

## Collaborative Essay Writing through E-mail

**Keivan Mahmoodi, Ph.D**

English Department, Malayer Branch, Islamic Azad University, Malayer, Iran

**Abstract:** *The present study aimed to find the effect of collaborative essay writing through e-mail on the improvement of the writing performance of Iranian EFL learners. 48 participants were chosen from Malayer Azad University and divided into two groups of experimental and control each consisting of 24 students in the age range of 18 to 25. A pre-test measured the participants' initial performance in writing. The control group attended the class in which they were required to write individually, while the students in the experimental group were assigned to write three paragraph essays collaboratively through email. They were asked to read each others' paragraphs and make comments and corrections. A parallel test was conducted at the end of the study to check the effect of the treatment on the students' final writing performance. Their paragraphs were scored by using the scoring rubric adapted from Rog (2007). In the control group, the participants were asked to write their paragraphs individually. After analyzing the data, the obtained results showed that the performance of the subjects in the experimental group was significantly better than that of the control group, supporting the argument that if learners get involved in collaborative writing through e-mail, their performance would improve.*

**Key words:** *collaboration, CALL, social learning, writing, team work*

### 1.1. Introduction

One of the basic requirements for education in the future is to prepare learners for participation in a networked, information society in which knowledge will be the most critical resource for social and economic development. Educational institutions are being forced to find better pedagogical methods to cope with these new challenges. In this development it is expected that computers could play an important role in restructuring teaching and learning processes to be better prepared for future challenges. Computer-supported collaborative learning is one of the most promising ideas to improve teaching and learning with the help of modern information and communication technology. Still in the late eighties most experiments on computer-supported learning were based on the so-called solo-learner model, and the opportunities to individualize learning processes were supposed to be the crucial feature of computers. This was especially true for CAI-programs based on the ideas of programmed instruction, but the emphasis of individualistic models was also typical of many learning environments designed according to constructivist principles (Crook, 1994). It was particularly the omission of social interaction in computer-based learning environments which worried many educators in the eighties (Baker,

1985; Cuban, 1986; Hawkins, Sheingold, Gearhart & Berger, 1982; Isenberg, 1992; Kreuger, Karger & Barwick, 1989; Turkle, 1984).

During the last ten years, the situation has changed dramatically. Most of the recent research on the use of information and communication technology in education is more or less explicitly considering technology's possibilities to facilitate social interaction between teacher and students, and among students. Collaboration and communication is certainly a main idea in network-based learning environments but social interaction has also been more and more taken into consideration in the design and implementation of systems running in separate workstations (see several chapters in Vosniadou et al., 1996).

There are two research traditions which have powerfully contributed to the development of the ideas of computer-supported collaborative learning. The first source is cooperative learning, which was an important element already in the programs of progressive pedagogics from the beginning of this century. According to Slavin (1997; see also Damon & Phelps, 1989), research on cooperative learning can be considered as one of the greatest success stories in the history of educational research. The amount and quality of that research greatly accelerated in the early 1970's and is currently one of the most expanding topics in educational research. Numerous studies have compared cooperative learning to traditional teacher-centered studies and several theories have been presented to explain the mechanisms behind the observed gains in achievement.

The other source of inspiration for developing computer-supported collaborative learning

originates from the research on Computer-Supported Collaborative/ Cooperative Work (CSCW).

This research has revealed many issues about the cooperative nature of work in the computerized work context (Baskerville & al.1995; Tuomisto, 1994). Some of the theoretical ideas and computer tools used in CSCL environments have originally been created and elaborated in modern work contexts. In this review, we briefly summarize the main findings of the Computer-Supported Collaborative Work and Cooperative Learning traditions that have proved to be important in developing CSCL environments.

Learning in collaborative setting is a social interaction involving a community of learners and teachers, where members acquire and share experience or knowledge. Collaborative learning is, therefore, a significant factor in students' learning because it promotes active learning and student-reliance in classrooms (Foote, 2009). Learning is shifting from passive reception to active creation. Students tend to take more ownership of their material and to think critically about related issues when they work as a team. The collaboration process enhances students'

learning and develops their social skills like decision-making, conflict management, and communication (Smith & MacGregor, 2009). According to Banerjee (2000), in the collaborative

learning process, a student must formulate ideas about the material assigned to him, test his assumptions, clarify them, come to a conclusion and then assimilate that material within himself. Once he feels that he “owns” the material, he must explain it to his group so that his knowledge can be pooled together and shared among all his group members. Each student, thus, is a dynamic contributor to both the learning and the teaching process. When questions are raised, different students will have a variety of responses. Each of them can help the group create a product that reflects a wide range of perspectives and is thus more complete and comprehensive.

Writing assignment has always been a nightmare for EFL learners due to learners' incapability to do it well and lack of enough practice with this skill. When EFL learners are asked to write on a topic, they usually fail to do so first in terms of content and second in terms of number of the words included in the task. That is, they are not capable enough to come up with the necessary ideas to support the main topic and the number of required words to reach the standard ones may not be enough. Besides, the present time learners are somehow different from the previous one, thanks to the present communicative technologies such as the Net, social networks, blogs and email. Perhaps we need to get away from the traditional method of using pen and pencil to ask learners to write and ask them to use more cutting edge technologies to write. Using these technologies, teachers can make learners work together and collaborate with each other to produce a piece of writing.

Given the above assumption about web-based instruction, the present study attempted to use a web-based (e-mail) course, in combination with traditional writing instruction (depending on the textbook). The main focus of this study was to find out whether the integration of a web-based course in traditional EFL in-class writing instruction significantly improves the writing skills of low ability EFL college students.

1. To ascertain the current level of writing ability of EFL learners.
2. To ascertain the current level of essay writing ability of EFL learners.
3. To assess the effect of using peer reviewing on EFL learners' feeling of writing apprehension.
4. To assess the effect of using peer reviewing on EFL learners' essay writing ability.

Thus, a review of the literature reveals that collaborative writing in the L2 writing classroom is advocated though underutilized, that there is a history of how technology has impacted the L2 collaborative writing process, and that technology provides many benefits to the L2 collaborative writing process. Yet, more research is needed on the nature and process of collaborative writing and learners' perceptions of the collaborative writing process (Storch, 2005). Even less work has been published on collaborative writing in Web-based word processing (though, see Kessler, 2009, and Kessler & Bikowski, 2010) and how learners navigate writing in this context. This

study aims to fill these needs by exploring the changing nature of Web-based collaborative writing within these environments.

Specifically, the study focuses on the following research questions:

1. Does collaborative essay writing through e-mail have any effect on the improvement of the writing ability of Iranian intermediate EFL learners?

## 2.1 Method

In this study, the researcher intended to find out whether collaborative learning through e-mail can improve Iranian intermediate EFL learners' writing ability.

## 2.2 Participants

The subjects of this research were 65 male and female Iranian EFL learners studying English language teaching in Malayer, Iran. They were between 18 to 27 years old. After administering a modified version of the Comprehensive English Language Test (CELT) 48 homogeneous students were chosen as the subjects of the study. They were randomly divided into two groups consisting 24 people each.

## 2.3 Instrumentation

The following materials were used to gather data at different stages of this study:

1. A language proficiency test, Comprehensive English Language Test (CELT), consisting of 70 multiple choice (M/C) items was given to the learners. This test was then given to the 62 target subjects in two intact classes to ensure that they belonged to the same population at the beginning of the experiment.
2. For the pretest, the subjects were asked to write an essay consisting 150 words.
3. For the posttest, they were required to write another essay consisting 150 words. The scale used for rating the composition tasks was the scale introduced by Brown & Baily (1984, pp. 39-41). Based on this rating scale, the subjects were given scores from 0 to 20. Two raters scored the papers.

## 2.4 Procedures

At the beginning of the study, extending ten weeks, two sessions was specified to familiarize the students in the experimental group with the way to send and receive emails, use Microsoft word processing and also with the principles of collaborative work and formal writing. The concept of peer correction and interaction was explained. The subjects were instructed to be attentive to the

comments made by each member of the group and be ready to consider their correction and opinions. During the other eight weeks, the subjects in the experimental group were required to write an essay each week.

The subjects in experimental group were grouped into eight teams consisting of three people each. The subjects in each team were required to write a three paragraph essay in such a way that each member was responsible to write one paragraph using Microsoft word processing and was supposed to send it to the next member of the team. After reading the paragraph, the second member was required to correct it, make his own comments and write his own paragraph. He emailed his paragraph to the third member of the team along with his correction and comments on the first paragraph. The third member of the team added his own share while correcting and commenting on the preceding paragraphs. Doing this, the subject sent a copy of the finished job to the members and they tried to polish the final product.

After being corrected by their peers, the subjects revised their own writing based on their peers' comments and suggestions. So, the process includes production-correction –edition for each member. Other studies made use of such a peer correction system (e.g., Chen & Tsai, 2009; Tseng & Tsai, 2007; Wen & Tsai, 2008). Each member performed the roles of both author and editor simultaneously.

The teacher made sure that the students followed the weekly schedule. The final draft was sent to the teacher for assessment. The purpose of the course was to develop fluency, accuracy, quality and correctness in writing.

In the control group, the subjects had the same of number of weeks to write, the same materials and the same teacher. The main difference with the experimental group was that the 24 members of the group were required to write individually. There was no team work and no collaboration. Unlike the experimental group, they had to write on a topic every week and they did not benefit from any correction made by their peers. The essays written by the subjects were delivered to the teacher every week and the teacher corrected them and returned them back to the subjects.

Then their scores in the posttest were compared through a *t*-test in order to examine whether there was a meaningful difference between the means of the two groups on the posttest. In order to determine the degree of improvement under two types of instruction, two matched *t*-tests were carried out between the pretest and posttest of each group.

### 3. Results

The writing performance consisted of a pre-test and a post-test in which the participants were asked to do a writing task. The students' task performance in writing was measured using the Rubric which was used by both the instructor and the other rater in order to check the inter-rater reliability. A *t*-test was used to analyze the difference between the writing performance of the

participants on the pre-test and the post-test. The results showed a significant difference between the performance of the experimental and control groups at all three levels.

In the next phase of the study, a writing pretest was administered in order to determine the ability of the subjects in the writing skill before giving the treatment. This would enable the researchers to investigate the possible impact of the treatment on the improvement of the writing ability of the experimental group. The descriptive statistics of the writing pretest are reported in Table 1.

**Table: 1**  
*Descriptive Statistics of the Writing Pretest*

Groups	N	Mean	V	SD	Range	Minimum	Maximum
<b>Experimental</b>	24	11.91	5.86	2.42	9.00	7.50	16.50
<b>Control</b>	24	11.93	4.55	2.13	8.00	8.00	16.00

Pearson Product Moment Correlation formula was used to calculate the inter rater reliability of the writing pretest which showed a high consistency between the two raters (Table 2).

**Table: 2**  
*Inter-Rater Reliability of the Groups on the Pretest*

Raters	Mean	SD	V	Pearson Product Moment Correlation
<b>Rater 1</b>	12.02	2.26	5.12	0.95
<b>Rater 2</b>	11.93	2.49	6.23	

A t-test was also run to ensure that the subjects are homogenous in terms of their current writing ability. As shown in Table 3, the F observed is not bigger than was lower than the F critical at 0.05 level of significance for 46 degrees of freedom. Accordingly, it could be claimed that the variances for the two groups on the pretest are homogeneous and the means could be compared. The  $t$  observed for the two groups was 0.030 at 46 degrees of freedom, showing a lower value than the  $t$  critical of 2.02. Thereby, this claim could be made that the two groups were not significantly different in terms of writing before undergoing the treatment.

**Table: 3**  
*Comparison of Variances and Means of the Groups on the Pretest*

Levene's Test for Equality of Variances	$t$ -Test for Equality of Means						
	F observed	F critical	$t$ observed	$t$ critical	df	Sig (2-tailed)	Mean Difference
<b>Equal variances assumed</b>	1.28	1.69	0.030	2.02	46	0.86	0.02

The treatment was given to the both groups as already explained. A posttest was administered and the subjects in the both groups were required to write a three paragraph essay to see how much progress the groups had made. The descriptive statistics of the posttest for the both groups are brought in Table 4.

**Table: 4**

<i>Descriptive Statistics of the Groups on the Posttest</i>							
Groups	N	Mean	V	SD	Range	Minimum	Maximum
Experimental	24	15.31	5.23	2.28	8.50	11.00	19.50
Control	24	12.56	5.37	2.31	9.00	8.50	17.50

To check how consistent the judgments made by the two raters are, Pearson Product Moment Correlation formula was ran. As the Table 5 shows, the two sets of scores on the posttest enjoy a high degree of correlation.

**Table: 5**

<i>inter-Rater Reliability of the Groups on the Posttest</i>				
Raters	Mean	SD	V	Pearson Product Moment Correlation
Rater 1	14.97	2.52	6.36	0.92
Rater 2	14.91	2.88	8.33	

As shown in table 6, a Levene's test was ran to prove the equality of variances of the two groups on the posttest. As Table 9 indicates, the calculated value of F observed was 1.02, which was lower than the F critical of 1.69 at 0.05 level of significance for 46 degrees of freedom. The researchers ran an independent *t*-test to analyze the means of the two groups on the posttest. Since the *t* observed value of 6.25 at 46 degrees of freedom was greater than the *t* critical of 2.02, the null hypothesis could be safely rejected at 0.05 level of significance leading to the conclusion that the treatment was effective enough to make a significant difference between the experimental and control groups. Consequently, it could be concluded that collaborative learning through e-mail would certainly improve students' writing ability.

**Table: 6**

<i>Comparison of Variances and Means of the Groups on the Posttest</i>							
	Levene's Test for Equality of Variances			<i>t</i> -Test for Equality of Means			
	F observed	F critical	<i>t</i> observe	<i>t</i> critical	df	Sig (2- tailed)	Mean Difference
Equal variances assumed	1.02	1.69	6.25	2.02	46	0.02	2.75

To find the effect of collaborative essay writing through e-mail on the improvement of the writing performance of the subjects in the experimental group, a matched  $t$ -test was done. As the table 6 suggests, the  $t$  value for the means of the experimental group before and after the treatment was 11.72, showing greater value than the critical  $t$  value of 2.06 for a two-tailed test at 0.05 level of significance at 23 degrees of freedom.

**Table: 7**  
*Matched t-Test between the Pretest and the Posttest of the Experimental Group*

	<i>t-Test for Equality of Means</i>				
	$t$ observed	$t$ critical	df	Sig (2-tailed)	Mean Difference
Experimental (pre test/ post test)	11.72	2.06	23	0.01	3.40

Matched  $t$ -test results conducted on the pre- and posttest of the control group are presented here in Table 7. The  $t$  observed (0.28) for the groups indicates a lower value than the  $t$  critical (2.26) at 0.05 level of significance at 23 degrees of freedom. So, it could be conclude that there was not any statistically significant difference between the pretest and the posttest mean scores of the subjects in the control group.

**Table: 8**  
*Matched t-Test between the Pretest and the Posttest of the Control*

	$t$ observed	$t$ critical	df	Sig (2-tailed)	Mean Difference
Control (pre test/ post test)	0.28	2.06	23	0.95	0.63

The above findings indicate that the performance of the subjects in the experimental group was significantly better than that of the control group suggesting that if the learners are required to write collaboratively through e-mail, they could develop their writing performance.

#### 4. Discussion

This study aimed to explore how EFL learners engage in collaborative writing using e-mail. Besides, this study intends to show how technology can help EFL learners to work collaboratively and share their ideas and knowledge especially in writing skill. The research

question asked how collaborative essay writing through e-mail has an effect on the improvement of the writing ability of Iranian intermediate EFL learners. The analysis of the data obtained through writing performance of the subjects on the pre and post tests revealed that the students' writing performance in both control and experimental groups improved, but after comparing the differences in the post-test results, it was found that collaborative essay writing was more effective than individual writing. The students in the experimental group had the chance to write their essays using a word processing software. This helped them to be more aware of the errors they made while writing and they could have the initial edition before emailing the writing to their teammate. So, this word processing tool can be considered as flexible means and allowed for fluidity in the process of collaboration and writing. Using this tool let the subjects be more attentive to form. They tried to take care of many things in their writing performance such as spelling, punctuation and capitalization. The tool also helped them to be more attentive to such grammatical problems as plurals, pronouns, part of speech, and verb tense. The findings are in line with Elola and Oskoz (2010), in which they found that the students who were engaged in writing collaboratively in a wiki showed improved accuracy.

Examining changes happened in form was not the only purpose of the study. The subjects also showed attention to the writing process as this was another important aspect of the writing course. They were trained to take care of the points such as how to start their paragraph, how to support their ideas and how to conclude their paragraph. The subjects' attention to process writing shows that they attend the write and revise paradigm and were interested to do so within a group context. This might seem interesting, since Storch (2005) suggests that learners involved in collaborative writing projects may focus on the product more than the process. Also illustrating their commitment to the actual process of collaborative writing was that students were willing to work together as they engaged in collective scaffolding (see Storch, 2005). This simultaneous editing and collective scaffolding allowed students to pool their linguistic knowledge and analyze their language production. The ability to provide and receive timely feedback is important for optimal collaborative writing to occur (Storch, 2005). Web-based word-processing tools also allow observations of student behavior, opportunities which are not available without these tools.

The research question involved students' participation in each group. Observation and analysis of the documents indicated that some students were more prepared for writing in the academic genre. Other factors contributing to the different levels might be the students' comfort with the Web-based word processing program, their comfort and experience with collaborative writing tasks, roles the teammates took on explicitly or implicitly, or overall comfort and confidence with writing academically in English. It should be noted, though, that the differing rates of participation were not perceived to be problematic to the students. This is significant given Spigelman's (2000) finding that trust and a willingness to share authorship are crucial for collaborative writing to succeed. Another possibility for differing participation rates could be

students working together at the same computer. Future research could explore the extent to which this occurs and how it may affect perceptions of ownership.

Thus, this study shows that students focus more on meaning than on form, but that when they do focus on form, they make correct more often than incorrect changes. They also demonstrate attention to process by assisting each other through collective scaffolding. The tool allowed the researchers to observe the students as they collaborated through the fluid process of planning, writing, revising/editing, and formatting. As they aid each other in edits and idea development, they demonstrate the willingness and ability to work together in the writing process. The teams' contributions illustrate the preparation, planning, and recursive revision practices associated with process-based writing and demonstrate how students negotiate the space between simultaneously being a member of a group and an autonomous writer.

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