. public education.

Assignment 4

Some people believe that computer skills should be a fundamental part of education. Do you agree?