



## The Effect of Wikis' Collaborative Environment on the Improvement of Iranian EFL Learners' Writing Skill

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### Abstract

*The present study was conducted to demonstrate the effect of wikis' collaborative environment on the improvement of Iranian EFL learners' writing skill. Wiki, Hawaiian word for quick, is a series of interlinked collaborative web pages that can be edited and added to by a group of learners. Nowadays, the availability of these online environments for practicing writing and delivering the materials in a web-based format has turned them into useful tools for teaching writing. In addition, the time demanding nature of writing and classroom time limitations have led some teachers to use these ideal platforms to boost their students' motivation to learn to write. The participants of this study consisted of 60 students chosen on the basis of a homogenizing proficiency test. They were divided into one control and two experimental groups. Collaboration was the key concept in both experimental groups where the members wrote through collaborative work and were corrected by their peers. While the activities in one of the experimental groups were done in the wiki environment, those in the other experimental group were performed in the class following the norms of any collaboration-oriented class. The students in the control group wrote individually and were corrected by the teacher. The same materials were used for teaching writing in all the three classes, and the same teacher taught them. After the 2- month treatment period, the same topic was given to all the participants to write a composition each on their own. The results of an analysis of variance revealed that collaboration in the wiki environment produced better student writers.*

### 1. Introduction

Writing as a productive skill is more complicated than it seems at first and often seems to be the hardest of the skills, since it involves not just a graphic representation of speech, but the development and presentation of thoughts in a structured way [1]. Writing is especially important for the instruction of second language learners for three reasons: first, writing well is a vital skill for academic or occupational success [2], but one that is especially difficult for second language learners to master; second, writing can be an effective tool for the development of academic language proficiency as learners more readily explore advanced lexical or syntactic expressions in their written work [3, 4]; third, writing across the curriculum can be invaluable for mastering diverse subject matter, as written expression allows learners to raise their awareness of knowledge gaps, abstract problem-specific knowledge into schemas that can be applied to other relevant cases, and elaborate mental representations of knowledge that can be more easily retrieved, while simultaneously allowing teachers to better understand the students' state of knowledge and thinking process and thus adjust instruction as necessary [5].

The new digital media have recently played an important role in the teaching of foreign language skills. During the last decade some important new tools such as wikis have emerged for the teaching and learning of writing in particular, and it is assumed that a rational orchestration of activities in wikis'



collaborative environment can bear some promising results for students aiming at developing the writing skill. The present study was conducted in order to shed some light on the usefulness of both collaboration and technology in teaching L2 writing.

## 2. Background

The growing presence of new technologies in everyday life along with the fact that students are increasingly growing up in the digital environment mean that students feel more and more comfortable using new technologies in the language classroom [6]. Many studies with wikis have shown: (a) the easy accessibility, simplicity and transparency of wiki pages help learners to share information and resources among their team members and across groups and make it easier for students to work at their own pace [7]; (b) students have positive perceptions about how wikis can improve collaborative group work and the quality of their work [8], and (c) the effectiveness of wiki application in learning and teaching depends on careful planning and training of both students and instructors to familiarize them with the technology, on class size, and on motivating students to learn from one another based on appropriate instructional design [9].

Wiki pages provide the opportunity for teachers to embed comments on the students' work and return the assignments to them, without the red ink scribbles that necessitate lengthy, time-consuming, and often wasteful retyping. The on-line submission of assignments saves class time and increases the amount of time they can devote to out-of-class learning activities. Moreover, students have the opportunity to consult their classmates and the teacher electronically about their writing. Wikis can also help with scaffolding students' collaborative writing through a platform of sharing, peer-commenting, and co-constructing [10]. According to Taylor [11], collaborative assignments offer students the benefits and experience of building on existing knowledge through the dynamic interplay with and among other students, the subject matter, and the teacher. With careful coordination and communication, group writing assignments can yield excellent results and valuable experiences. Also, like other group tasks, collaborative writing has the potential to be far superior to individual writing because the weaknesses and inadequacies of individuals are caught by one another, while all the strengths of the individuals are pooled [12]. Here, the students can exchange their ideas and share their understanding of the task and eventually find solutions to the given problems.

## 3. The study

### 3.1 Research question

This study aimed at answering the following question:

- *Does working in wikis' collaborative environment have any effect on the improvement of Iranian EFL learners' writing skill ?*

### 3.2 Participants

60 homogenous lower-intermediate students within the age range of 14-16 studying English as a foreign language in a junior high school in Tehran participated in this study. Later, they were divided into one control and two experimental groups, each with 20 students.

### 3.3 Instrumentation and Materials

The following instruments were used in order to collect the required data for this research:

- a. A standardized proficiency test based on KET [13], consisting of 20 word completion, open cloze, and information transfer items, and a guided writing test used to homogenize the participants
- b. A writing pretest in the form of describing a series of pictures on the topic "Lunch Bullies"
- c. A writing posttest on the topic "My Birthday"

Most of the materials of the study were included in PBworks.com, ([www.writingcourse90.pbworks.com](http://www.writingcourse90.pbworks.com)), an educational online workspace enabling the users to perform collaborative editing, complete history, and audit trail and easily inviting students to participate in the activities. The next material was the book Writing Tutor by R. Lewis, 2011, which was used both as the textbook and as a source for choosing the topics for students' writings in the course of the 12-session treatment period.

### 3.4 Procedure

After choosing 60 homogenized students on the basis of their scores on a proficiency test, the researchers divided them into one control and two experimental groups all having the same teacher. During the treatment, personal narrative writing was used in the experimental groups, where the students formed groups of 5 members. They wrote collaboratively and corrected each others' errors. The activities in experimental group 1 were done in wiki environments, while those in experimental group 2 were performed in the classroom without the wikis. The students in the control group wrote individually on the same topic as the two experimental groups and were corrected by the teacher. At the end of the treatment, the same posttest was given to the students to compare them in terms of their gain in writing.

## 4. Data analysis and results

### 4.1 Proficiency test

Initially, 100 elementary EFL learners sat for KET and 60 of them were matched based on their scores and divided into three groups as the final participants of the study.

**Table 1. Descriptive Statistics of the Proficiency Test (KET)**

	N	Mean	Std. Deviation	Skewness	
				Statistic	Std. Error
Control	20	10.50	3.692	.847	.512
Ex 2	20	10.55	3.953	.872	.512
Ex 1	20	10.80	4.188	.667	.512

As shown in table 1, the assumption of normality was observed in the distribution of the general proficiency scores of the three groups ( 1.65, 1.70, and 1.30 falling within the range of -1.96 and +1.96).

There was no statistically significant difference between the means of the three groups because they had been matched in terms of their proficiency scores.

#### 4.2 Pretest

In the next phase of this study, a writing pretest was administered in order to measure the participants' writing ability prior to the treatment. The descriptive statistics of the writing pretest are reported in table 2.

**Table 2. Descriptive Statistics of the Pretest**

	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Control	20	9.68	1.162	.590	.512
Ex 2	20	9.87	1.572	.076	.512
Ex 1	20	9.82	1.908	.786	.512

Two raters rated the papers using the analytic scale for rating personal narrative writing. The inter-rater Cronbach- $\alpha$  reliability of the scores was 0.92, indicating a high level of consistency between the two raters.

Later, an ANOVA (table 3) was run in order to establish the homogeneity of the participants regarding their writing ability at the outset of the study. Since the significance level of  $p=0.91$  was higher than  $\alpha=0.05$ , it was decided that the three groups belonged to the same population.

**Table 3. One-way ANOVA for the Pretest**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.433	2	.217	.087	.917
Within Groups	141.712	57	2.486		
Total	142.146	59			

#### 4.3 Posttest

At the end of the treatment, all the three groups took the same writing posttest. The descriptive statistics of the test are given in table 4.

**Table 4. Descriptive Statistics of the Posttest**

	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Control	20	11.6500	1.12507	.692	.512
Ex 2	20	13.1000	1.38222	-.314	.512
Ex 1	20	14.6750	2.06649	-.476	.512

The inter-rater reliability of the posttest scores calculated through the Cronbach- $\alpha$  formula turned out to be 0.92, which was deemed satisfactory.

Another ANOVA was run in order to compare the participants' mean scores on the posttest. As given in table 5, there was a significant difference between the mean scores of the three groups.

**Table 5. One-way ANOVA for the Posttest**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	91.558	2	45.779	18.443	.000
Within Groups	141.488	57	2.482		
Total	233.046	59			

Then a follow-up Scheffe test was conducted in order to determine the exact location of the difference (s). According to table 6, all the mean differences were significant.

**Table 6. Schefee Test for the Posttest**

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
EX2	control group	1.45000*	.49822	.019	.1977	2.7023
EX1	control group	3.02500*	.49822	.000	1.7727	4.2773
	EX2	1.57500*	.49822	.010	.3227	2.8273

\*. The mean difference is significant at the 0.05 level.

The mean score for Ex 2 ( M= 13.10) was significantly higher than that of the control group (M=11.65). Similarly, the mean of Ex 1 or the wiki group (M=14.67) was significantly higher than those of both Ex 2 and the control groups. In other words, the wiki group outperformed the other two groups in terms of writing ability.

## 5. Conclusions

The result of this study indicated that learners who were exposed to collaborative learning through the wiki environment outperformed those who experienced writing without the wiki or individually. Wikis allow students to work collaboratively on a project giving students the option to add to the wiki and edit each other's work. As West [14] notes, wikis are especially suited "for collaborative activities, especially those that are dynamic and nonlinear in construction and will result in a shared product or outcome" (p.6). Students enjoyed using the wiki in how it helped them to work better as a team and write better, encouraged peer-to-peer interaction, and facilitated online group work. Integrating technology into content and language classrooms makes the lessons more interesting and enables students to develop more comprehensive homework with deeper understanding.

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