The Effect of Scaffolded Written Corrective Feedback on Iranian EFL Learners' Writing Quality: An Activity Theory Perspective

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Abstract
With the latest paradigm shift in SLA from Cognitivism to Sociocultural Theory (SCT), more studies are carried out to investigate the efficacy of Written Corrective Feedback (WCF) through a social and cultural lens. A more recent offspring of SCT is Activity Theory which provides an explanatory framework for scrutinizing an activity in a social setting. The present study aimed at investigating the impact of Scaffolded WCF within the framework of Activity Theory on Iranian EFL learners' writing performance in terms of reduction of the learners' writing errors with respect to the content, vocabulary, mechanics, organization, and grammar. Finally, different types of Activity Theory-based strategic mediations (i.e. artifact, rule, community, and role mediations) Iranian EFL learners employed in their writing revisions were investigated. Accordingly, 25 Iranian university-level students, through convenient sampling, were chosen to participate in the study. The treatment they received on their writings was a graduated Scaffolding WCF in their Zone of Proximal Development in the form of both peer and teacher feedback. The findings indicated that Scaffolded WCF statistically significantly contributed to the participants' writing performance in terms of content, vocabulary, mechanics, organization, and grammar. With respect to the mediation strategies used by the learners, it was discovered that the learners benefitted from all the available mediators although with various degrees. It is hoped that the findings of this study will promise implications for promoting a teacher/learner-friendly method of providing WCF based on SCT, which can be utilized in large classes typical of Iranian EFL university courses.

Keywords: Activity Theory, Second Language Acquisition, Second Language Writing, Written Corrective Feedback, Scaffolding, Scaffolded Feedback

Introduction

Since the emergence of process writing, providing feedback on the learners' first writing drafts has been a concern for writing teachers. Nowadays, the majority of language teachers and researchers consider corrective feedback the sine qua non of language learning since correcting the learners' errors, they believe, helps students recognize their linguistic shortcomings (Ferris, Liu, Sinha & Senna, 2013; Han & Hyland, 2015; Liu & Brown, 2015, Yu & Hu, 2017; Nassaji, 2018). However, writing correction has generally been considered a cumbersome ordeal among language teachers as it is too demanding and time-consuming (Zamel, 1985) and "can be fraught with problems" (Lee, 2017, p.60). However, a critical review of the WCF literature by Truscott

(1996) appalled the proponents of corrective feedback by saying that "grammar correction has no place in writing courses and should be abandoned" (p. 328).

Truscott's views, which he has reiterated many times ever since (Truscott, 1999; 2007; 2016), sparked a heated debate among L2 writing scholars and a new wave of research urged by researchers emerged and thrust the studies on WCF into the limelight. Despite the plethora of research on the efficacy of different types of WCF, the results are still discrepant and conflicting.

With the recent paradigm shift from cognitivism to the sociocultural theory in both SLA in general and in writing studies in specific, investigating the L2 writing and its relationship with the context, reconceptualizing writing strategies within the sociocultural framework has gained considerable prominence (Lantolf & Thorne, 2006). In the past decade, a new strand of research on the efficacy of WCF has been introduced and found prevalence among some researchers. These researches (Niami, 2011; Zhu & Mitchell, 2012; Mak & Lee, 2014; Yu & Lee, 2015) have adopted Activity Theory, an offshoot of SCT, as an explanatory tool which elucidates the mediating factors during feedback provision and text revision episodes in writing classes.

Studying the mediation strategies through the lens of Activity Theory can elucidate the complex nature of writing classroom dynamics and interactions as well as the strategies student writers adopt during the feedback phases. However, the existing literature has, to date, failed to address the issue of adopting such a method in large classes and the designs are inapplicable to real college writing classrooms. The present study sought after filling this gap.

Evidently, this is a promising approach to investigating the nature of writing classroom interactions. Furthermore, as the existing literature implies, a WCF method designed based on the tenets of sociocultural theory is tenable. Accordingly, the present study adopts Activity Theory as its major theoretical framework and investigates the efficacy of Scaffolded Written Corrective Feedback in EFL writing classrooms.

Review of Literature

Activity Theory: Nature and Scope

Traditionally, within the cognitive and social sciences, there has been discord between individual and social accounts that often has resulted in contradictory stances. Activity theory opposes this partition but provides accounts where both collective and individual activities can be seen to converge, by operating with a number of different units and levels of analysis. This also puts more emphasis on the nature of the relations and activities between the organisms engaged in the activity and their technological artifacts in comparison with other theories. The role technological artifacts (e.g. cyber networks) play in workplace activities has begun to be investigated more fully. It is due to the fact that the concept of mediation is the core of activity theory (Kaptelinin, Kuutti, & Bannon, 1995). Activity Theory is a framework or descriptive tool (Nardi, 2005) that provides "a unified account of Vygotsky's proposals on the nature and development of human behavior" (Lantolf, 2006, p. 8).

Engeström (1999) argues for the existence of three generations of Activity Theory which have been set forth in the six decades since Vygotsky's death. This first approach drew heavily from Vygotsky's concept of mediation.

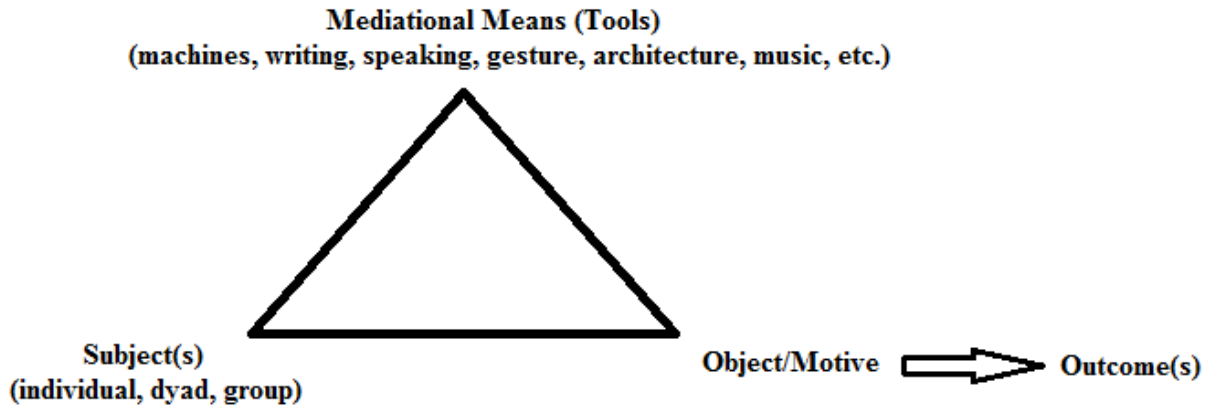

Figure 1. *First generation activity theory model (Engeström, 1999, p.30)*

He set forth the idea that the objects distinguish different activities and that it is the transformation of the object/goal that results in the integration of elements of the activity system.

Engeström (1999, p. 29) argues that the second generation of Activity Theory advocates the study of artifacts "as integral and inseparable component of human functioning", but he explicates that its relationship with other components of an activity system should be the focus of mediation studies. "Leontiev distinguished between the material objective and affective motives of activity, seeing objective purpose as translating motive into a physical act, transforming the internal plane to the external world and driving activity through the formation of goals" (p. 29).

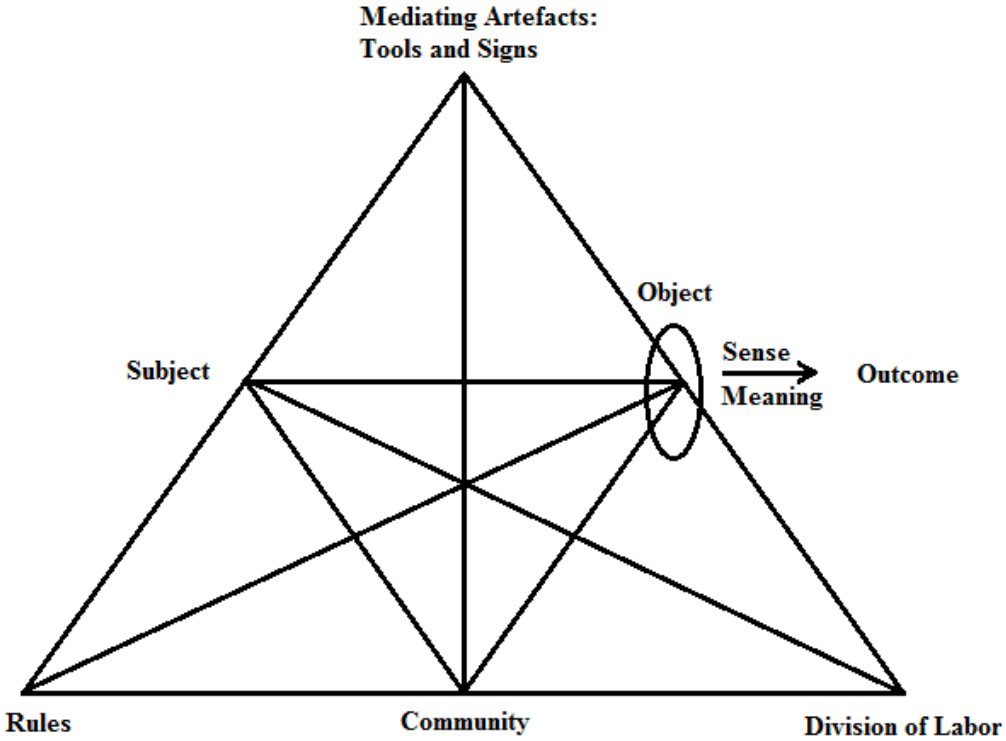

Figure 2. *Second generation activity theory model (Engeström, 1999, p.31)*

The significance of this second generation of Activity Theory was that it shed light on the interrelations between the individual subjects and their community. This model of the structure of

activity system was developed by Engeström (1987) which incorporates the interacting elements of subject, object, tools (instruments or artifacts), division of labor, community, rules, and outcome.

The third generation of Activity Theory has been developed by Engeström (2001) and aims at establishing conceptual tools for understanding the nature of dialogues, various points of view and interaction networks in activity systems. He founds his theory on ideas of dialogism and multi-voicedness in order to expand the second generation's framework.

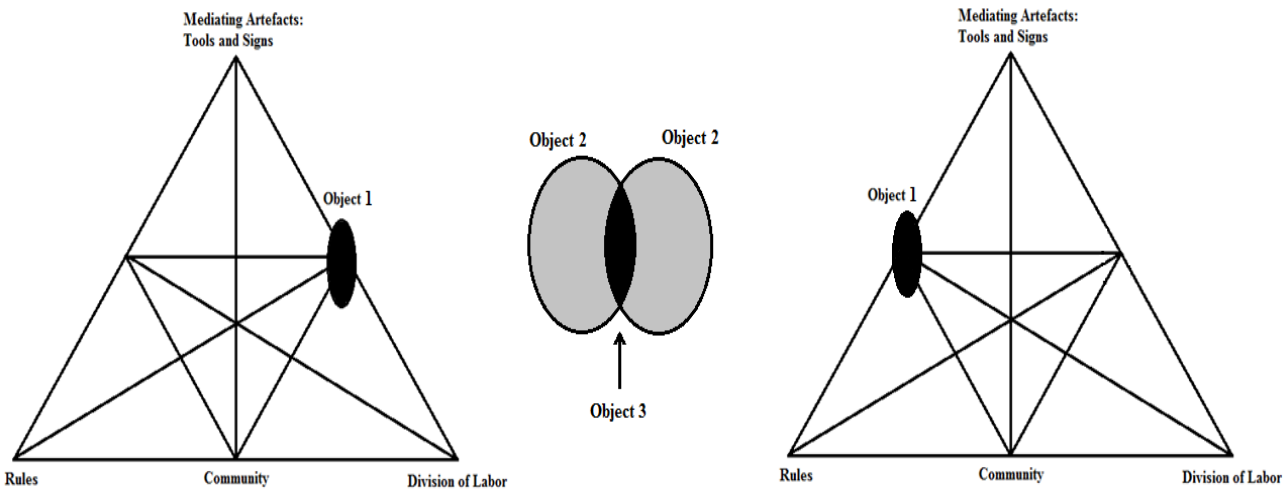

Figure 3. *Third generation Activity Theory model (Adapted from Engeström & Sannino, 2010, p.6)*

Activity Theory and Second Language Education

Sociocultural factors are integral parts of language learning, where language is considered a cultural artifact which mediates thinking and communication among people and within an individual him/herself. This cultural/historical perspective led to an epistemological shift away from Cartesian theories of cognition that isolate the individual mind from society and culture (Thorne, 2004). Activity Theory posits more holistic approaches to SLA research and practice (Lantolf & Thorne, 2006). It intends to transform practices in the way that they can improve the conditions and outcomes of language teaching/learning, by introducing additional mediation, providing different rules of engagement, and gathering individuals/communities with various previous histories.

In the classroom setting, even when the learners seemingly adopt the same behaviors, from a cognitive perspective they are always undertaking the activity differently and direct the activity in specific ways according to their different individual history, goals, and motives. It is not required that all learners in the classroom have a shared goal for learning. What is of great significance to learning is the activity because it is what shapes the learners' orientation to learn or not.

The Role of WCF in Activity Theory

Activity Theory has recently crept its way into the milieu of SLA research. Therefore, studies on WCF conducted in the framework of Activity Theory are quite rare. Below, a number of such studies are reviewed.

Drawing upon Engeström's (1987) version of Activity Theory, Lee (2014) addresses the limitations of traditional feedback approaches in EFL school contexts and accentuated the need to replace these approaches with more effective practices specifically those which are based on Activity Theory. She further suggests that the components of Activity Theory are applicable to writing classes in general and WCF in specific. Although enlightening, this paper fails (or at least does not intend) to provide a set of practical guidelines for implementation of Activity Theory-based WCF in EFL classroom.

More recently, Lee (2017) has remedied the practical gap and has offered a set of guidelines for implementing negotiated WCF in the classroom, which in turn can be investigated through the lens of Activity Theory. However, the author has lavished all her attention to peer feedback, and teacher feedback has been only marginally treated.

In a case study, Zhu and Mitchell (2012) examined two ESL learners' peer response stances from an Activity Theory perspective. They built the theoretical framework of their study on Leontiev's (1978) constructs of activity and motive/object. The data included recordings of peer response sessions and individual interviews. The results indicated that each participant had an idiosyncratic motive/object for participating in peer response and that these motives/objects motivated the students' peer response stances.

In a further case study, Mak and Lee (2014) used Activity Theory framework to explain how four elementary teachers in Hong Kong attempted to foster change in assessment by implementing in the L2 writing classroom dominated by the examination culture. Based on the data obtained from classroom observations and interviews with teachers and administrators of two elementary schools in Hong Kong during an academic year, this study revealed the tensions and contradictions that arise as a result of the introduction of Activity Theory in writing. They concluded that such tensions cannot be overcome unless the contradictions in the activity systems can be resolved.

In the same vein, Yu and Lee (2015) in their case study, guided by the constructs of activity and motive in Activity Theory, investigated two Chinese university students' motives for participating in group peer feedback activities in the EFL writing classroom. Obtained data indicated that EFL students' group peer feedback activities are directed by their motives, which are shaped (mediated) by the sociocultural context. The findings also demonstrated that students' motives could have a direct impact on students' participation in group/peer feedback activities and their subsequent revisions.

Looking at the issue from a different angle, Niami (2011) investigated possible differences among four groups of students receiving four types of feedback--questions, statements, imperative sentences, and indirect statements or suggestions--on their writings regarding local and global errors. A mediated strategy questionnaire, designed and validated, was used to investigate students' revision within the Activity Theory framework. The participants were 140 Iranian university students. The data were accumulated in six phases of writing the first draft, receiving teacher-written feedback, revising the first draft on the basis of teacher feedback, an interview session, completing a process log, and answering the mediated strategy questionnaire. Although quantitative analysis of data did not suggest any statistically significant difference among the four groups, the content analysis revealed students' preferences for feedback. In addition, there was no significant relationship among the four types of mediated strategies and students' revision.

As surveyed above, to date there have been very few studies investigating the efficacy of WCF through the lens of Activity Theory most of which are either case studies (Zhu & Mitchell, 2012; Mak & Lee, 2014; Yu & Lee, 2015; Lee, 2017), exclusively consider peer response or

teacher feedback (Niami, 2011), or merely offer an explanatory account of the issue at stake (Lee, 2014). The present study intends to avoid the caveats of previous studies and at the same time shed light on how Scaffolded WCF within the Activity Theory framework impact different aspects of second language writing achievement. Accordingly, in this study, the following research questions were raised:

Q.1. Does providing Scaffolded Written Corrective Feedback have any statistically significant impact on Iranian EFL learners' writing quality in terms of content, organization, vocabulary, grammar, and mechanics?

Q2. What types of mediation strategies (based on Activity Theory) do the Iranian EFL learners adopt to revise their paragraphs?

Methodology

Participants and the Context of the Study

The study involved 25 (N=25) university-level students majoring in English Translation (20 females and 5 males) from two Advanced Writing classes (aka Paragraph Writing) at a university in Tehran, Iran. The participants' age spanned from 19 to 43 with an average of 23.3 (M=22.3). The Advanced Writing course as guided by the requirements of Iran's National Teaching Syllabus for university students majoring in English Translation, developed by Iran's Ministry of Science, Research and Technology, is a 16-session (each session is 90 minutes long) compulsory course. The intended outcome is for the students to learn different methods of paragraph development in English. During the course, the students are acquainted with different types of paragraphs including illustration (exemplification), description, process analysis, comparison/contrast, cause/effect, definition, and classification.

Despite the theoretical popularity of the process writing, university-level writing instructors, in effect, simply adhere to product-oriented approaches to teaching L2 writing. The adopted approach is essentially single-draft and form-focused with minimal (if any) focus on revision. The utilized corrective feedback types are generally explicit and limited to the form and the content is solely trivially addressed. The source of feedback is exclusively the instructor and peer interaction/collaboration is generally overlooked.

This study, however, took a different pedagogical stance by adopting a multiple-draft approach which incorporated teacher-student as well as student-student negotiation of form and meaning.

Design

A mixed-methods design was used for conducting the research study. With respect to the quantitative aspects, a repeated-measures design, including a pre-test, an immediate posttest, and a delayed posttest was adopted. However, the qualitative research question was dealt with through triangulation of data (i.e. classroom recordings, questionnaire, and field notes).

Instrumentation

Eight instruments were used in the present research: (1) a general language proficiency test (TOEFL), (2) a writing pretest, (3) immediate writing posttest, (4) delayed writing posttest, (5) writing tasks (throughout the course), (6) students' mediation strategies questionnaire, (7) writing quality scoring scheme, (8) field notes, and (9) classroom recordings.

General Proficiency Test

A mock version of TOEFL (Phillips, 2001) was given to the participants of the study at the first session of the course in order to establish whether there are any differences in their general language proficiency, so as to ensure the homogeneity of the participants. Due to the nature of this study, only four sections (the written sections) of the test were utilized:

Section I: Structure and written expressions (40 items)

Section II: Vocabulary (30 items)

Section III: Reading comprehension (30 items)

Section IV: Test of Written English (TWE) (a 150-word long paragraph)

The total score of the test is 130. To ensure the content validity of the instrument, two experts reviewed the items. In addition, the internal reliability of the instrument was estimated (Cronbach's $\alpha = 0.832$).

Pre-test, Immediate Post-test, and Delayed Post-test

For the pretest, immediate posttest, and delayed posttest, the participants were required to accomplish three expository writing tasks.

Writing Tasks

Students performed seven writing tasks on the assigned topics (i.e., exemplification, description, definition, cause/effect, comparison/contrast, classification, and process) each including roughly 150 words during a period of sixteen weeks.

Students' Mediation Strategies Questionnaire

Following Lei's (2008) categorization of writing revision strategies, Niami (2011) has developed and validated a 23-item questionnaire. This questionnaire was adopted in this study and was administered to the student writers. These mediation strategies are based on the components of Activity Theory (Engeström, 2016). Lei (2008) classified strategic mediations as follows:

1)Artifact-mediated process: This type of mediation consists of utilizing the internet, reference books such as dictionaries and grammar books, L1, and L2.

2)Rule-mediated strategies: When the students are asked to revise their writings, they are supposed to be conscious of some rules and criteria according to which they develop their ideas. These rules and criteria can include rhetoric, teacher‘s evaluation criteria, and time limitation.

3)Community-mediated strategies: While revising their writings, the students might ask the members of their community for help. These members include their classmates, other university instructors, or their friends and family members.

4)Role-mediated strategies: The students play at least two roles while revising. The first role is as the author of the piece of writing, and the other one is as a language learner.

Due to the limited number of participant, the students' mediation strategies questionnaire did not undergo a robust mathematical analysis and the researchers merely content validated the instrument and estimated its internal reliability (Cronbach's $\alpha = 0.72$).

Writing Quality Scoring Scheme

In order to evaluate the writing performance of the participants, the composition scoring scheme developed by Jacobs, Zinkgraf, Wormuth, Hartfiel, and Hughey (1981). This writing scheme assesses the student writers' writing performance on the basis of five categories of content, organization, vocabulary, language use (i.e. grammar), and mechanics of writing.

Field Notes

Due to the contingent nature of the classroom dynamics and for or the purpose of later analysis of the qualitative data, the researchers took note of the potentially important and unanticipated classroom interactions and raised questions or contradictions. The qualitative data obtained through the field-notes later were utilized to interpret and elucidate the findings of the study.

Classroom Recordings

Some of the peer feedback instances were randomly audio recorded throughout the course so they could be analyzed to gain insights into the nature of the peer-peer negotiations (see the Appendix).

Procedure

Prior to the commencement of the study, in order to ensure the homogeneity of the participants in the study, a mock version of TOEFL taken from the book Longman Preparation Course for the TOEFL Test (Phillips, 2001) was administered to the participants and the participants whose scores lay within one standard deviation above and below the mean score were selected.

Then, at the first session of the course, the selected participants were required to write an expository paragraph based on a given topic. As per the instructor's instructions, the paragraphs were supposed to contain around 150 words. These paragraphs were not corrected and the instructor returned the papers to the students at the end of the course so the students could compare their initial performance with their final work.

Prior to the commencement of the procedure and in order to acquaint the participants with ways they could provide fair and accurate peer feedback, the instructor conducted a one-hour workshop in which the participants were acquainted with the potential benefits of peer feedback and were trained to provide effective peer comments. For this purpose, the instructor provided the students with a set of guidelines (in form of questions) which drew their attention to different aspects of the written text such as content, organization, vocabulary, etc. In the same workshop, the characteristics of a sound paragraph were discussed and examples were shown to the students. In the first session of the treatment process, after writing their first draft, students handed over their writings to the instructor. The instructor decided whether the draft needed feedback on forms, content, or both. As the previous research has indicated, Iranian EFL learners acting as peer reviewers tend to equate feedback to commenting solely on the formal errors and ignoring the content errors (Author, 2015). In order to counter this tendency, the instructor assigned two different students to provide peer feedback on either content errors or formal errors (if any comment was necessary); therefore, the peer reviewers were spurred to pay the due attention to both types of errors. The drafts, along with the comments, were returned to the student writers to revise the text based on the comments they had received. The second draft was submitted to the instructor again, and he commented on any probable remaining errors. Finally, the student writers revised the second draft and submitted the final draft to the instructor. After this final revision, the instructor conducted whole-class conferences addressing the common errors the student writers had made hoping that they would learn from each other's mistakes. In the treatment phase, the student writers were required to write seven unique paragraphs on the assigned topics. The modes of these paragraphs were cause/effect, comparison/contrast, definition, description, process, exemplification/illustration, and classification/division.

It must be mentioned that the comments both the peers and the instructor provided were initially indirect WCF in the form of indicating and locating (underlining) the errors and keeping the explicit explanation or provision of the correct form to the bare minimum.

Example:

*I prefer <u>to living</u> in an apartment than in a house.

A more explicit explanation was provided only if the provided feedback did not lead to uptake (i.e. the student writer could not correct the error or did not understand the purpose of the comments). These explicit comments were provided orally.

Example:

*I prefer to living in an apartment than a house.

Peer oral comment: You can't use infinitive and gerund at the same time. Use either 'to' or '-ing'.

The reason behind this is that while providing scaffolded corrective feedback based on sociocultural theory the first feedback move must be as implicit as possible (Aljaafreh & Lantolf, 1994) to engage the student writer more cognitively (and therefore contribute to their microgenetic growth) and hopefully increase the chance of noticing the errors by the writer. The procedure has been illustrated in a flowchart in Figure 4.

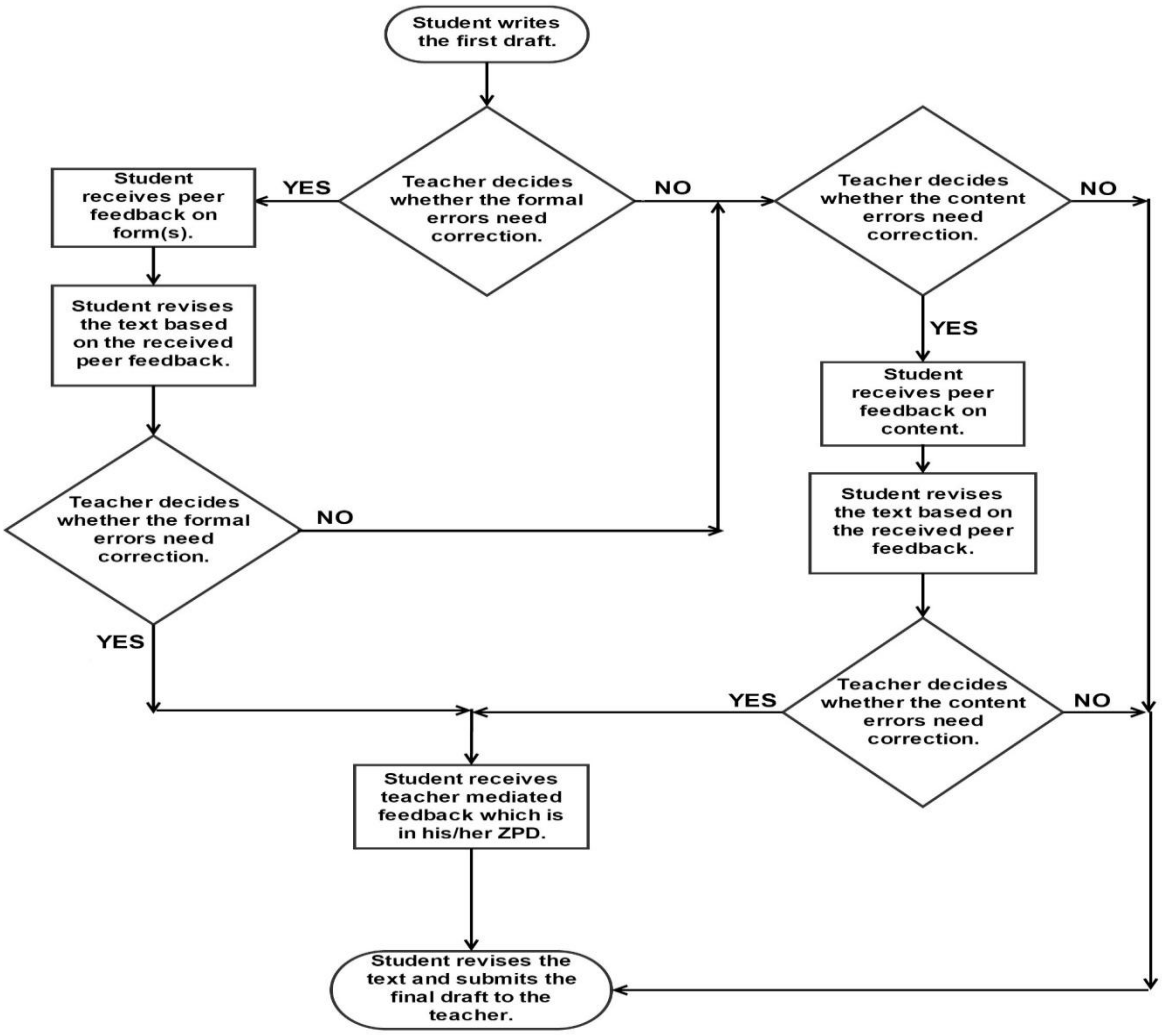

Figure 4. *The flowchart of the treatment procedure*

One week after the submission of the final draft of the seventh paragraph, student writers were given an immediate posttest on one of the seven paragraph types addressed during the course. The delayed posttest was given one month after the immediate posttest. After the posttest, the students were asked to answer the mediation strategies questionnaire.

The students' drafts in the pretest, the posttest, and the delayed posttest were scored by two raters (one of the researchers and a writing instructor who had three years of experience teaching writing courses at the B.A. level), using the ESL composition profile prepared by Jacobs, Zinkgraf, Wormuth, Hartfiel, and Hughey (1981). Because of the unavoidable variability that exists among different raters, attempts were made to reduce the variability of raters' judgments and also to increase the raters' levels of agreement with each other.

A series of carefully selected drafts, illustrating salient features of students' different levels of performance, was rated by one of the researchers using think-aloud ratings. Then the other rater was asked to rate other series of selected scripts independently in the training session and then to discuss the results. In order to ascertain that an acceptable level of agreement existed between the raters, ten writing samples were rated by the two raters. The acquired data were used to calculate the inter-rater reliability. The obtained inter-rater reliability was .81. One of the researchers rated the papers twice, and intra-reliability of two rating process was calculated accordingly. The intra-rater reliability was .93.

Results

This study included two sets of data. The first set of data consisted of 75 paragraphs written as a response to three writing tasks (i.e. pretest, immediate posttest, and delayed posttest).

The second set of data was the 23-item questionnaire on mediated strategies answered by the students at the end of the course. The questionnaire checked four types of mediation strategies: artifact-mediated strategies, rule-mediated strategies, community-mediated strategies, and role-mediated strategies.

The first research question of this study dealt with the subjective scoring of the written paragraphs using a scoring rubric (Jacobs, Zinkgraf,
Wormuth, Hartfiel, & Hughey, 1981). The question investigated the quality of the written paragraphs in terms of content, organization, vocabulary, language use (grammar), and mechanics. Regarding the first research question, there is one independent variable (i.e. Scaffolded Written Corrective Feedback), and one dependent variable (i.e. writing score in terms of content, organization, vocabulary, grammar, and mechanics).

To check the parametricity of the data, a test of normality of the data was run. The results showed that only the data pertaining to the content scores are normally distributed. Therefore, only for the content scores, the parametric test of Repeated-Measures ANOVA was used and for the organization, vocabulary, grammar, and mechanics scores the non-parametric test of Friedman was utilized.

In order to compare the participants' pre-test, immediate post-test, and delayed post-test in terms of the participants' content scores, a repeated-measures ANOVA with a Greenhouse-Geisser correction was performed which revealed that mean content scores differed statistically significantly between pre-test, immediate post-test, and delayed post-test ($F(1.131, 27.147) = 32.553$, $P < 0.0005$).

As illustrated in Table 1., Post hoc test using the Bonferroni correction revealed that the content scores have elicited a sharp increase from the pre-test to the immediate post-test (19.324 vs. 22.156, respectively), which was statistically significant ($p = .000$). However, the improvement of scores from immediate post-test to delayed post-test (22.156 vs. 22.516,

respectively) was not statistically significant (p = .084). Therefore, we can conclude that the content scores improved significantly after the treatment; however, it remained relatively constant after a month.

Table 1. *Post-hoc Test for the content scores*

(I) Content	(J) Content	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Pre	IP	-2.832*	.509	.000	-4.142	-1.522
	DP	-3.192*	.530	.000	-4.555	-1.829
IP	Pre	2.832*	.509	.000	1.522	4.142
	DP	-.360	.154	.084	-.756	.036
DP	Pre	3.192*	.530	.000	1.829	4.555
	IP	.360	.154	.084	-.036	.756

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

In order for comparing the participants' pre-test, immediate post-test, and delayed post-test in terms of the participants' organization scores, a Friedman's test was conducted which showed that there was a statistically significant difference between the scores obtained from pre-test, immediate post-test, and delayed post-test, χ^2 (2) = 36.400, p = 0.000.

As illustrated in Table 2., Post hoc test using Dunn's test revealed that the organization scores have elicited a sharp increase from the pre-test to the immediate post-test (13.78 vs. 16.97, respectively), which was statistically significant (p = .000). However, the improvement of scores from immediate post-test to delayed post-test (16.97 vs. 17.1, respectively) was not statistically significant (p = 1.000). Therefore, we can conclude that the organization scores improved significantly after the treatment; however, it remained relatively constant after a month.

Table 2. *Post-hoc Test for the organization scores*

Sample1-Sample2	Test Statistic	Std. Error	Std.	Sig.	Adj.Sig.
PREORG-IPORG	-1.420	.283	-5.020	.000	.000
PREORG-DPORG	-1.460	.283	-5.162	.000	.000
IPORG-DPORG	-.040	.283	-.141	.888	1.000

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

In order to compare the participants' pre-test, immediate post-test, and delayed post-test in terms of the participants' vocabulary scores, a Friedman's test was performed which indicated that there was a statistically significant difference between the scores obtained from pre-test, immediate post-test, and delayed post-test, χ^2 (2) = 17.286, p = 0.000.

As illustrated in Table 3., Post hoc test using Dunn's test revealed that the vocabulary scores have elicited a sharp increase from the pre-test to the immediate post-test (13.53 vs. 14.85, respectively), which was statistically significant (p = .006). However, the improvement of scores from immediate post-test to delayed post-test (14.85 vs. 14.87, respectively) was not statistically

significant (p = 1.000). Therefore, we can conclude that the vocabulary scores improved significantly after the treatment; however, it remained relatively constant after a month.

Table 3. *Post-hoc Test for the vocabulary scores*

Sample1-Sample2	Test Statistic	Std. Error	Std.	Sig.	Adj.Sig.
PREVOC-IPVOC	-.880	.283	-3.111	.002	.006
PREVOC-DPVOC	-1.100	.283	-3.889	.000	.000
IPVOC-DPVOC	-.220	.283	-.778	.437	1.000

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

In order for comparing the participants' pre-test, immediate post-test, and delayed post-test in terms of the participants' language use scores, a Friedman's test was conducted which showed that there was a statistically significant difference between the scores obtained from pre-test, immediate post-test, and delayed post-test, χ^2 (2) = 37.440, p = 0.000.

As illustrated in Table 4., Post hoc test using Dunn's test revealed that the language use scores have elicited a sharp increase from the pre-test to the immediate post-test (15.32 vs. 17.62, respectively), which was statistically significant (p = .000). However, the improvement of scores from immediate post-test to delayed post-test (17.62 vs. 18.12, respectively) was not statistically significant (p = .269). Therefore, we can conclude that the language use scores improved significantly after the treatment; however, it remained relatively constant after a month.

Table 4. *Post-hoc Test for language use scores*

Sample1-Sample2	Test Statistic	Std. Error	Std.	Sig.	Adj.Sig.
PREUSE-IPUSE	-1.200	.283	-4.243	.000	.000
PREUSE-DPUSE	-1.680	.283	-5.940	.000	.000
IPUSE-DPUSE	-.480	.283	-1.697	.090	.269

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Finally, in order for comparing the participants' pre-test, immediate post-test, and delayed post-test in terms of the participants' mechanics scores, a Friedman's test was performed which revealed that there was a statistically significant difference between the scores obtained from pre-test, immediate post-test, and delayed post-test, χ^2 (2) = 24.581, p = 0.000.

As illustrated in Table 5., Post hoc test using Dunn's test revealed that the mechanics scores have elicited a sharp increase from the pre-test to the immediate post-test (2.58 vs. 3.08, respectively), which was statistically significant (p = .001). However, the improvement of scores from immediate post-test to delayed post-test (3.08 vs. 3.14, respectively) was not statistically significant (p = 1.000). Therefore, we can conclude that the mechanics scores improved significantly after the treatment; however, it remained relatively constant after a month.

Table 5. *Post-hoc Test for the mechanics scores*

Sample1-Sample2	Test Statistic	Std. Error	Std.	Sig.	Adj.Sig.
PREMEC-IPMEC	-1.000	.283	-3.536	.000	.001
PREMEC-DPMEC	-1.220	.283	-4.313	.000	.000
IPMEC-DPMEC	-.220	.283	-.778	.437	1.000

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

The second research question intended to investigate the types of mediation strategies (based on Activity Theory) the participants adopted to revise their paragraphs. Drawing on the premises of Activity theory, the items of the 23-item Likert-scale questionnaire were divided into four categories of Artifact Mediation, Rule Mediation, Community Mediation, and Role Mediation strategies. The respondents had to indicate the adopted strategies by choosing from the five options of Not at all (1), Not really (2), To some extent (3), Quite a lot (4), and Very much (5).

As Figure 5. illustrates, the participants' response to the six items under the category of Artifact Mediation strategy (i.e. items 1, 2, 3, 4, 5, and 6), generally, indicates the aforementioned strategies have been adopted more than average (i.e. 2.24, 2.56, 2.52, 3.84, 2.84, and 3.72 respectively) with the total mean of 2.95.

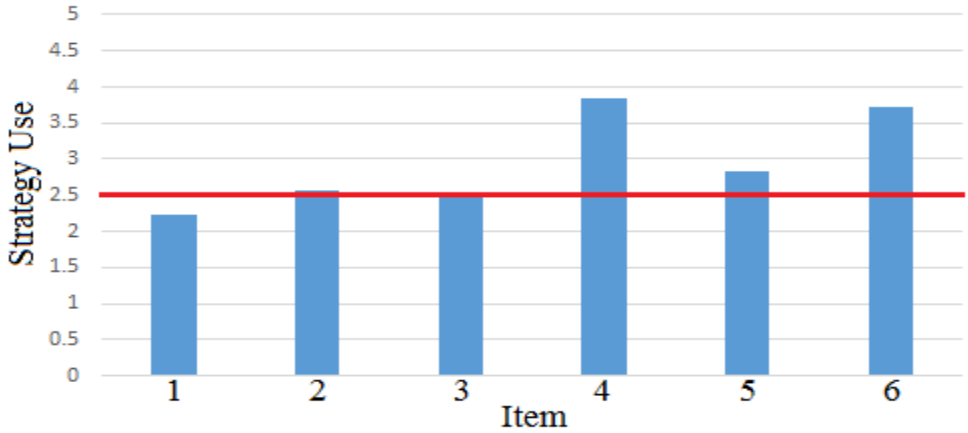

Figure 5. *The participants' reported mediation strategies use (artifact mediation)*

Figure 6. shows the participants' response to the eight items under the category of Rule Mediation strategy (i.e. items 7, 8, 9, 10, 11, 12, 13 and 14). The figure indicates an extensive adoption of the strategy (i.e. 3.28, 3.16, 3.36, 3.12, 3.68, 3.08, 4.40, and 3.44 respectively) with the total mean of 3.44.

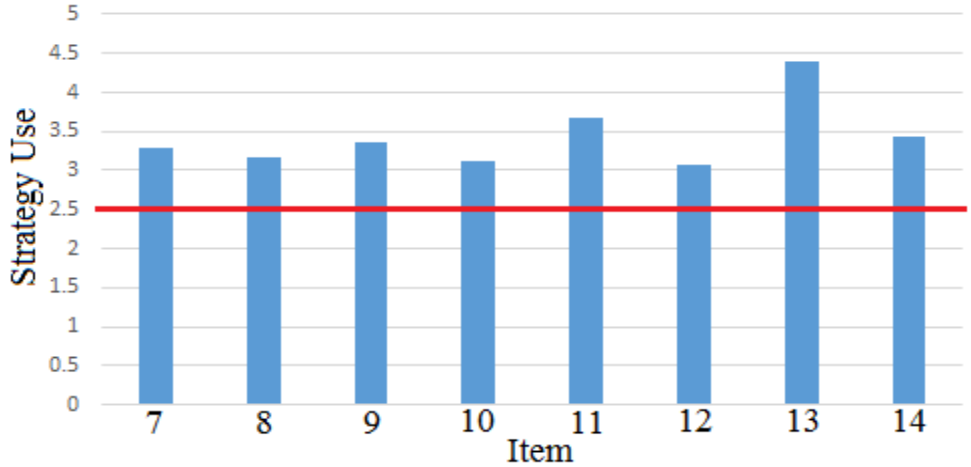

Figure 6. *The participants' reported mediation strategies use (rule mediation)*

As Figure 7 illustrates, the participants' response to the six items under the category of Community Mediation strategy (i.e. items 15, 16, 17, 18, 19, and 20), generally, indicates a relatively low adoption of Community Mediation strategy (i.e. 3.36, 2, 4.44, 1.72, 1.32, and 1.40 respectively) with the total mean of 2.37.

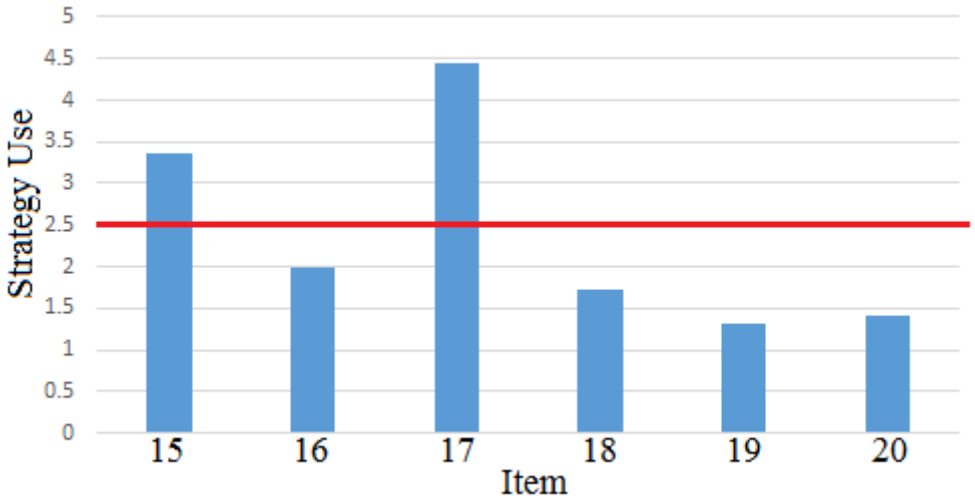

Figure 7. *The participants' reported mediation strategies use (community mediation)*

Figure 8 shows the participants' response to the three items under the category of Role Mediation strategy (i.e. items 21, 22, and 23). The table indicates an extensive adoption of the strategy (i.e. 3.24, 3.92, and 3.80 respectively) with the total mean of 3.65.

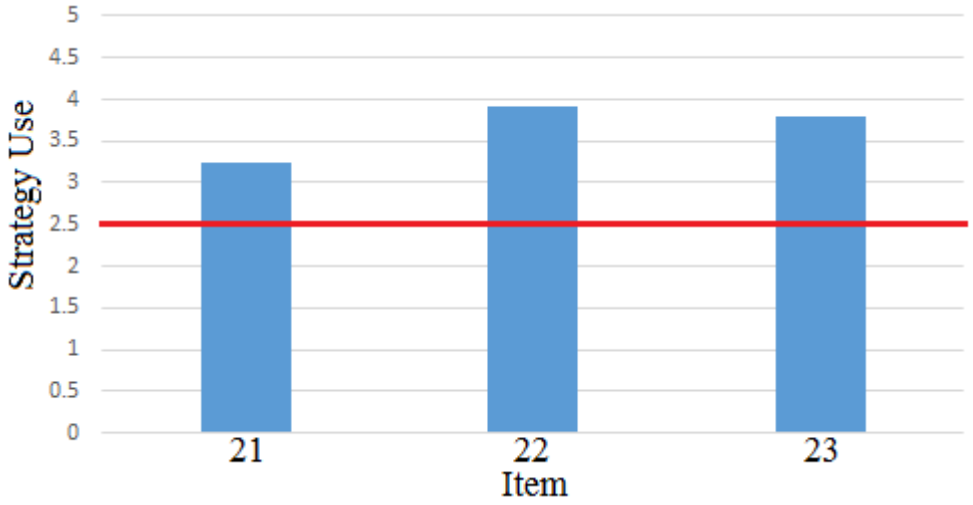

Figure 8. *The participants' reported mediation strategies use (role mediation)*

Figure 9. illustrates the total mean of the four mediation strategies (Artifact, Rule, Community, and Role Mediation) adopted by the participants.

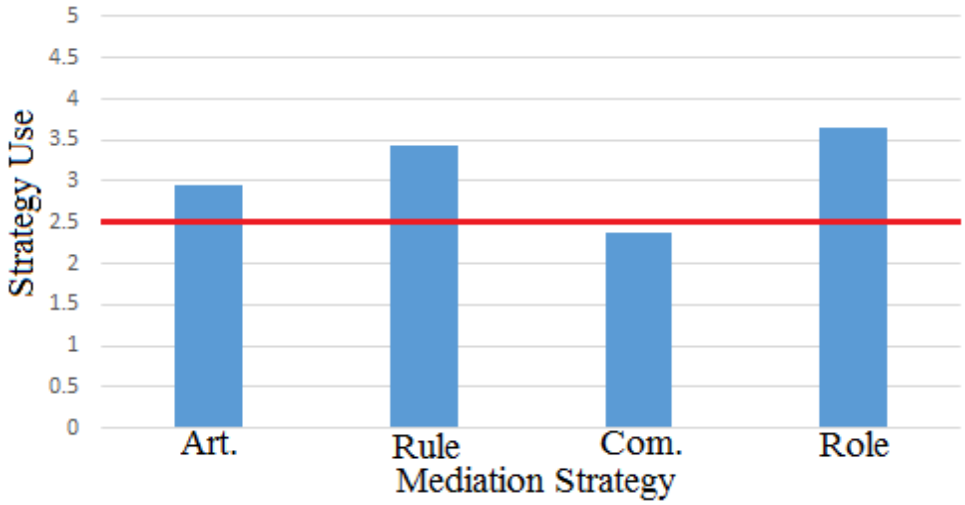

Figure 9. *The participants' reported mediation strategies use (comparison of the four mediation strategies)*

Discussion

The first research question investigated the efficacy of Scaffolded WCF on the learners' writing quality in terms of content, organization, vocabulary, language use (grammar), and mechanics. The utilized instrument for this purpose (Jacobs et al., 1981) offers a set of scoring rubrics for evaluating the student writers' writing performance. The rubrics are subjective in nature. In other words, human factors (on the part of the raters) influence the scoring process (after all, a text is written by a human being to be read by other human beings!). As mentioned above, WCF provided in the learners' ZPD contributed to improvements in all aspects of content, organization, vocabulary, grammar, and mechanics. Although the improvement over the course of the treatment proved significant, this increase in the quality of writing halted after the treatment and it reached a plateau. This implies that intervention plays a crucial role in the writers' performance. On the bright side, however, this finding implies that the improvements were sustainable. One of the contributing factors for such improvements is that for the peer review section, the participants were trained in how to provide constructive feedback on both form and content. Additionally, they had to use a checklist to ascertain that all these aspects had been taken into account equally. Without sufficient training and a checklist drawing the feedback providers' attention to all the aspects of content, organization, grammar, vocabulary, and mechanics, most of the comments would concern the form of language at the expense of content.

To date, most studies investigating the efficacy of scaffolded ZPD-based WCF have sufficed with holistic scoring of the written drafts and little attention (if any) is directed to the constituents of a text. In other words, most researchers investigating WCF within the framework of SCT have failed to clearly explain what they mean by writing quality. However, regardless of this methodological difference in the scoring process, the findings obtained in this study are in accordance with the results reported by studies such as Aljaafreh and Lantolf (1994), Niami (2011), Zhu and Mitchell (2012), Lee (2014), Mak and Lee (2014), Yu and Lee (2015), and Lee (2017). However, it is worth mentioning that unlike the present study which has exploited a nexus of peer review and teacher feedback, the scaffolded feedback in these studies is either provided by the peers or the instructors.

As for the reason for such improvements, it can be argued that due to the collaborative and negotiated nature of Scaffolded WCF, the learners were highly involved in the writing

process. This process afforded learners with ample gradual assistance in their ZPD which in turn enabled them to progress from the other-regulated stage to the self-regulated stage. Such transition empowered the learners to excel in their writing performance.

Another reason for the learners' improvement is probably rooted in the fact that the whole-class conferencing stage provided all the learners with mediating prompts in a less threatening atmosphere. This is in line with Lantolf and Poehner's (2011) findings with respect to the impact of group mediation on other learners in the class.

Last but not least, the findings indicate the benefits of pair work in writing classes. Pair work enables learners to use a wide range of language functions to provide and receive peer feedback. Peer-peer interaction is a rarity in traditional writing classes and the provision of such opportunity is proved to be of great benefits as the learners can learn from each other without the concern of being judged by the instructor. This, in turn, makes the learners less conservative and allows them to venture to step out of their comfort zone and as a result learn more.

The second research question investigated the various types of mediation strategies (based on Activity Theory) the participants adopted to revise their writings. To answer this question, a 23-item questionnaire was devised. The items in the questionnaire were categorized in the four different factors (strategic mediations) of Artifact-mediated strategies, Rule-mediated strategies, Community-mediated strategies, and Role-mediated strategies. These are briefly explained below:

1.Artifact-mediated strategies: This type of mediation consists of utilizing the internet, reference books such as dictionaries and grammar books, L1, and L2.

2.Rule-mediated strategies: When the students are asked to revise their writings, they are supposed to be conscious of some rules and criteria according to which they develop their ideas. These rules and criteria can include rhetoric, teacher‘s evaluation criteria, and time limitation.

3.Community-mediated strategies: While revising their writings, the students might ask the members of their community for help. These members include their classmates, other university instructors, or their friends and family members.

4.Role-mediated strategies: The students play at least two roles while revising. The first role is as the author of the piece of writing, and the other one is as a language learner.

The learners' answers to the first category of questions (Artifact strategies) indicated that the learners had benefitted from artifacts (tools) such as the Internet, books, articles, and dictionaries for revising their paragraphs. The results also reveal that translating from Persian to English as well as thinking in English during the revision process helped the student writers write better paragraphs. Overall, the most common artifact used by the learners was dictionary and the least used one was the Internet. One reason for this fact is probably the learners' lack of familiarity with useful educational websites and the ways online resources can contribute to writing better paragraphs. Therefore, it seems necessary to hold a brief workshop during the training stage on various ways the student writers can benefit from online resources.

With respect to the use of Rule-mediated strategies, the respondents reported that the rules explained in the peer revision checklist played a crucial role in helping learners with writing better paragraphs in terms of content, grammar, organization, mechanics, appropriacy, and the development of ideas. However, the learners claimed that the teacher's instruction was far more influential compared to other mediating factors. This lack of trust in peer feedback is deep-rooted in the cultural belief that the teacher is the main disseminator of knowledge and all other sources play a secondary role. However, as SCT puts forth, learning will be enhanced when a wide range of mediating factors are utilized. This finding calls for more explanation on the benefits of peer review during the training stage. The instructors need to raise awareness about the fact that

although in some instances the peer comments might be inaccurate, their benefits outweigh this shortcoming.

The third category (Community-mediated strategies) focused on the assistance the learners received from other people in their community including their peers, the course instructor, other instructors, family members, and people outside the university. The respondents' answers to the items under this category indicated that most mediating help the learners received came from first the course instructor and then from their classmates. The learners also reported that the least assistance came from their family members and people from outside the university community. Considering the mentality of Iranian university students, these findings are quite understandable and predictable because, as stated above, they regard course instructors as the main source of knowledge and if they have relied on their peers' comments this is due to the fact that this role of feedback provider was delegated by the course instructor and they were encouraged (and to some extent forced) to take their classmates' comments into consideration with the hope that such comments are later supplemented by the instructor's feedback. This prevalent mindset is also promoted by many instructors who ban their students from consulting other instructors regarding the course content. They believe that what happens in the class must remain in the class! This attitude will deprive the learners of the invaluable knowledge they can obtain from various sources outside the classroom. After all, everything is known by everyone and the synergy among all the mediating factors will enhance the learning. However, learners need to be equipped with the necessary criteria to discern useful sources of knowledge from misleading ones.

The last investigated factor is Role-mediating strategies (aka Division of labor) which put forward that learners play two major roles in such a class: the specific role of 'author' and the general role of 'language learner'. The learners reported that this method not only helped them with writing better paragraphs but it also provided them with strategies required for becoming more successful language learners in general. That is, the adopted approach (Scaffolded WCF) can transcend the writing classroom and will (hopefully), through promoting self-regulation strategies, contribute to educating autonomous language learners.

These findings are discrepant with those of Niami (2011) where she found no positive correlations between learners' strategy use and their revision. The present study, however, indicates that the participants benefitted from all five mediating strategies during the revision phase.

Conclusions

Activity theory, as an offspring of SCT, affords learners' goals an important role in explaining actions as well as in creating opportunities for learning. Wells (2000, p. 71) writes that "knowledge is situated, it is (re)created in a specific activity setting". In this study, the findings show that knowledge of and about language was consolidated, reconstructed and co-constructed collaboratively by course members who shared a common goal. In such an activity system, members brought their personal experiences and information derived from other sources to solve particular language-related problems. These solutions were then appropriated and internalized by the participants. In this sense, the learners' negotiations over language-related problems can be conceived of as creating opportunities for learning.

Another implication of the study is that writing instructors should encourage learners to exhaust all the resources they can access while revising their texts. This includes the Internet, resource books, other students, and even other instructors. Many Iranian university instructors

prohibit their students from consulting other instructors by doing which they are depriving their students of other sources of information.

Beyond writing courses, the findings of this study call for the adoption of scaffolding techniques in all the pedagogical activities in a language classroom. Scaffolding can significantly contribute to nurturing self-regulated and autonomous language learners who can take care of their own learning. They can benefit from all the available resources and critically discern the reliable ones from the unreliable ones by comparing them. After all, training self-regulated learners is the utmost goal of lifelong learning.

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Appendices

Excerpt 1: Transcribed peer feedback episode on the content

S1 (Student 1): Your topic sentence is a little confusing to me. Just a little.
S2 (Student 2): Yeah, I have written that downloading a track of music and a movie is considered as a common way of having the latest ones as soon as they are released. I mean that this is the easiest way to have the latest music and movie without any effort.
S1: So you mean every new music and movie that coming to market different people can download them.
S2: Yeah, yeah.
S1: But why do you think it is a good idea that they do that. In my writing I mentioned that it is…
S2: No, no I didn't mean it is a good idea to download them illegally. I mean it is common. It is not something unusual that if you do it you will be criticized by others.
S1: But if everyone downloads…
S2: This is about works from other countries. But artists in your country need the money.
S1: OK, OK [laughing].

Excerpt 2: Transcribed peer feedback episode on the form

S1 (Student 1): Why did you underline this word? I think is correct.
S2 (Student 2): No. Because you said "many people usually downloading music form the Net." The verb is not correct.
S1: Mmm. Downloading? Can you explain?
S2: Downloading means right now not usually. You need simple present.
S1: OK. You mean download?
S2: Yes, people usually download.

Excerpt 3: Transcribed teacher feedback episode on the form

S (Student): Excuse me, here you underlined "need". Why?
I (Instructor): You have written "each person need an enjoyable vacation." What is the subject in this sentence?
S: Mmm. Person.
I: Actually it is "each person".
S: Yes.
I: Is "each person" singular or plural?
S: Singular?
I: Yes. Therefore, you need to use the appropriate verb for a singular subject.
S: So, "each person needs". Right?
I: Yes. Whenever we have "each person", "everyone", and "everybody" we have to use singular verbs.

Excerpt 4: Transcribed whole-class conferencing by the instructor

I have noticed that many of you don't use comma correctly or don't use it when you have to. For example, when you begin your sententeces with an adverb such as "finally" or "additionally", you need to add a comma after them. Look at these examples …