

The effect of collaborative writing on Iranian high-school students' vocabulary development: Comparing group and individual work

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Abstract

One of the most challenging aspects which language learners face is vocabulary development. Therefore, helping the learners master the target language vocabulary is of vital importance. Using collaborative writing (CW) tasks to help students achieve this goal and to see how it impacts their vocabulary development was the subject of this research. To this end, the researcher selected forty female high school students and divided them into two groups: an experimental group and a control group. A pre-test and a post-test were conducted on both groups. The design of this study was quasi-experimental intact group design with pre and post-test control and experimental group. Statistical analysis of test results showed that collaborative writing has an impact on the development of the vocabulary of Iranian high school students.

Keywords: writing, vocabulary development, collaborative writing

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1. Introduction

Renewed interest in collaborative learning (CL) has provided a major impetus for recent Second Language Acquisition (SLA) research. The major motivation for CL has been frustration with the traditional teacher-centered individualized learning in which a teacher is a model and students are usually passive and are treated as listeners and receivers of information and knowledge from a teacher. Therefore, as a reaction, second language researchers claimed that in order for the teaching to be positively effective and language learning be a rewarding and, therefore, an efficient experience (Dörnyei & Malderez, 1997; Foster & Ohta, 2005), we need to create a learning environment in which students should be involved in collaborative learning. In such a context, “the task is the scaffold and even the source of the new language” (Larsen Freeman & Freeman, 2008, p. 167). In addition, students' and teachers' roles noticeably change. While the teacher's role is to facilitate and guide their learners' learning, it is the learners who play the main role in their learning process. To this aim, they actively interact with each other in order to acquire the same goal (Oxford, 1997). In such a learning context, students work together on a common task and the ownership of teaching and learning is shared by groups of students, and is no longer the sole responsibility of the teacher.

The authority of setting goals, assessing learning, and facilitating learning is shared by all. Students have more opportunities to actively participate in their learning, question and challenge each other, share and discuss their ideas, and internalize their learning. Along with improving academic learning, collaborative learning helps students engage in thoughtful discourse and examine different perspectives, and it has been proven to increase students' self-esteem, motivation, and empathy. Accordingly, CL plays a significant role in promoting social skills (i.e. group work, decision making and problem solving activities) and reflective practice among students. Gaith (2002), who focused on the psychological factors making the learning environment awarding, stated that one of the important aspects of classroom climate that may influence learners' achievement in academic settings is social support. In the classroom, those who are able to provide this support are teachers and peers. Group or pair work is the basic premise of collaborative learning and is mainly used for maintaining linguistic interaction in the classroom (Long & Porter, 1985; Brown, 2001; Mackey, 2003; Cao & Philp, 2006). Besides its psychological benefits, collaborative learning has proved to be positively effective in cognitive facets.

According to Cohen (1994), involvement of students in group discussions has two advantages: first, it is an alternative to the traditional way of teaching, and second, it serves as an active communication in which increased use of second language is created for students. Therefore, the aims of this present study is to investigate the effect of collaborative writing, based on Vygotsky's social constructivist perspective, at the high-school level in EFL classes, examining how insights taken from such a perspective enhance the development of L2 vocabulary use and performance and exploring and providing insights crucial to vocabulary learning in collaborative writing tasks. Therefore, this study was an attempt to answer the following question:

RQ (1): Does collaborative writing have any effect on Iranian high school students' second language vocabulary development?

2. Review of the Literature

2.1 Collaborative learning

Collaborative learning is rooted in Piaget's theory, Zone of Proximal Development (ZPD) Theory,

Communicative Language Teaching, and Input Hypothesis. Apple (2006) defines ZPD as the limit to which someone can learn something with others' help. Hiep (2007) recommends the use of cooperative learning activities in Communicative Language Teaching (CLT). CLT activities are based on pair or group work. He points out that CLT is a learner-centered approach, so it is collaborative learning in nature and wants students to learn together in pairs or in groups. There are various advantages to collaborative and cooperative learning. They have different effects on the learning process of which most are beneficial. According to ZPD Theory, group work increases social skills. Older children help younger ones and practice how to learn as a team. Vygotsky (1978) believes that children learn together and increase their individual skills in group activities. Gokhale (1995) adds that interest and critical thinking rise among collaborative groups. Students can become critical thinkers. Students become able to share their knowledge and be responsible for their own learning.

Pair and small group activities give more time to students for speaking in the target language. In addition, learners feel more comfortable and less anxious when they interact with peers in the group. Their self-confidence increases through group activities (McDonough, 2004). Wills (2007) refers to some of the psychosocial advantages of cooperative learning. He holds that group working reduces the fear of failure among students. Students can access the stored information much easier and quicker during a cooperative learning situation. DelliCarpini (2009) adds that "cooperative learning creates multiple opportunities for comprehensible input and output" (p. 44). Despite the advantages of collaborative learning, there are also arguments against collaborative learning. According to Tinzmann, Jones, Fennimore, Bakker, Fine, and Pierce (1990), teachers do not like collaborative learning because they know that a collaborative classroom is noisier than a traditional classroom and they do not want noisy classrooms. Another reason is the preparation time for collaborative learning. Some teachers do not know how to use time appropriately in a collaborative classroom, so they think collaborative learning wastes the time of the class. The third reason is individual differences among students. Some teachers believe students with individual differences cannot be grouped together. They argue that teachers think some students may not accept responsibility in a group.

Tinzmann, et al. (1990) mentions several roles for teachers in a collaborative classroom. The first role is as a facilitator. Teachers help students connect new information to their prior knowledge. Teachers can facilitate collaborative learning by designing different tasks. The second role for the teacher is modeling. Modeling may involve thinking aloud and demonstrating. The last role is coaching. Teachers help students to provide a strategy and use it in the learning process. The teacher is a supporter, an observer, a change agent, and an advisor in a cooperative classroom (Wang, 2007). Students also play different roles in collaborative learning such as facilitator, time keeper, checker, encourager, recorder, summarizer, elaborator, and observer in their own groups (Farrell & Jacobs, 2010). It is believed that there are more than 100 techniques used in collaborative learning. Each of these techniques has different effects and is useful for students and teachers in diverse situations. Using these techniques depends on the task and group size. Teachers should know the goals of the teaching and learning, then select suitable cooperative techniques in their classrooms (Keyser, 2000).

2.2 Roles of teacher and student in collaborative learning

In collaborative learning, the teacher is not the center of the classroom any more. What teachers must do is just to help students become autonomous learners (Horwitz et al, 1997). Learning must be shared between the teacher and the learner or among learners with the guidance of the teacher. In teacher-student collaboration, teachers help learners work in groups effectively and teachers act as a part of each group too. Being a part of each group does not mean that teachers share equal power with group members. They just become a member of the groups as a guide and a facilitator whenever any group needs help. Teachers cannot share equal power in groups in collaborative learning because there are several groups in a classroom and each group might need help. In student-student collaboration, teachers are not participants in the collaborative work. They might only guide and facilitate the work whenever learners need help. The role of learners here is to negotiate with group members and "to help to direct and reflect upon his or her own learning experiences" (Wilhelm, 1997, p. 528). There must be negotiation, interaction, help, and sharing in teacher-student or student-student collaborative work.

2.3 Learners' attitudes toward collaborative writing tasks

Learners' attitudes toward collaborative writing activities in second and foreign language contexts have been investigated in a number of studies. In Storch (2005), one of the first studies to address this issue, five learners completed a writing task individually and 18 in pairs. When interviewed about the collaborative writing experience, most of these 18 students were very positive. They found that writing in pairs provided them with opportunities to pool their resources, observe each other, and learn different ways of expressing the same ideas. They specifically stated that collaboration was helpful for grammatical accuracy and L2 vocabulary learning.

As described above, collaboration did result in shorter but grammatically more accurate texts. Two students, however, felt that writing was an inherently individual task and that therefore pair work was better suited for oral activities. Of the 16 students who expressed positive attitudes, five did so with "some reservations" (Storch, 2005, p. 166). These reservations revolved around their lack of confidence in their own language skills and their concern with criticizing others. In Shehadeh (2011), two classes of English as a foreign language learners completed the same writing assignments during an entire semester, but one class worked individually while the other worked in pairs. Most of the 18 students who worked in pairs reacted positively to the experience. Although collaborative writing was new to them, they enjoyed it and found it beneficial. They stated that collaborative writing "enabled them to generate ideas, pool ideas together, discuss and plan, generate their text collaboratively, provide each other with immediate feedback, and put their text in better shape" (Shehadeh, 2011, p. 296).

Furthermore, some of these students reported that the activity enhanced not only their writing skills, as initially observed by the researcher, but also their self-confidence and speaking abilities. Students' perceptions of collaborative writing have been examined in a variety of contexts and learning situations. Elola and Oskoz (2010) examined advanced Spanish students working collaboratively in a writing task using web-based social tools, wikis, and chats. The learners in this study unanimously agreed that working with a partner enhanced the overall quality of their texts. In particular, they felt that collaboration improved the content and the structure of their writing. However, they also mentioned that, when working outside the classroom, they preferred to write individually, in order to be able to work on their own time schedule and to develop their own personal style. In sum, when previous research has questioned L2 learners about their experiences with actual collaborative writing tasks, learners have generally reported positive attitudes toward collaboration (see also Ewald, 2005; McDonough & Sunitham, 2009; Zeng & Takatsuka, 2009).

Most students seemed to recognize the positive impact of working with a peer on the content, organization, and/or linguistic accuracy of their texts, as well as the learning benefits of the collaborative writing activities in which they participated. While this previous research has focused almost exclusively on pair work, a number of studies have examined learners' perceptions of the use of both pair and small group activities in the classroom, but without focusing specifically on writing (e.g., Brown, 2009; Garrett & Shortall, 2002; McDonough, 2004; Riley, 2009).

In these studies, learners' affective reactions toward group work have been, for the most part, very positive. In general, most students welcomed the opportunity to speak with other learners in class (Riley, 2009), and found pair and small group activities more fun and relaxing than teacher-fronted activities (Garrett & Shortall, 2002). However, these same learners were not able to see the learning advantages of student-centered activities. They found peer interaction helpful for practicing oral skills, but they did not perceive pair and small group activities as useful for learning, particularly for grammar and vocabulary learning (Garrett & Shortall, 2002; McDonough, 2004). In the present study we look at learners' attitudes toward pair and small group writing, as well as their perceptions of the learning value of collaborative writing. First, we examine learners' reactions to the collaborative writing task designed for the purposes of the study. We analyze their preferences not only between individual and collaborative writing, but also between pair and small group writing. We look at how these preferences may have been influenced by their engagement, either in pairs or in groups of four, with the task. Secondly, we analyze learners' perceptions of the collaborative writing activity as an occasion for L2 development. We examine to what

extent learners were aware of the learning opportunities they were creating while writing in collaboration with their peers, and of the positive impact that this collaboration was having on the nature of their written texts.

3. Methodology

The aim of the present study is to test the effect of collaborative writing on Iranian high school students' vocabulary development. The researcher divided the participants into two groups, respectfully: one control group and an experimental group, each consisting of twenty students. The researcher provided both groups with a pre-test at the same time. The researcher also used achievement tests among the participants. The pre-tests enabled the teacher to know the students' vocabulary knowledge prior to doing the tests. The tests were conducted as classroom assignments when the research was being conducted in weekly sessions of the class. Accordingly, the following research question and null hypothesis were raised:

RQ₁: Does collaborative writing have any effect on Iranian high school students' second language vocabulary development?

Participants - The participants of this study, forty female Iranian Azeri-speaking high school students, making up two classes at the Ebrahimi Daryani high school located in Soufiyan, Iran, were supposed to participate in this study. Their age ranged from 17 to 18 years old studying English as an EFL in grade 12. They also would participate in the study as part of their routine curriculum, 2 sessions per week. The same teacher would conduct these classes through different methods. Since the participants in this classroom research were already assembled, neither random selection nor random assignment to groups would be possible. This has made the design of the study a non-probability sampling design.

3.1 Instrumentation

The following instruments were applied to comply with the objective of the present study. An Oxford Placement Test (OPT), and vocabulary pre- and post-tests.

Oxford Placement test - To tap participants' level of English language proficiency level, an Oxford Placement Test (2004, Allen) was utilized to homogenize the participants in the study. The test consisted of reading, vocabulary and grammar sections. The test comprised of 60 questions in two parts. The first part comprised of 40 multiple choice items in 4 sub-parts. Questions 1 to 5, the learners were asked to answer grammatical questions about prepositions. Questions 6 to 10, the learners were asked to read a cloze passage and selected one option out of three ones. Questions 11 to 20, they were also asked to read two cloze passages and select one option from four ones. Questions 21 to 40 checked the learners' grammatical knowledge. In the second part of this examination, there was two sub-sections. For questions 41 to 50, the learners were required read two cloze passages and select the correct option. Questions 51 to 60 tapped learners' vocabulary format. The participants were allotted 30 minutes to answer the questions. The results were classified based on OPT ranking rubric.

Teacher Made Test - In order to evaluate the knowledge of the target vocabulary among the participants, the researcher used one teacher-made test. It is considered as an achievement test, consisting of a couple of sections – Section 1 and Section 2. Section 1 evaluates the knowledge of the target vocabulary through both Multiple Choice (MC) and *fill in the blanks* formats in which, vocabulary items are omitted. The MC test has about 10 items. The *fill in the blanks* test has about 10 items, too. The total number of test items is about 20. Some parts of both the MC and fill in the blanks tests are pictorial to increase conceptualization and ease of understanding.

3.2 Data Collection Procedure

The study will be composed of a pilot study and a main study. In the pilot study, the teacher-made tests will be administered to a sample which is similar to the main population. The purpose of the pilot study is to determine the item characteristics to control the problems that the participants might encounter in the test administration. In

the main study, the achievement test will be administered at two stages. In the first stage, the participants will be pre-tested on the teacher-made tests. In the second stage, there will be a post-test. To preclude a practice effect, the pre-test will be slightly modified for the post-test, without any major changes in the test complexity. Item sequences will be, however, shuffled and several content words will be replaced with other equally familiar content words. The interval between the pre-test and the post-test will be four weeks.

Instructional Treatment - Vocabulary learning strategies refer to those strategies that capture learners' attention to form while maintaining meaningful communication. Thus, meaningful communication, crystalized through pedagogical tasks, will be the basis of the instructional treatment in the experimental group. The application of Vygotsky's social constructivist perspective for vocabulary learning techniques through collaborative writing tasks such as... Means enhancing rather than replacing techniques we value. In so doing, the researcher will aim to encourage collaboration in the individual learners to develop social skills. Accordingly, both experimental and control groups will receive instruction by the same instructor, however, the instructional treatments for both experimental and control groups will be different.

4. Results

The data analysis was presented under based on the order of implementation including both the pilot study and the main study and contains descriptive and inferential statistics.

4.1 Descriptive Statistics

In this section, the researcher used descriptive statistics. Table 4.1 shows the mean and standard deviation of the studied variable (i.e. Vocabulary development) both for experimental and control groups.

Table 4.1

Average and standard deviation of the studied variable in the studied groups

Variable	Group	Pre-test Average \pm mean	Post-test Average \pm Standard Deviation
Vocabulary development	Experimental Group	0.40 \pm 52	0.55 \pm 94
	Control Group	0.33 \pm 50	0.34 \pm 52

In this table, we can observe the scores of mean and standard deviation of two groups. As it is shown, the pre-test scores for vocabulary development variable are 52 and 50, respectively. After obtaining group collaborative writing, the post test scores for these two variables are 94 and 52, respectively. The results of the average control group are also shown in the table.

4.2 Responding to research hypotheses

Smirnov-Kolmogorov test for Normality Diagnosis and Distribution of Variables - In order to select the appropriate statistical tests to analyze the collected data, it is necessary to evaluate the type of distribution of variables in terms of their normal distribution, in which case, the Smirnov-Kolmogorov test was used. In statistics, the Kolmogorov–Smirnov test is a nonparametric test of the equality of continuous, one-dimensional probability distributions that can be used to compare a sample with a reference probability distribution, or to compare two samples.

To determine the normal distribution of values of variables, the researcher used Smirnov Kolmogorov test. Table 4.2 shows a significance level of the above test for vocabulary development. Table 4.2 indicates that the significance level of the above test for the studied variables is less than 0.05 and therefore, the results shows that distribution of data is absolutely normal. Table 4.2. Smirnov Kolmogorov test to determine the normal distribution of values of variables.

Table 4.2*Smirnov Kolmogorov test to determine the normal distribution of values of variables*

Variable	Pre-test	Sig	Post-test	sig
Vocabulary development	0.581	0.888	0.849	467

Homogeneity of Variances - The results shows the equality of variances or relationships between variables in two cases. With respect to that the level of significance, the significance level is greater than 0.05, then we conclude that variances are homogeneous in both pre-test and post-test modes, and that covariance analysis can be used.

Table 4.3*Regression slopes homogeneity test results*

Index	Level	df1	df2	Sig
Vocabulary development (pretest)	0.435	1	30	0.514
Vocabulary development (post-test)	1.207	1	30	0.281

As can be seen in Table 4.3, the value of the significant level for the interaction of the independent variable and the equal distribution in all three variables is greater than 0.05. Thus, the interaction between the group and the pretest is not statistically significant, and therefore, the assumption of regression slope homogeneity is confirmed for the use of covariance analysis test.

4.3 Investigation of the Research Question

The proposed research question aimed to investigate the effect of collaborative writing on Iranian High-School Students' Vocabulary Development: Comparing Group and Individual Work. To this end, the statistical analysis of univariate analysis of covariance was used.

Table 4.4*Results of univariate analysis of covariance scores of vocabulary development scores*

Variable	Dependent Variable	df	Ms	T	Sig	Coefficients	St Power	
Group	Vocabulary development	2335.203	1	2335.203	112.381	0.000	0.752	1.000
Error	Vocabulary development	768.833	37	20.779				
Total	Vocabulary development	1811889	40					

As shown in Table 4.4, collaborative writing and vocabulary development of Iranian high school students are significantly related (Sig = 0.0001, and $F_2 = 382/381$, and 75% of vocabulary development with the use of collaborative writing is explained, so H1 hypothesis is confirmed. That is to say, the null hypothesis is rejected, and the results of the finding shows that Collaborative writing has a positive and significant effect on vocabulary development.

5. Discussion

The present study attempted to investigate the effect of collaborative writing on Iranian High-School Students' Vocabulary Development: Comparing Group and Individual Work. The findings of this study demonstrate that the collaborative writing can have significant effect on task achievement of EFL learners while writing. Based on the findings of the present study, collaborative writing and vocabulary development of Iranian high school students are significantly related (Sig = 0.0001, and $F_2 = 382/381$, and 75% of vocabulary development with the use of collaborative writing is explained, so H1 hypothesis is confirmed. That is to say, the null hypothesis is rejected, and the results of the finding shows that Collaborative writing has a positive and significant effect on vocabulary development.

The findings of Kim (2008) similar to the findings of this study, indicated that collaborative work has a positive effect on second language (L2) vocabulary development. In this end, Kim (2008) investigated the effect of collaborative work on second language (L2) vocabulary development and obtained similar results in support of the effect of scaffolding on language learning. To sum up, the present study provides support for previous studies and attempts to explore the effect of collaborative instructional treatment on vocabulary knowledge of learners. Shin, Lidster and Sabraw (2016) believe that more research is required to understand how collaboration can affect language learners' writing. Indeed, one of the short comings in the literature was that they had dealt with writing accuracy and fluency. To this end, this study looked at language learners' task achievement. Congruent results were also reported by Zaffarani (2016) who concluded that collaborative writing can have positive effect on writing of EFL learners in terms of language production. Her study also revealed that teacher-selected pairs can outperform student-selected groups in terms of writing fluency and accuracy.

6. Conclusion

The present study has provided empirical evidence on the effectiveness of the effect of collaborative writing on Iranian high school students' vocabulary development: Comparing Group and Individual Work. Its major interest was exploring the effects of those use collaborative writing strategies on the Iranian high school students' vocabulary development. The results of the findings showed that collaborative writing has an impact on the development of the vocabulary of Iranian high school students- the statistical method of univariate analysis of covariance was used. Collaborative writing and vocabulary development of Iranian high school students are significantly related. (Sig = 0.0001 and $F_2 = 382/381$ and 75% of vocabulary development with the use of collaborative writing is explained, so H1 hypothesis is confirmed. One of the most important levers for improving language knowledge in learners is the development of vocabulary. Since language learning is interactive, writing in a group and collaborative manner will have a significant impact on the development of students' vocabulary. The point is that the most second language (L2) writing studies emphasize that students' attention to vocabulary learning can be directed through group working and cooperation. However, in group work activities, the responsibilities are often divided among learners in the group to accomplish the task. They are required to cooperate to compile the task together at the end to give the final product. In so doing, they are required to amend a text that they did not create. Such tasks cannot be considered a collaborative writing task because the individuals did not collaborate to compose the text in the first place.

7. References

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