

Improving Critical Thinking Skills in Writing Essay

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Abstract

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This study aims to determine the effect of critical thinking on the use of students' critical thinking skills in essay writing. This study uses an experimental study conducted on Indonesian students from the Department of Informatics Engineering divided equally into the experimental group and the control group. While participants in the experimental group were taught to write with critical thinking skills, others were taught to write without reference to these skills. Participants in both groups took a pre-test and posttest to evaluate the development of their use of critical thinking skills in argumentative writing. Data that has been analyzed quantitatively shows that the experimental group significantly outperformed the control group. The students' ability to use more credible evidence, answer alternative arguments, support conclusions, and maintain a logical flow of ideas in their essays did not reach the level of mastery in the posttest, but the average level they achieved was convincing considering the short training time they had. Critical Thinking integration for a longer time can yield satisfactory results.

Keywords: writing, critical thinking, higher education, argumentation

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INTRODUCTION

Higher education is a stage in students' life where they are expected to achieve two major goals by the end of their education. They should be able to (i) obtain sufficient knowledge about a discipline or a subject matter, and most importantly, (ii) think critically about the knowledge they have obtained and other topics or issues they face in their everyday life (Schafersman, 1991). While the first goal is fulfilled in most universities effortlessly, the second one, however, is universities' Achilles' heel (Halpern, 2014; Bailin et al., 1999).

Fostering students' critical thinking in universities is viewed as one of the most serious challenges of today's education in the age of easy access to information. Nowadays, people are faced with an abundance of information once they turn on the radio and TV or use their social media. At the end of the day, one hardly realizes that they have received a large amount of information that may become beliefs without assessing their credibility. As university students are no exception, universities should train students on how to be able to filter the information they receive daily. However, universities seem to be far beyond fulfilling this goal. In a study that aimed to investigate the difference between the



critical thinking of graduate and non-graduate students, Pithers and Soden (1991, cited in Ozmen, 2008, p. 121) concluded that there is no significant difference between the two groups. This suggests that the universities included in the study failed to instill critical thinking skills in their students. With critical thinking being the expected outcome of higher education (Andrews, 2010; Halpern, 1998; Beyer, 1995; Lipman, 1985), students majoring in

English should not be exempted from this 'educational ideal' (Siegel, 1985) simply because their major emphasizes the mastery of a foreign language. EFL learners spend a great deal of time reading, writing, and attempting to communicate in English inside or outside the classroom. Therefore, learners cannot be merely repeating or practicing the language without being critical when writing, reading or speaking in the target language.

Given the utmost importance of the critical spirit which allows EFL learners to "question, challenge, and to demand reasons and justifications for what is being taught" (Siegel, 1985, p. 71), the present study aims to experiment the potential effects of integrating critical on students' critical thinking ability in argumentative writing.

METHODOLOGY

This study is an experimental research with two groups namely the experimental group and the control group. There are 36 Indonesian students who are the subjects of this research. All students enrolled in Semester 3 take lessons in addition to the other 5 courses (i.e., reading comprehension, grammar, oral communication, reading in culture, and English culture and society). The number of students 36 was divided equally into two groups, each group was 18 students with an average age of 20.42. Being in the same age group and academic level, the participants in the second group had roughly the same level of English proficiency. To ensure validity, the participants were randomly assigned to groups. At the beginning of the Semester, more than 50 students were considered as participants in the experiment but excluded some of them for missing more than 3 classes or failing to take any of the tests. In addition, the reason behind the number of participants being eighteen in each group was the attention of the researcher to give all students the opportunity to voice their ideas and to benefit from the instructor's feedback. Since students must review their peers' essays and share evaluations with the whole class, it makes sense to have several students in each group.

RESULTS

In order to investigate the potential effect that integrating Critical Thinking skills has on students' Critical Thinking ability in argumentative writing, the researcher administered an argumentative essay pre-test and posttest to the experimental group and control group. The participants' essays were blindly and carefully scored by the researcher using the Illinois Critical Thinking Essay Scoring Rubric (Finken and Ennis, 1993). The participants' scores were processed through the Paired Samples t-test in order to test the aforementioned hypotheses.

Sample Characteristics

Before testing the two hypotheses, it is worth looking at the descriptive statistics. Tables (1) and (2) present the distribution of the means and standard deviations among the experimental group and control group in the pretest and posttest, respectively.

In the pretest, the participants in the Experimental Group obtained a mean score of (13.11) while the Control Group scored a mean of (10.72), with a difference of only (2.39). The small difference between the means obtained by the two entails that the participants exhibit almost similar Critical Thinking skills in argumentative writing before the beginning of the instructional treatment. With regard to the variability of the data from the point of central tendency, the standard deviation of the experimental group (SD=3.96) and the control group (SD=2.56) is fairly small indicating that the scores among the participants are tightly clustered around the mean.

A quick look at the means of the two groups indicates that the level of the use of Critical Thinking skills in argumentative writing is relatively low as the two groups were not able to reach the average (=15) in Critical Thinking ability in argumentative writing.

In the posttest, the experimental group obtained a mean score of (18.83) which is higher than the one scored in the pre-test. As far as the control group's performance in the posttest is concerned, the participants obtained a mean of (11.33) which is only (.61) higher than the mean scored in the pretest.

Determining whether the differences between the means scored in the pretest and posttest is statistically significant requires the examination of the inferential statistics obtained via the operation of the Paired Samples t-test.

Normality Assumption

Prior to running the Paired Samples t-test, examining the assumption of normal distribution is crucial.

Table 3. Normality tests

	Groups	Skewness	Kurtosis
Pretest	Experimental Group	-.63	-.24
	Control Group	.54	-.98
Posttest	Experimental Group	-.20	-1.09
	Control Group	.11	-.21

It can be asserted that the assumption of normal distribution is satisfied as the Skewness and Kurtosis levels are less than the maximum allowable values for a t-test (i.e., Skewness <|2| and Kurtosis |9.0|; Posten, 1984). Accordingly, the results of the Paired Samples t-test can be taken into account as the scores are normally distributed throughout the four observations.

The Effect of Critical Thinking Instruction on Learners' Critical Thinking in Writing Essay

Before looking at the significance level, it should be pointed out that the

correlation between the pre-test and posttest scores in both groups was estimated at r (.71) and (.79) that are extremely significant at (.00) and (.00), respectively. This correlation suggests that the participants tend to have the same ranking in the pre-test and posttest; higher scores in the pre-test were associated with higher scores in the posttest and vice versa.

The scores of the experimental group participants from the pre-test to the posttest point to a t -value (-8.59) that is extremely significant at (.00). Therefore, the mean of the posttest is statistically higher than the pretest means. Thus, Hypothesis (1) is confirmed.

The scores of the control group participants from the pre-test to the posttest indicate to a t -value (-1.25) that is extremely insignificant at (.22). Since the mean of the posttest is not statistically higher than the mean of the pretest, Hypothesis 2 is confirmed.

These results suggest that integrating Critical Thinking skills in teaching writing to EFL learners helps students develop their Critical Thinking ability in argumentative writing as the students who benefited from an infusion approach to teaching Critical Thinking in writing significantly outperformed the students who were taught writing without any reference to Critical Thinking skills.

CONCLUSION

The results of this study, as well as other studies, propound that the absence of Critical Thinking skills from language courses entails that the learners who are deprived from the opportunity to learn how to think critically (e.g., learners in the control groups) tend to perform less than the ones who benefit from Critical Thinking instruction. Conversely, the integration of Critical Thinking is bound to guide students to think more critically about the information they receive, check the credibility of sources, attempt to consider alternative theses, evaluate evidence etc. The moderate positive results attained from the integration of Critical Thinking in writing for only a semester promise more positive outcomes if Critical Thinking is integrated in L2 writing courses for longer periods. Considerations of transferability of these skills from writing to other courses, reading for instance, are essential to examine if students would be able to transfer these skills across the curriculum.

Another conclusion that the present study suggests is that Critical Thinking is teachable in L2 classes. However, the number of studies which experiment different approaches and techniques to facilitate Critical Thinking in L2 education are limited. More studies are required in this field. In addition, the Critical Thinking tests used in these studies to measure students' Critical Thinking ability were designed for native speakers in the first place; hence, designing tests appropriate for EFL learners will ensure the validity of Critical Thinking assessment in this area.

The findings of the present study suggest a number of implications for English language educators teaching students majoring in English. Though these educators may object to integrating Critical Thinking in their syllabi due to the fact that their focus should be on language purposes, striking a balance between Critical Thinking and language is bound to enable EFL university students to develop their thinking skills. EFL educators are, therefore, invited to set Critical Thinking as a learning

aim besides language. When Critical Thinking is set as a learning aim, teachers can integrate it through Socratic questioning, argument mapping, self-assessment, multi-drafting etc. Finally, the interconnection between Critical Thinking and argumentative writing invites theorists and instructors of L2 writing to consider designing syllabi and teaching materials that intrinsically aim to develop Critical Thinking and writing simultaneously.

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