Maximizing Exposure to Online Tasks to Improve Critical Thinking and Academic Writing Achievement

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Abstract

The present study was an attempt to investigate the effects of online tasks on improving critical thinking and academic writing achievement of Iranian EFL learners. To perform this study, 150 Iranian EFL learners studying English in a private Language Institute in Isfahan were selected. They took an Oxford Placement Test and 100 intermediate-levels were randomly assigned into two experimental and control groups. Then, both groups were given a pre-test of writing and critical thinking questionnaire before the treatments sessions to determine the participants' writing ability and critical thinking at the beginning of the research period. During the treatments, both groups were taught writing courses. The experimental group received the courses through online program while the control group received traditional teaching of the writing courses. Having finished the treatments, the learners in the both groups were given the post-test of writing ability and critical thinking questionnaire. Data were analyzed through Independent Samples t-test to test the hypotheses of this study. The findings revealed that writing ability of the experimental group improved after the instruction while the instruction did not have significant effect on developing writing ability of the control group. In other words, the experimental group outperformed the control group at the significant level. Moreover, critical thinking ability of both experimental and control group did not improved after the instruction.

Keywords: call, critical thinking, online tasks, writing skill

INTRODUCTION

Recently, some researchers (e.g., Geddes, 2004) attempt to build instruments to support informal communication. The instruments focused on audio and video environments. Recently, with the emergence of new technologies, computers as instruments for informal communication have become of great interest to the modern community especially the young because it is an instrument that successfully supports informal communication (Nardi, Whittaker & Bradner, 2000).

Similarly, computer technologies can support learning in a number of ways and facilitate learning preprocesses (Gorjian, 2008). In general, the Internet provides wide international resources of language learning. It enables second language learners to communicate directly with native English speakers. Generating language is the most important item for making inter-personal relationship for self-expression and social interaction.

Receptive and productive language skills (i.e., listening, reading, speaking and writing) can be facilitated through the Internet. Abidin, Ahmad and Kabilan (2010) believe that, second language learners should expand their abilities, self-knowledge, self-confidence, and lifelong learning. They improve their life skills by using different social media that enable the learners to foster their positive trends about learning English. The process of learning a foreign/second is primarily based on the main skills of a language (i.e., speaking, listening, reading and writing). Learning language skills has important role in learners' communication in the real world (Brown, 2007). Among the skills, writing is considered as a vital skill in the process of language learning.

Writing ability is one of the major elements in language learning. It is very important for learners how to learn it and how to use it. It is obvious that for learners, writing is a means of recording and reformulating knowledge and developing ideas. It may also be a means of personal discovery, of creating, and of self-expression. According to Richards and Schmidt (2010), "writing is viewed as the result of complex processes of planning, drafting, reviewing and revising and some approaches to the teaching of first and second language writing teach students to use these processes " (p. 641). Writing ability is one of the four mail skills of learning a language. This important ability is the way to put words together to convey the meaning through those words. According to Luchini (2010), writing skill is a challenging task because it necessitates a wide range of cognitive, interpersonal, and linguistic strategies of which EFL learners are mostly unaware.

Furthermore, Langan (2005) states that writing is a very complex skill including different stages and sub-processes including discovering and developing a thesis, organizing, revising, and editing what is written to have an effective, error-free piece of writing. Similarly, EFL/ESL writing is regarded as a difficult, complex and challenging process (Alsamadani, 2010). Wade (1995) persuasively states that writing is an essential ingredient in critical thinking instruction, since it promotes greater self-reflection and the taking of broader perspectives than does oral expression. Suitable written assignments, she believes, can stimulate classroom writers to enhance their active learning spontaneously. Writing, especially the process approach, is, by nature, a self-critical one. It lends itself to the kind of introspection that would prompt students to reflect on their understanding, and to communicate their feelings about what they know, what they are doing, what they are struggling with, and how they are experiencing their learning (White & McGovern, 1994).

The issue of critical thinking has a special position in academic education in general and second or foreign language learning and teaching in particular. Critical thinking can be considered as a cognitive skill that affects learning dramatically which can be defined generally as the ability to think reasonably (Bailin, 2002). In another definition, Richards

and Schmidt (2010) remarked that "a level of reading comprehension or discussion skills when the learner is able to question and evaluate what is read or heard. In language teaching, this is said to engage students more actively with materials in the target language, encourage a deeper processing of it, and show respect for students as independent thinkers" (p. 147).

Halvorsen (2005) claims that critical thinking is not an easy concept to define, as it can mean quite different things to different people in different contexts and cultures but he mentioned that critical thinking is "to think critically about an issue is to consider that issue from various perspectives, to look at and challenge any possible assumptions that may underlie the issue and to explore its possible alternative" (p. 1). The ability to think obviously and judiciously is called critical thinking. It includes the ability to engage in reflective and independent thinking; the ability to decide what to do or what to believe (Ennis, 2011). In another explanation, critical thinking is defined as the different practice of cognitive skills or strategies that extend the probability of a desirable outcome. According to Halpern (1998) critical thinking is purposeful, reasoned, and goal-directed. Therefore, critical thinking has a significant role in higher education and the professions (Moon, 2008) which can be considered as a main part of higher education and as a fundamental goal of learning (Halvorsen, 2005).

LITERATURE REVIEW

Al-Abed Al-Haq and Al-Sobh (2010) conducted a research to determine the effectiveness of a web-based writing instructional EFL program (WbWIP) on Jordanian secondary students' performance. 122 seventeen-year old students in the eleventh scientific grade studying in four secondary comprehensive schools, two male schools and two female ones that belong to Irbid Second Directorate of Education were selected to participate in the study. The authors found that there were statistically significant differences at ($\alpha = 0.05$) in the students' mean scores of the overall English writing achievement post-test in favor of the experimental group. Mover, there were statistically significant differences at ($\alpha = 0.05$) due to gender in favor of the female students compared with males.

In another study, Ahmadi and Marandi (2014) attempted to investigate if the use of wikis would have any effect on EFL learners' writing performance. 16 EFL students attending the Advanced Writing course at JDKU were randomly selected from a population of 60 EFL students. The wiki group, attending the language lab, acted as the experimental and the other group as the control group. The results of the study revealed that the wiki group outperformed the traditional writing class. Based on the collected data of this study, it could be understood that the use of wikis would enable writing students to perform better.

Ababneh and Lababneh (2013) were other researchers who analyzed the effect of using the internet on Arab EFL students' performance in English writing. The subjects were purposefully chosen from a private school in Irbid district in Jordan. They were instructed in the traditional way in the first semester and their writing was rated as a pre-test. In the second semester they were instructed using the internet as a mean of teaching/learning. Their writing was rated afterwards as a post-test to examine the effect

of using the internet on their writing. "The results showed that students' overall performance on the post-test improved significantly. The most significant improvement was on the use of vocabulary and the least was on the development of their paragraphs in general " (Ababneh & Lababneh, 2013, p.103).

Finally, Hayati and Gooran (2014) examined the relationship between using email as a communication tool and students' writing achievement. Following a pre-test, one group was taught the procedures of writing a paragraph in class while another group received instruction via email. "The results of the study indicated a significantly positive relationship between using email and students' writing performance " (Hayati & Gooran, 2014, p. 1).

Based on the effectiveness of computer assisted language learning in second/foreign language learning, some research (e.g., Zainia & Mazdayasnab, 2014) that investigated the effect of computer assisted language learning on the development of EFL students' writing ability. However, to the best of researchers' knowledge, no study have investigated the effects of online tasks on improving critical thinking and academic writing achievement of Iranian EFL learners. Therefore, to fill the gap, this study was designed to be conducted.

RESEARCH QUESTIONS

- Do online tasks have statistically significant effect on improving academic writing achievement of Iranian EFL learners?
- Do online tasks have statistically significant effect on improving critical thinking of Iranian EFL learners?

METHOD

Participants

The participants of the present study were 150 Iranian male and female EFL learners studying English at Kish and Safir language institutes in Isfahan, Iran. All of the participants were Persian native speakers in the age ranging from 13 to 21 years old. Among the population, 100 EFL learners (i.e., 38 female and 34 male learners) who got the band score of the OQPT (i.e., from 30 to 48) were considered as the intermediate learners and participated in this study. The homogenized learners were divided into two groups (i.e., an experimental and a control groups).

Instruments

The Oxford Quick Placement Test (the OQPT)

The OQPT was given to participants to find out their homogeneity level. It is a placement test for homogenizing the whole population of this study as intermediate EFL learners. The OQPT was used to measure the learners' general language ability so they could be placed into the appropriate level for the research. It is the test of language proficiency presented by Oxford University Press, Local Examination Syndicate which provides tutors with a reliable and time-saving technique for determining the proficiency level of

a learner. This test consists of 60 items in two parts: part one with the first 40 questions and part two with 20 items.

Critical Thinking Questionnaire

In order to measure the EFL learners' critical thinking ability before and after the treatments, a critical thinking questionnaire was given to the learners. To do this, The Persian version of Honey's (2004) critical thinking questionnaire including 30 multiple choice items was administered to the participants to evaluate the skills of analysis, inference, evaluation, inductive reasoning and deductive reasoning. The critical thinking questionnaire from Naeini's thesis (2005) was used in order to gather the related data. The reliability of the critical thinking questionnaire was estimated to be .80 with 30 subjects similar in characteristics to target subjects using the Cronbach alpha coefficient which demonstrated a reasonable degree of reliability.

Pre and Post-test of Writing

Writing section of a PET was administrated as the pretest. This test intended to measure the writing ability of the EFL learners before the treatments. This test had five parts and 35 questions and 75 minutes time to answer. Moreover, to measure writing ability of the learners after the treatments, the groups of this study were given the posttest. Like the pretest, writing section of another PET was administrated as the posttest.

Procedure

The first step in this study was to homogenize the learners into intermediate level. Accordingly, 150 EFL learners were given the OQPT. This test consisted of 60 items and two parts: part one included 40 and the second included 20 items. The participants had 50 minutes to answer the questions. After the placement test, 100 EFL learners were selected to take part in the study as the members of an experimental and a control groups (n=50).

The second step in this study was to measure the level of critical thinking of the learners before the treatments. Accordingly, the Persian version of Honey's (2004) critical thinking questionnaire translated by Naeini (2005) was administered to the participants to evaluate the skills of analysis, inference, evaluation, inductive reasoning and deductive reasoning. According to Naeini (2005), the English version of critical thinking questionnaire was translated by her to guarantee the full comprehension of the questions by participants.

The third step was to measure the learners' performance in writing test before the treatment. The pre-test was administrated to all participants of the study. After administrating of the pre-test, both groups received the treatments.

The forth step was to administrate the treatments. The whole instruction for both experimental groups take place in 16 sessions (each group received 8 sessions) and each session lasted for 60 minutes. With regards to the experimental group, the learners received the online writing tasks. Each session, one writing task was presented and taught to the group.   Regarding the control group, the learners received face to face teaching of writing. Each session, one unit extracted from Grammar in Use for

intermediate learners was taught to the group. It should be noted that method of teaching in both groups were the same and only the materials are different because the researcher intended to know the effect of the materials on reading comprehension.

Finally, having finished the treatments, the two groups took the writing posttest. Afterwards, critical questionnaire was administered.

Design

The present study was carried out through an experimental research, as true randomization was carried out. It was a quantitative research and attempted to establish cause-effect relationship among three variables: an independent variable (exposure to online tasks) and two dependent variables (writing ability and critical thinking ability). In other words, an experimental pretest-posttest comparison group research design has been chosen for the study to compare the groups in terms of writing and critical thinking abilities.

Data Analysis

The Independent Samples t-tests by the use of SPSS software version were applied to analyze the data.

RESULTS

First Research Question

Table 1 provides the mean of experimental group in the post-test is higher than the mean of control one. It reveals that the difference between the pre-test and the post-test of experimental group was significant. On the other hand, control group did not perform better in post-test in comparison with the pre-test stage. In sum, the post-test of experimental group was significantly different from the post- test of control group.

Table1. Descriptive Statistics of Pre and Posttest of Writing

Group		Max	Min	STD	M	N
Experimental	Pre	14	3	1.588	7.5	50
	post	15	5	1.254	14.30	50
Control	Pre	16	2	1.236	8.25	50
	post	12	5	1.874	9.50	50

Table 2. Independent Samples t-Test for the Pre-test of Writing

Experimental/ Control	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	Lower	Upper
Equal Variances Assumed	5.853	.019	.898	98	.324	.633	.636	-.641	1.908
Equal Variances Not Assumed			.948	98	.325	.633	.636	-.647	1.913

Table 2 shows that t (.948) with df= 98 is less than the critical t (1.96), the difference between the groups is not significant at pretest stage (p > 0.05).

Table 3. Independent Samples t-Test for the Post-Test of Writing

Experimental / Control	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	Lower	Upper
Equal Variances Assumed	.491	.486	3.895	98	.000	2.366	.554	1.25	3.47
Equal Variances Not Assumed			4.198	57.941	.000	2.366	.554	1.25	3.47

Table 3 indicates that t (3.895) with df= 98 is greater than 1.96, thus the difference between the groups is significant at posttest stage (p < 0.05). Based on the descriptive and inferential statistics used in the present study, online tasks had positive effect on improving writing ability of experimental group while there was no significant difference between the scores of the learners in the control group the difference at pre and posttest stages.

Second Research Question

Descriptive statistics of the critical thinking ability of both groups indicate that there is no much difference between them. In sum, the critical thinking questionnaire scores of the experimental group were not significantly different from the control group.

Table 4. Descriptive Statistics of Critical Thinking Questionnaire

Group		Max	Min	STD	M	N
Experimental	Pre	130	25	1.253	85	50
	post	112	20	1.214	80	50
Control	Pre	89	18	1.365	72	50
	post	118	30	1.458	75	50

Table 5. Independent Samples t-Test for the Critical Thinking Questionnaire before the Instruction

Experimental / Control	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	Lower	Upper
Equal Variances Assumed	2.888	.095	.642	98	.523	.333	.519	-1.372	.705
Equal Variances Not Assumed			.642	58.214	.523	.333	.519	-1.375	.708

Table 5 shows that t (.642) with df= 98 is less than the critical t (1.96), the difference between the groups is not significant at the beginning of the research period (p > 0.05).

Table 6. Independent Samples t-Test for the Critical Thinking Questionnaire after the Instruction

Experimental / Control	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	MD	SED	Lower	Upper
Equal Variances Assumed	2.214	.125	.725	98	.412	.258	.512	-1.125	.607
Equal Variances Not Assumed			.725	58.214	.412	.258	.512	-1.127	.601

Table 6 shows that t (.725) with df= 98 is less than the critical t (1.96), the difference between the groups is not significant after the instruction (p > 0.05). Based on the results from the independent samples t-test, online tasks did not have statistically significant effect on improving critical thinking of Iranian EFL learners.

DISCUSSION AND CONCLUSION

The results of the present study revealed that online tasks had significant effect on improving writing ability of the experimental group while the tasks did not improve writing ability of the control group. Moreover, online tasks did not develop critical thinking ability of the learners in the experimental and control groups.

The results of the present study are in line with Al-Abed Al-Haq and Al-Sobh (2010) who tried to determine the effectiveness of a web-based writing instructional EFL program (WbWIP) on Jordanian secondary students' performance. The results revealed statistically significant differences at (α = 0.05) in the students' mean scores of the overall English writing achievement post-test in favor of the experimental group. The results further revealed that there was a significant difference at (α = 0.05) among the mean scores of the students' achievement post-test for the discoursal component content in favor of the experimental group.

Moreover, the findings of the present study match with Ahmadi and Marandi (2014) who attempted to investigate if the use of wikis would have any effect on EFL learners' writing performance. The result of the study revealed that the wiki group outperformed the traditional writing class. Likewise, the findings of the present study are in line with those of Ababneh and Lababneh (2013) who analyzed the effect of using the internet on Arab EFL students' performance in English writing. The research design of this study used a pre-test/post-test to identify the influence of the internet on students' writing in English. The subjects were purposefully chosen from a private school in Irbid district in Jordan. They were instructed in the traditional way in the first semester and their writing was rated as a pre-test. In the second semester they were instructed using the internet as a

mean of teaching/learning. Their writing was rated afterwards as a post-test to examine the effect of using the internet on their writing. The results showed that students' overall performance on the post-test improved significantly. The most significant improvement was on the use of vocabulary and the least was on the development of their paragraphs in general.

Finally, the results of the present study agree with Hayati and Gooran (2014) who examined the relationship between using email as a communication tool and students' writing achievement. Following a pre-test, one group was taught the procedures of writing a paragraph in class while another group received instruction via email. The results of the study indicated a significantly positive relationship between using email and students' writing performance.

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