

Original Article

Effects of Critical Thinking on Writing Cause and Effect Essays by Iranian EFL Learners

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Abstract

The goal of the current study was to investigate the effects of critical thinking skill on EFL learners' cause and effect essay writing and their attitudes towards it. To achieve this goal, 60 Iranian upper-intermediate EFL learners were randomly divided into two equal control and experimental groups. After evaluating their knowledge of writing, the conventional teaching methods were used for the control group while an eight-step method was used to promote the critical thinking skill for the experimental group. Then the participants sat for the second test to assess the effect of critical thinking instruction and to compare the groups with each other. Elicitation of their attitudes towards the method was done by the questionnaire. The results revealed that the critical thinking instruction had meaningful consequences on the cause and effect essay writing of the participants, and the participants had positive attitudes towards the training. The findings of the research can recommend useful suggestions for the instruction of writing and critical thinking skills.

Keywords: Cause and Effect Essays, Critical Thinking, Critical Thinking Instruction, Writing Skill

1. Introduction

Every language contains two input and two output skills, among which writing is one of the outputs. Writing can be defined as the symbolic representation of language using graphic signs (Yule, 2014). Unlike speech, it must be acquired by instruction and needs tremendous effort. Not all languages have a written form, and many people in any language are not able to use the writing system (Yule, 2014). Writing is one of the necessary and crucial language skills in our life. Through writing, human beings can inform others, do transactions, persuade, irritate, and tell what they feel (Grabe & Kaplan, 2014).

Writing skill can be regarded as the most difficult language skill to be learned. As Hamp-Lyons and Heasley (2006) believed, proficient writing is usually acquired as the ultimate skill for all language learners whether native or second or foreign learners. Most English learners consider accurate and fluent writing a challenging area (Harmer, 2001). According to Nunan (1999), composing a consistent, valuable, and prolonged writing work is probably the most demanding endeavor because the reader has to grasp the meaning and message without requesting an explanation.

Inadequate writing competence will instigate problems for EFL students throughout their academic lives (Graham & Perin, 2007). Research has shown that academic writing is a transformational activity (Murray & Moore, 2006) for L2 learners to become skillful writers before they graduate (Currier, 2010). These problems become more serious when they finish their education and take part in professional advancement. Consequently, weak writing performance affects people's job-seeking chances along with their application for higher education (Nejmaoui, 2019).

One of the methods that can be used to improve L2 learners' writing abilities is the enhancement of students' critical thinking skills (Dabaghi et al., 2013). Critical thinking is defined as "a disciplined, self-directed thinking which exemplifies the perfections of thinking appropriate to a particular mode or domain of thought" (Paul & Binker, 1990, p. 9). Writing can undeniably be considered as a thinking process requiring writers to use an assortment of strategies to determine a definite organization for writing genuine aims like writing official letters, criticizing a specific situation, and summarizing lessons (Brockbank & McGill, 2012).

A cause and effect essay indicates how two or more incidents are related to each other. This kind of essay explains and analyzes why something took place or how something happened. In other words, cause and effect essays focus on the reason of what happens (causes) and the results of what happens (effects). Cause and effect is a routine method of systematizing and interpreting ideas. A cause and effect essay is organized around the objective of realizing and discussing incidents that lead to specific consequences. When the writer is writing a cause and effect essay, he should be sure that they have researched certain causes and are sure that they are indicating why they cause specific outcomes. They can either focus on all causes, effects, or a mixture of both (Gilmore, 2009).

Accurate writing has always been a challenging area for EFL and ESL learners. According to Luchini (2010), second language learners need to dedicate a great deal of time to fully understand the most important constituents of writing, i.e. topic sentences, thesis statements, blueprints, supporting sentences, and conclusions. EFL/ESL learners need to apply different types of writing strategies to write properly. Previous research in the context of Iran reveals that Iranian EFL learners deal with serious problems in understanding and utilizing English writing skills (Rezaei & Jafari, 2014). Hashemi et al. (2010) focused on the Iranian educational system. They claimed that in that system the mind of students is considered as a place for accumulating a great deal of knowledge and information and not a place for creativity and thinking. In this respect, they put that system under criticism. Hence, the results suggest that instructing critical thinking to Iranian EFL learners is necessary and must be investigated.

2. Literature Review

2.1. Writing Skill

Writing is almost an ability, but it is primarily a skill, and as a skill, it flourishes with practice. The purpose of writing is to allocate some knowledge, communicate thought, emotion, belief, and adventure by writing it down, to convey and transpose a well-suited meaning (Ferst, 2005). Not only writing is a goal in foreign language teaching and learning, but also a way of language learning for learners to efficaciously complete their college study and have access to further study (Haiyan & Rilong, 2016).

Competent writing is normally considered as being the last language skill to be learned for native speakers of the language along with for foreign or second language learners (Hamp-Lyons & Heasley, 2006). EFL learners' fortune in English writing takes them advantages not only in their English learning but also in their professions (Tuan, 2010). For most EFL learners, however, English writing comes out to be challenging (Harmer, 2007). Therefore, it is very significant for language learners to develop this skill and they need to become familiar with methods that facilitates this process for them.

2.2. Critical Thinking in L2 Learning

Critical thinking (CT) is a level of reading comprehension or discussion skill when the student is capable of asking questions and evaluating what is read or heard. In language teaching, this is engaging learners more actively in the target language, stimulates deeper processing of it, and expresses approval for students as a self-ruling scholar (Richards & Schmidt, 2010). CT has been regarded as a skill for the existence of complex options which people should put together in their individual, academic, and social lives. In this high-speed and ever-changing world, critical thinking is not a mere splendor; it has been deemed by many researchers a fundamental endurance skill (Moon, 2007).

Mohseni et al. (2020) studied the effect of critical thinking on reading comprehension. They randomly divided the participants into three groups of instant classes and checked whether their comprehension skills of general, argumentative, and cause and effect text types were homogeneous by administrating the reading pre-test. The results emphasized the need of EFL learners for increasing their organizational competence regarding different writing genres and notably the cause and effect organizational signals in EFL learning. The results also figured out the multifaceted category of teaching reading and the diverseness of the aspects like a textual genre that needs to be taken into account to advance EFL learners' comprehension.

In a second language environment, ways in which critical thinking might be clarified and educated have grown greatly argued questions for L2 learning researchers and experts lately (Thompson, 2002). An alteration has happened from considering learning mainly as rote training to conceptualize learning as a continually developing process of discovering, questioning, and reformulating hypotheses (Pennycook, 2014). Critical thinking skills have also acquired more and more attention in study related to student acquirement and attitudes

and a different area of instructive study has recounted the significance of encouraging high-level thinking skills and the undeniable effect of critical thinking on students' improvement in EFL situation (Davidson & Dunham, 1996; McBride & Bonnette, 1995).

2.3. Critical Thinking and Writing Skill

Related to writing skill, various factors can affect EFL learners' competence and performance. Barnawi (2011) maintained that successful academic EFL writers require to foster their critical thinking skills. CT is considered as a socio-cognitive process through which L2 writers interact with their interpersonal and intrapersonal skills. At the interpersonal level, the writer interacts with the readers in a particular context. During the intrapersonal level, the writer interacts with his/her prior observations, experiences, and knowledge (Barnawi, 2011).

Many researchers highlighted the importance of CT on writing skills. Stapleton (2002) maintained that CT skill is necessary to academic writing in English at the advanced education level. Hence, it can be mentioned that CT can be an effective factor in EFL learners' writing skills. However, this issue needs to be investigated more thoroughly.

2.4. Review of the Previous Empirical Studies

Sham (2016) studied teaching and learning writing skills through critical thinking. The researcher divided the participants into two control and experimental groups. The critical thinking skills were taught only to the participants in the experimental group. It was revealed that the teaching of critical thinking skills had a conclusive effect on the participants' writing performance. In addition, the participants enjoyed learning critical thinking skills.

Indah (2017) examined the relationship between Indonesian EFL learners' critical thinking, writing performance, and topic formality. The researcher concluded that there was an incontrovertible relationship between the learners' critical thinking and writing performance. In addition, it was revealed that there was also a direct connection between their critical thinking and topic formality.

Akbaeva (2017) investigated the effects of the development of critical thinking skills in the class on enhancing the learners' writing performance. The findings revealed that the

development of critical thinking skills had a conclusive effect on the enhancement of the participants' writing skills.

In another recent study, Saedpanah and Mahmoodi (2020) examined the relationship between critical thinking, writing anxiety, and writing performance of Iranian EFL learners. The findings revealed that there was a significant connection between the participants' critical thinking, writing anxiety, and writing performance.

The current study was conducted to answer the following research questions:

1. Does critical thinking have a significant effect on Iranian EFL learners' writing cause-and-effect essays?
2. What are Iranian EFL learners' attitudes towards the effect of critical thinking on writing cause-and-effect essays?

3. Methodology

3.1. Participants

The participants of the study were 60 Iranian EFL learners (46 females & 14 males) who were learning English at a language Institute in Ahwaz. The participants' level of proficiency was upper-intermediate which was evaluated via Oxford Quick Placement Test (OQPT). The participants were adults and their ages ranged from 19 to 25. The placement test was given to 110 students and the ones whose proficiency level was suitable were selected. The participants were randomly divided into two equal control and experimental groups. The critical thinking skills were taught only to the participants in the experimental group.

3.2. Instruments

The following instruments were applied in this study by the researcher for data gathering.

The first one was Oxford Quick Placement Test (OQPT). This was a quick and reliable assessment of language learners' level of proficiency and teacher and institutes could employ it to place their students into suitable classes and levels based on their general English knowledge. This test was run to measure the participants' general English information and to make sure about their homogeneity. The OQPT was a standardized test developed for placing learners into a particular level class for a particular language course.

The test contained 60 questions where the test taker had to choose the correct answers among the alternatives that were provided (Allan, 2004). According to Allan (2004), test takers whose scores were between 41 and 50 on this test were at the upper-intermediate level.

The second one was the California Critical Thinking Skills Test (CCTST). CCTST was created and certified by Facione and Facione (1993) and consisted of 34 multiple-choice questions. This test was an objective assessment of the core reasoning skills required for reflective decision-making regarding what to believe or what to do. It was designed to allow test-takers to display the critical thinking skills necessary to be successful in situations where problem-solving and decision-making by developing justified judgments are crucial. It is believed as a logical, unbiased, and trustworthy measure of core reasoning skills all over the world. The test contains areas of evaluation, inference, analysis, inductive reasoning, and deductive reasoning. Its completion lasts around 40 minutes. Since this test needs reflective decision-making on the part of the test-takers, care was taken to make sure the participants' complete understanding.

The third instrument was the attitude questionnaire. This questionnaire was developed by the researcher and run to the participants in the experimental group to elicit their attitudes towards the effects of learning critical thinking skills on their writing skills. The questionnaire was a Likert-scale one with 10 items which means there were five alternatives for each item which ranged from *strongly disagree* to *strongly agree*. The reliability of the questionnaire was measured through Cronbach's Alpha ($r = .79$) which indicated that it had high reliability. To ensure the validity of the questionnaire, three experts in the field of TEFL who had Ph.D. degrees were consulted and they confirmed its validity.

The last instrument was writing tests. The participants took these tests before performing the treatment and after completing it. The participants were supposed to write essays in the form of cause and effect. The first writing test was given to the participants to measure their prior writing knowledge and to assure that they all were at the same level of proficiency related to this skill. For this test, the participants were asked to write a cause and effect essay about a topic provided by the researcher with at least 150 words in 20 minutes. The second writing test was given to the participants after the treatment to compare the groups with each other. The format of this test was similar to the first one but

they had to write an essay with at least 300 words in 30 minutes. The tests were scored out of 30 and the correct usage of vocabulary, punctuations, and sentence structures were considered.

3.3. Procedure

As the first step, OQPT was given to the participants to evaluate their general English knowledge and to make sure they were homogenous. After conducting the placement test, the participants were randomly divided into the experimental and control groups. The participants sat for the first writing test to evaluate their writing skills before the treatment. In addition, CCRST was administered to the participants to assess their familiarity with critical thinking skills. The conventional teaching methods were used for the participants in the control group but the ones in the experimental group became familiar with critical thinking skill. An eight-step method was used by the researcher to promote the critical thinking skill of the participants in the experimental group. These steps were (a) establishing a set, (b) introducing common and accessible problems, (c) making, (d) asking the participants, (e) challenging, (f) instructing the participants, (g) error correction, (h) and writing down the description.

For the first step, a set of common critical thinking and logical concepts was established by the researcher. For the second step, common and accessible problems for discussion that obliged the participants to either choose a side or make a decision were introduced. For the third step, the researcher challenged all assertions the participants made by asking them how they reached their conclusions. For the fourth step, the participants were asked to write down a stepwise description of their position on the contentious issue. For the fifth step, the participants were challenged to analyze their writing. They were supposed to underline examples of the common critical thinking and logic concepts that were delineated at the beginning of the course. For the sixth step, the researcher taught the learners to share their writing with a classmate, and ask each pair to read through their peer's work with a similar point of view towards recognizing the critical thinking and sensibleness concepts. For the seventh step, the participants were asked to correct any rational errors or suppositions in the stepwise description of their position. Finally, for the eighth step, the researcher challenged the participants to write down a stepwise description on the opposite of their position on the divisive issue.

After completing the treatment, the participants sat for the second test to assess the effect of critical thinking instruction and to compare the groups with each other. Finally, the questionnaire was run to the participants in the experimental group to elicit their attitudes towards the method. The results of the tests and the questionnaire were gathered for further analysis.

4. Results

4. 1. Results of OQPT

OQPT was given to the participants to assess their level of proficiency and to make sure they were homogenous.

Table 1.

Descriptive Results of OQPT

	Groups	N	Mean	Std. Deviation	Std. Error Mean
OQPT	Experimental	30	43.65	1.764	.322
	Control	30	43.93	1.749	.319

The table shows the mean score and standard deviation of the experimental group ($M = 43.65$, $SD = 1.76$) and the control group ($M = 43.93$, $SD = 1.75$) on OQPT. The difference between the mean scores was not noticeable at all. However, the Independent-Samples *t*-test was run to make sure this difference was not statistically significant.

Table 2.

Results of Independent-Samples t-test for OQPT

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
OQPT	Equal variances assumed	.000	.995	-.610	58	.544	-.277	.454	-1.185	.631
	Equal variances not assumed			-.610	57.996	.544	-.277	.454	-1.185	.631

According to the results of the Independent-Samples *t*-test, the difference between the mean scores was not statistically significant because the *p*-value was not lower than .05 ($t(58) = -.61, p = .544$). Therefore, the participants were at the same level of proficiency. The first writing test was given to the participants before the treatment to evaluate the participants' writing skills and to make sure there were not significant differences among the participants.

Table 3.

Descriptive Results of the First Writing Test

	Groups	<i>N</i>	Mean	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
First Test	Experimental	30	16.77	2.661	.486
	Control	30	17.70	2.307	.421

Table 3 indicates the mean score and standard deviation of the experimental group ($M = 16.77, SD = 2.66$) and the control group ($M = 17.70, SD = 2.31$) on the first writing test. It can be noticed that the participants in the control group performed slightly better than their counterparts in the experimental group. The Independent-Samples *t*-test was run to check if this difference was statistically significant.

Table 4.

Results of Independent-Samples t-test for the First Writing Test

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
First Test	Equal variances assumed	.489	.487	-1.452	58	.152	-.933	.643	-2.220	.354
	Equal variances not assumed			-1.45256	854	.152	-.933	.643	-2.221	.354

The table shows that the results of the Independent-Samples *t*-test were not significant ($t(58) = -1.45, p = .152$) because the *p*-value was greater than .05. Therefore, the participants' writing skill in both groups was the same before performing the treatment.

4. 2. Results of the First CCRST

This test was given to the participants before the treatment to evaluate the participants’ critical thinking skills and to make sure there were not significant differences among the participants.

Table 5.

Descriptive Results of the First CCRST

	Groups	N	Mean	Std. Deviation	Std. Error Mean
First CCRST	Experimental	30	20.22	3.885	.709
	Control	30	20.87	3.396	.620

Table 5 indicates the mean score and standard deviation of the experimental group ($M = 20.22$, $SD = 3.86$) and the control group ($M = 20.87$, $SD = 3.40$) on the first CCRST. It can be noticed that the participants in the control group slightly outperformed the ones in the experimental group. The Independent-Samples *t*-test was run to check if this difference was statistically significant.

Table 6.

Results of Independent-Samples t-test for the First CCRST

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
First CCRST	Equal variances assumed	.696	.407	-.683	58	.497	-.644	.942	-2.530	1.242
	Equal variances not assumed			-.683	56.985	.497	-.644	.942	-2.530	1.243

The table shows that the results of the Independent-Samples *t*-test were not significant ($t(58) = -.68$, $p = .497$) because the *p*-value was greater than .05. Therefore, there was not a significant difference between the participants’ critical thinking skills in both groups.

4. 3. Results of Comparing the First and Second CCRST for the Experimental Group

This comparison was made to make sure the instruction of critical thinking skills was effective and the participants in the experimental group became more familiar with critical thinking.

Table 7.

Descriptive Results of the First and Second CCRST for the Experimental Group

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	First CCRST	20.22	30	3.885	.709
	Second CCRST	25.55	30	2.674	.488

The table shows the mean score and standard deviation of the experimental group on the first CCRST ($M = 20.22, SD = 3.89$) and the second CCRST ($M = 25.55, SD 2.67$). It is obvious that the participants considerably outperformed on the second CCRST. To assure this difference was statistically significant, the Paired-Samples t -test was conducted.

Table 8.

Results of the Paired-Samples t -test for the Experimental Group

Pair		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	First CCRST - Second CCRST	-5.331	4.655	.850	-7.069	-3.593	-6.273	29	.000

The table shows that the Paired-Samples t -test was statistically significant ($t(29) = -6.27, p < .001$) because the p -value was lower than .05. Therefore, the instruction of critical thinking skills to the participants significantly improved the familiarity of these skills in the participants.

4. 4. Results of the Second Writing Test

The second writing test was given to the participants after the treatment to evaluate the effects of critical thinking on the participants' writing skills and to make sure this effect was significant.

Table 9.

Descriptive Results of the Second Writing Test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Second Test	Experimental	30	23.82	2.328	.425
	Control	30	20.60	2.027	.370

Table 9 indicates the mean score and standard deviation of the experimental group ($M = 23.82$, $SD = 2.33$) and the control group ($M = 20.60$, $SD = 2.03$) on the second writing test. It is obvious that the experimental group performed better than the control group. The Independent-Samples t -test was run to make sure that this difference was statistically significant.

Table 10.

Results of Independent-Samples t -test for the Second Writing Test

	Levene's Test for		t -test for Equality of Means							
	Equality of									
	Variances									
	<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Second Test	Equal variances assumed	.172	.680	5.714	58	.000	3.221	.564	2.093	4.349
	Equal variances not assumed			5.714	56.923	.000	3.221	.564	2.092	4.350

The table shows that the result of the Independent-Samples t -test was statistically significant ($t(58) = 5.71$, $p < .001$) because the p -value was lower than .05. Therefore, the critical thinking instruction had a significant effect on the participants' writing cause and effect essays. Furthermore, the size of Cohen's d ($d = 1.47$) indicated that the difference between mean scores was large. The results are also illustrated in the following figure.

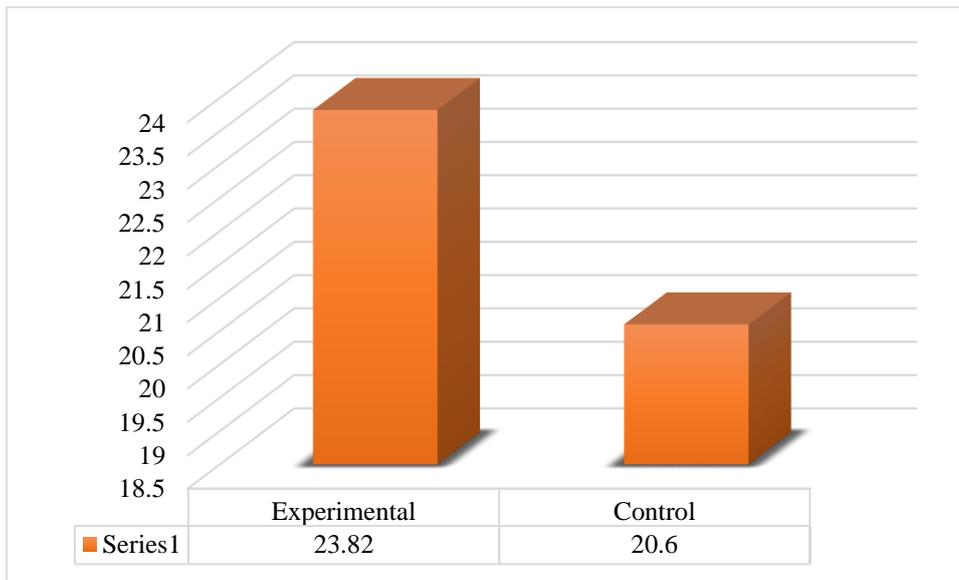


Figure 1. Mean scores of the groups on the second writing test

The figure clearly shows that the experimental group significantly outperformed on the second writing test which indicated the effectiveness of critical thinking instruction.

4.5. Results of the Attitude Questionnaire

The questionnaire was run to the participants in the experimental group to elicit their attitudes towards the effects of critical thinking on their skill of writing cause and effect essays.

Table 11

Descriptive Results of the Questionnaire

	<i>N</i>	Mean	<i>Std. Deviation</i>	<i>Std. Error Mean</i>
Attitudes	30	4.03	.978	.182

The table indicates the mean score ($M = 4.03$) and standard deviation ($SD = .98$) of the participant's answers to the items of the questionnaire. Since the questionnaire was a Likert-scale one and there were five alternatives for each item, the average criterion was 3, and the mean score was greater than the average which represents a positive attitude. Therefore, it can be mentioned that the participants' attitude was positive because the mean score was greater than the criterion. However, the One-Sample *t*-test was run to make sure this positive attitude was statistically significant.

Table 12

Results of the One-Sample t-Test for the Questionnaire

Test Value = 3					
<i>t</i>	<i>df</i>	<i>Sig.</i> (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
Attitudes	5.66329	.000	1.033	.66	1.41

The table shows that the result of the One-Sample *t*-test was statistically significant ($t(29) = 5.66, p < .001$) because the *p*-value was lower than .05. Therefore, the participants' positive attitudes were statistically significant. The effect size Cohen's *d* of 1.03 indicated a large effect as the mean dissimilarity between the mean scores was large.

5. Discussion

The results of the current study announced that instructing critical thinking skill had an expressive result on the learner's ability to write cause and effect essays. It was also revealed that the participants had positive attitudes towards it and they believed that being familiar with critical thinking can improve their writing skills.

As Chaffee (2014) presented, the most significant goal of critical thinking is to create more *intelligent decisions*, and critical intellect is one recognizing the outward world, make intelligent decisions, and judge about *important ideas* (p. 43). Also Paul and Elder (2006), state that critical intellects aim to clear up difficult issues in different configurations by questioning, relevant data gathering, and communicating in a useful manner.

Writing essays is a complicated activity that needs a lot of logical reasoning and critical thinking and it is necessary for academic success (Weigle, 2002). Therefore, it can be rational to improve the EFL learners' writing skills by enhancing their ability of critical thinking. The relation with writing performance and critical thinking skills appears to signify that the outcome of the learner's essay is linked with the cognitive territory (Overbaugh & Schultz, 2008) displayed by the echo of critical thinking constituents, that is, the merit of the essay writing consists of the improvement of the cognitive territory indicated in the critical thinking skills. Unquestionably, writing performance is accompanied with critical thinking which assumes to verify Wade (1995) who assumed that the writing skill matured through an array of concise and brief writing tasks that can touch the necessary levels of critical thinking and ingenious consideration.

Some researchers in the past stated that improving language learners' critical thinking can have a conclusive result on their writing skills. For instance, Sham (2016) maintained that the teaching of CT skills has a positive result on the writing performance of the learners. The concluding remarks of the study correspond to the results of the study conducted by Indah (2017) who argued that there is a positive connection between the students' critical thinking and writing performance. The findings of the current study are also consistent with the outcome of Saedpanah and Mahmoodi's (2020) study who proved that there is a noteworthy connection between language students' critical thinking and writing performance.

Most language learners are interested in methods that enable them to learn more efficiently and pave their way to success. As previously mentioned, being familiar with CT skills significantly help EFL students to improve their language proficiencies and when they become competent in CT they can write better essays. Therefore, it is not surprising that the participants had positive attitudes towards them. Similar results were obtained in the previous studies in the literature in which the participants had positive opinions about CT and its effects on improving their language skills (e.g., Akbaeva, 2017; Indah, 2017; Sham, 2016). Therefore, it can be mentioned that EFL learners would like to become familiar with CT skills to improve their writing skills.

6. Conclusion

The findings of the study revealed the positive relationship between the critical thinking of EFL students and their competence in writing cause and effect essays and their attitudes toward it. Critical thinking is a significant bone of contention in education and the improvement of critical thinking skills should be one of the immediate objectives for educators at all levels (Al-Fadhli & Khalfan, 2009). Critical thinking skills have acquired more and more consideration in research related to learner attainment and outlooks. A different area of instructive study has recounted the significance of encouraging higher-order thinking skills and the confident effect of CT on students' improvement in EFL circumstances (Chaffee, 2014).

Writing can be regarded as the most challenging for language learners, in that they cannot acquire it without proper instruction and they need to become competent in other language skills, too. Therefore, language teachers need to employ methods to facilitate this

process for their students. To achieve this aim, language teachers need to contribute CT skills in EFL writing classes because they have a positive effect on their students' writing skills and language learners like to become more familiar with methods to improve their CT abilities. It is also recommending for curriculum designers to put the instruction of CT in their curricula to help language learners to become competent in their writing. Moreover, language learners need to pay more attention to developing their CT skills to obtain competency in English essay writing. Besides, the current study can open a window of opportunity for researchers who are interested in similar lines of research.

References

- Akbaeva, G. N. (2017). Development of critical thinking in ESL writing classroom. In *Proceedings of the 3rd International scientific and practical conference* (pp. 178–183). Tambov State Technical University.
- Al-Fadhli, S., & Khalfan, A. (2009). Developing critical thinking in an e-learning environment: Kuwait University as a case study. *Assessment & Evaluation in Higher Education*, 34(5), 529-536.
- Allan, D. (2004). *Oxford placement test 2: Test pack*. Oxford University Press.
- Barnawi, O. Z. (2011). Finding a place for critical thinking and self-voice in college English as a foreign language writing classroom. *English Language Teaching*, 4(2), 190–197.
- Brockbank, A., & McGill, I. (2012). *Facilitating reflective learning: Coaching, mentoring and supervision*. Kogan Page Publishers.
- Chaffee, J. (2014). *Thinking critically*. Cengage Learning.
- Currier, D. (2010). Essay on the importance of writing—need feedback please. *Asian ESL Journal*, 8, 183–189.
- Dabaghi, A., Zabihi, R., & Rezazadeh, M. (2013). Argumentative and narrative written task performance: Differential effects of critical thinking. *International Journal of Research Studies in Language Learning*, 2(2), 3–14.
- Davidson, B. W., & Dunham, R. L. (1996). Assessing EFL Student Progress in Critical Thinking with the Ennis-Weir Critical Thinking Essay Test. *JALT Journal*, 19(1), 43–57.
- Facione, P. A., & Facione, N. C. (1993). *Test Manual: The California critical thinking skills test: form A and Form B, test manual*. The California Academic Press.
- Ferst, P. (2005). Gateways to academic writing: Effective sentences, paragraphs, and essays.
- Gilmore, A. (2009). Using online corpora to develop students' writing skills. *ELT Journal*, 63(4), 363–372.
- Grabe, W., & Kaplan, R. B. (2014). *Theory and practice of writing: An applied linguistic perspective*. Routledge.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99(3), 445–476.
- Haiyan, M., & Rilong, L. (2016). Classroom EFL writing: The alignment-oriented approach. *English Language Teaching*, 9(4), 76–82.
- Hamp-Lyons, L., & Heasley, B. (2006). *Study writing: A course in written English for academic purposes*. Cambridge University Press.

- Harmer, J. (2001). *The practice of English language teaching*. Longman.
- Harmer, J. (2007). *The practice of English language teaching*. Pearson Longman.
- Hashemi, S. A., Naderi, E., Shariatmadari, A., Naraghi, M. S., & Mehrabi, M. (2010). Science production in the Iranian Educational system by the use of critical thinking. *International Journal of Instruction*, 3(1), 61–76.
- Indah, R. N. (2017). Critical thinking, writing performance, and topic familiarity of Indonesian EFL learners. *Journal of Language Teaching and Research*, 8(2), 229–236.
- Luchini, P. L. (2010). Evaluating the effectiveness of a complementary approach to teaching writing skills. *International Journal of Language Studies*, 4(3), 73–92.
- McBride, R., & Bonnette, R. (1995). Teacher and at-risk students' cognitions during open-ended activities: Structuring the learning environment for critical thinking. *Teaching and Teacher Education*, 11(4), 373–388.
- Mohseni, F., Seifoori, Z., & Ahangari, S. (2020). The impact of metacognitive strategy training and critical thinking awareness-raising on reading comprehension. *Cogent Education*, 7(1), 146-172.
- Moon, J. (2007). *Critical thinking: An exploration of theory and practice*. Routledge.
- Murray, R., & Moore, S. (2006). *The handbook of academic writing: A fresh approach*. McGraw-Hill Education (UK).
- Nejmaoui, N. (2019). Improving EFL learners' critical thinking skills in argumentative writing. *English Language Teaching*, 12(1), 98–109.
- Nunan, D. (1999). *Second English teaching and learning*. Heinle & Heinle.
- Overbaugh, R. C., & Schultz, L. (2008). Bloom's taxonomy. *Date Accessed*, 3.
- Paul, R. W., & Binker, A. J. A. (1990). *Critical thinking: What every person needs to survive in a rapidly changing world*. Center for Critical Thinking and Moral Critique, Sonoma State University, Rohnert Park, CA 94928.
- Paul, R., & Elder, L. (2006). *Critical thinking competency standards*. Tomales, CA: Foundation for Critical Thinking.
- Pennycook, A. (2014). *The cultural politics of English as an international language*. Routledge.
- Rezaei, M., & Jafari, M. (2014). Investigating the levels, types, and causes of writing anxiety among Iranian EFL students: A mixed-method design. *Procedia-Social and Behavioral Sciences*, 98(1545-1554).
- Richards, J. C., & Schmidt, R. (2010). *Longman dictionary of language teaching and applied linguistics* (4th ed.). Routledge.
- Saedpanah, E., & Mahmoodi, M. H. (2020). Critical thinking, writing strategy use, l2 writing anxiety and L2 writing performance: What are the Relations? *Journal of English Language Teaching and Learning*, 12(25), 239–267.
- Sham, D. P. L. (2016). Teaching and learning ESL writing by critical thinking. *American Journal of Educational Research*, 4(12), 854–860.
- Stapleton, P. (2002). Critical thinking in Japanese L2 writing: Rethinking tired constructs. *ELT Journal*, 56(3), 250–257.
- Thompson, C. (2002). Teaching critical thinking in EAP courses in Australia. *TESOL Journal*, 11(4), 15–20.
- Tuan, L. T. (2010). Enhancing EFL learners' writing skills via journal writing. *English Language Teaching*, 3(3), 81-88.
- Wade, C. (1995). Using writing to develop and assess critical thinking. *Teaching of Psychology*, 22(1), 24–28.
- Weigle, S. C. (2002). *Assessing writing*. Ernst Klett Sprachen.
- Yule, G. (2014). *The study of Language* (5th ed.). Cambridge University Press.