

# An Investigation on the Effect of Critical Thinking (CT) Instructions on Iranian EFL Learners' Descriptive Writing: A Case of Gender Study

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**Abstract:** This study aimed to find out whether critical thinking instructions affect Iranian EFL male and female students' descriptive writing, and if there is a significant gender difference in strategy use in the writing performance. After administrating a Nelson (Fowler & Coe, 1976) test, a group of homogeneous university male and female students (60 males and 60 females) were selected from a total population of 170 at the intermediate level in Yasuj University. Then, they were randomly assigned to control and experimental groups. The experimental groups received instructions regarding critical thinking instructions respectively, whereas the control ones received Conventional Instruction (CI) method followed an individualistic instructional approach based on the exercises in their regular text books. An independent sample t-test was conducted to compare the subjects' means and to determine the effect of gender. The results depicted that critical thinking instructions had a significant effect on improving Iranian EFL students' descriptive writing ( $p < .05$ ). The results of the analysis also indicated that there were significant differences on the effective use of critical thinking instructions with regard to gender in descriptive writing test performance ( $p < .05$ ).

**Keywords:** Critical thinking instructions; Descriptive writing; Gender; Conventional Instruction Technique

## 1. Introduction

Critical thinking (CT) is considered to be central to higher education or an essential goal of teaching (Kuhn, 1999). To give an increase to this importance, Moon (2008) believes that critical thinking is a process involved in any research activity (Phillips & Bond, 2004). Some researchers realized the importance of teaching methods in all subject matters including language; great efforts have been put into creating noble methods and techniques for the sake of the learner's better improvement. On the other hand, during the last decades researchers have got to believe that the traditional approaches to teaching have failed to teach learners to their utmost actual ability. CT is one of the noble methods with its roots going back to Socrates. The goal of this method is to teach learners how to evaluate, analyze, solve problems as well as make rational decisions. What makes this approach especial is the effort it steps up to make learners discover different concepts instead of teaching them directly which helps learners to keep them in mind permanently and the importance it attaches to learners as active members.

Schafersman (1991) conducted researches on the issue and the effective methods of applying critical thinking to language classes. These attempts led to the emergences of a critical pedagogy or critical teaching which aims at enabling learners to evaluate what they read or hear, pose questions and seek for reasons and have sound judgment. In the global society of the twenty-first century the ability to accept changes, solve problems, make decisions, and

devise noble solutions will be a necessary purpose to which the world community must devote serious attention (Presseisen, cited in Meins, 1991). The proposed research questions will be converted into the following hypotheses. H01. Teaching critical thinking does not improve Iranian EFL learners' descriptive writing skill.

## 2. Literature review

Research into teaching methods and the way they interact with learners' learning is a subject of interest to educators and scholars. The reason is that they want to discover the best way students can learn a language through an applicable method for EFL learning. As Meins (1991) points out, discovering the truth of opinions through analysing or utilizing them is the only possible way which can make those opinions stay in the students' minds permanently. However, the vital question still remains: what are the best ways instructors can motivate and encourage students to discover ideas rather than simply learn them? According to Elbow (1981, p. 7), writing calls on criticizing. Criticizing is the ability to criticize words and ideas in order to decide which ones to use. He recommended, First write freely and uncritically so that you can generate as many words and ideas as possible without worrying whether they are good; then turn around and adopt a critical frame of mind and thoroughly revise what you have written. Ennis (1992) believes that the skills associated with critical thinking can be learned independently of specific disciplines, and can be transferred

from one domain to another. For him, the process of critical thinking is deductive: it involves applying the skills and principles of critical thought to a particular discipline.

In contrast to Ennis, for Mcpeck (1981) the process of critical thinking is inductive: it involves inducing the principles of critical thought by generalization from the content and structure of the discipline. For him, CT should be taught with a particular subject matter. He believes that one cannot think critically in a field if one is not familiar with or knows a little about it. He concludes that critical thinking cannot be taught independently without any particular subject matter. Siegel (1991) proposed that the critical thinker must be able to assess reasons and their ability to warrant beliefs, claims and actions properly. Accordingly, "the critical thinker must have a good understanding of, and the ability to utilize, both subject-specific and subject-neutral (logical) principles governing the assessment of reasons" (p.38). Schafersman (1991) mentioned that critical thinking is nothing but problem solving skills that result in reliable knowledge. In his opinion, there is a distinction between critical thinking and what he calls low-order thinking. He explains the difference with a tangible example. He proposed that processing information to understand whether you got the correct change in the supermarket or to know to stop for the red light in the street does not require critical thinking. Critical thinking is higher-order thinking which makes one able, for instance, to judge correctly between political candidates or to serve on a murder trial jury.

Buskist and Irons (2008) suggest in teaching critical thinking to learners through problem-based scenarios in class when the instructor is to teach critical thinking based on the infusion approach of the subject matter and critical thinking. They believe that students should be asked to think critically about the subject matter constantly since it reminds them of the importance of critical thinking in problem solving and decision making and helps them to get accustomed to thinking critically. Ekeru and Kmr (2008) in their research believed in investigating the relationship between critical thinking skills and in-class questioning behaviours of English Language Teaching (ELT) students. This study suggests that students with higher critical thinking scores ask questions out of curiosity to remove the uncertainties, and to lead people to think profoundly. They ask questions to find alternatives, to think the reverse and to find new ideas. On the contrary, students with lower critical thinking ask questions that clarify unclear points. The students in the higher score group had more intensive thinking processes compared to the lower score group.

Liaw (2007) conducted a study examining the effectiveness of promoting learners critical thinking skills and EFL skills with a content-based approach. This study attempts to bridge the gap between theories and instructional practices through the design and implementation of a content-based junior high school EFL syllabus.

In their study Birjandi and Bagherkazemi (2010) investigated the relationship between EFL teachers' critical thinking ability and their student-evaluated professional

success. They found out that better critical thinkers turned out to be better EFL teachers. Condon and Kelly-Riley (2004) tried to explore the relationship between college-level writing and critical thinking abilities and recognized that critical thinking could be promoted through writing, but such promotion needed to be done overtly. Carroll (2007) in his study found differences in types of writing assignments as well as changes in student writing throughout the semester in a critical thinking course. The results showed that students were less tentative at the end of the semester than at the beginning. Miller (1981) sought to determine the relationship between critical thinking achievements and reading comprehension achievement. She states that significant differences between the treatment and the control group scores were found. Based on her findings there appears to be a positive relationship between gains in critical thinking achievement and gains in reading proficiency achievement.

Ege and Kutieleh (2004, p. 5) explain that Western academic culture is very much a Western cultural product and has its roots in the classical Greek philosophical tradition. In the Socratic system of teaching and learning, scholars extend the parameters of knowledge by discussing competing knowledge claims. Students are expected to adopt the stance of another "expert" in their field, rigorously defending personal positions but also critically demolishing opposing positions using logical reasoning and skilful argumentation (Sinclair, 2000). In Western academic culture, students are encouraged to adopt a claim-based orientation to oral and written texts. They are urged by their teachers to assume a questioning attitude towards knowledge claims, frequently referred to as "reflective skepticism". They learn the desirability of maintaining only provisional belief in claims" (Mcpeck, 1981, p.7).

In contrast, many of Indonesian learners have been trained in an intellectual tradition where there is a very clear boundary between 'experts' and 'non-experts' (Sinclair, 2000). In the guru-siswa tradition, experts (guru) transmit a body of knowledge to non-expert students (siswa). The right to share opinions and knowledge comes with high status, age, and expertise. Do men and women employ LLSs differently? This question has been explored in a number of studies. Oxford and Nyikos (1989) investigated that sex has not received sufficient research attention to allow definite conclusion. They found that females reported significantly more frequent use of conversational input elicitation strategies relating to social interaction. In their study women reported to use general study strategies and formal rule-related practice strategies significantly more often than men. In Politzer's (1983) study "females reported a significantly greater propensity than males to engage in second language social interactions with others outside of the class". Politzer mentioned it as "minor" importance. Nevertheless, it shows that sex difference might help us understand how males and females go about language learning.

### 3. Methodology

### 3.1. Participants

The research was conducted with the help of one hundred and seventy students at Yasuj University selected on the basis of non-random judgment sampling, including 50% females and 50% males. Their age limit was from 20 to 24, and their level of English proficiency and homogeneity were tested through Nelson English Proficiency Tests (Fowler & Coe, 1976), 120 learners whose scores were one standard deviation above and one standard deviation below the mean score were selected as the participants of the study. Then they were randomly divided into two groups, and each group includes 60 participants. Therefore, there were one experimental group and a control group.

### 3.2. Instrumentation

The following instruments were implemented in the study: The first instrument that was used by the researcher in this study is a sample language proficiency Nelson test (Fowler & Coe, 1976). Its reliability was estimated through KR-21 as ( $r=.75$ ) formula to make sure of the sample population homogeneity. The second one was a paragraph descriptive writing exam based on the TOEFL (2003) test of writing. This test includes three topics. Each of the students chose one of the subjects and began to write a descriptive paragraph. They were suggested not writing of 250 words. The paragraphs were scored by two raters based on writing scale for the paragraphs (Sharpe, 2003). Inter-rater reliability also was computed through Pearson Correlation Coefficient ( $r=.71$ ). The third one was the checklist developed by Soles (2005) to rate the essays post-test phases.

### 3.3. Procedure

This part describes the treatment used in the study. It explains the procedure followed by the instructor to teach the experimental group through critical teaching method. It also makes it clear how the control group of the study was treated. During the term the control group of the study did not receive any particular treatment. They were taught based on the conventional approaches taught at university which was to a great extent in line with the communication approach. In the writing section after a warm up the students in the control group were asked to write about their favorite topic and narrow it down as much as possible. At the second step, they were asked to write the topic sentence and also they were asked to recognize what the controlling idea is and that their controlling idea is limited and readily defined. At the third step, they were asked to write some supporting sentences. At the fourth step, they were asked to organize the materials. Finally, they were required to do some extra exercises regarding paragraph writing.

The treatment in the experimental group was carried out based on Ennis (1989) infusion approach in which integration of the subject matter and teaching critical

thinking is observed. In the infusion approach, the method of teaching the subject matter changes in a way that leads learners to become critical thinkers; however, they are not taught directly to become critical thinkers, they learn it subconsciously without knowing what critical thinking really is. The strategies used in this approach involved encouraging students to ask questions, solve problems, and seek for reasons. There were some steps followed, after writing warm-up and during the narrowing, limiting, coherence and cohesion and organizing of the descriptive writing to help the students develop their critical thinking skills.

At the first step, the students are asked to create words and ideas and write the favorite topic. They were obliged to generalize and narrow it. They were taught to bring facts to the defense of their ideas. The participants, of course, were explained that creating can be light or heavy, depending on the writer's purpose and the difficulty of the text. The more important or difficult a text is, the more creation it needs. The students were told that, for instance, writing a piece of newspaper is different from writing a text for an exam and that in writing a newspaper or a magazine they may need to use more passive words than writing a simple text for an exam. The second step was unity, which means the quality of oneness that occurs in a paragraph in which all the sentences of the paragraph relate to the controlling idea. In other words, it is best achieved by relating the main clause of each supporting sentence to the controlling idea of the topic sentence. The third step is to make the text or paragraph coherent –using different ways to achieving coherence, such as: (1) Transition in which single words or short phrases that can generally be positioned almost anywhere in a sentence, (2) Repetition of pronouns, nouns, and adjectives establishes a pattern of identity throughout a paragraph by keeping the reader's attention focused on the people, objects, or ideas that are the subject of the paragraph, (3) Modification improves coherence by adding details that answer such questions as who, how, when, where, why, and what and (4) Logical order ties ideas presented in a paragraph to a distinct order time, space, or cause and effect, to mention a few possibilities.

The fourth step was organization on which students were trained, how to outline and classify the paragraphs of the text, in which the large body of facts will be divided into smaller related ones based on their importance. The next step was to teach learners not to be mere receivers of information from the instructor; they need to be active members who tried to be more responsible for how they thought and what they learned. So they were asked to get involved in the process of learning in general and writing in particular. Questions regarding writing skills from students meant they were thinking critically about what they were writing. So learners were encouraged to ask questions. In this method questions were always welcomed, and were never rejected. In fact, the students were encouraged to ask questions. During the process of treatment the students were required to ask some written questions on the assigned topics and paragraphs and to ask their peers in the class. These questions helped learners to understand descriptive

writing skill better. It was explained to the learners that their questions should focus on the main ideas, not on details; and that the questions had to be in their own words. Sometimes the learners were divided into small groups and they were asked to make questions based on the written paragraphs and discuss the questions in their groups. The whole class discussed some of the questions from each small group as well.

Following this method, the instructor also had to ask questions that obliged the students to think based on the data they possessed, discuss them, and reach new conclusions or a new understanding about the topic. The questions were devised in a way that they promoted critical thinking rather than rote memorization. For example, the questions required the students to elaborate, compare, or give their own idea on the topic. One- minute paper was the last strategy trained to the learners of the experimental group. A good way of teaching critical thinking is to ask the students to write. Writing forces the students to organize their thoughts, think critically about the material, evaluate their data, and present their conclusion. So the learners were asked to write a one- minute paper on the most important thing they learned in the class and what they were still confused about, on what they agreed or disagreed about, or what challenged their beliefs more.

#### 4. Results

To begin with, questionnaire analysis indicated that the most popular and neutral topics for male and female respondents were describing an interesting historical place (Topic A), describing an interesting hobby that you enjoy (Topic B) and describing a useful website you have visited (Topic C). Consequently, the topics mentioned above were selected for descriptive writing test as a post-test.

To accept or reject the stated null hypotheses, the data obtained through Nelson language test as homogeneity test and post-test (Table 4. 1 and 4. 2, 3, 4, 5, 6, 7, 8, and 4. 9) were analyzed (using SPSS 14 software) in different steps. The early step used in analyzing data was determining the homogeneity of the groups regarding their levels of second language proficiency. So, the students' overall scores on Nelson language proficiency test were collected from their records. Means and standard deviations of each of the three groups for Nelson language proficiency test (Fowler & Coe, 1976) are presented in Table 1. It shows that each of the four groups had approximately similar performance on Nelson language proficiency test, and the obtained means and standard deviations of each of the four groups, were to some extent, similar. The results are presented in Table 1.

Table 1. Sample Means and Standard Deviations for Homogeneity Test

Group	N	Maxi	Mini	Mean	Std. D.	Variances
Experimental Group (male)	30	16	5	10.67	3.20	
Experimental Group (female)	30	18	6	10.90	3.32	
Control Group (male)	30	16	3	9.80	3.60	

Control Group (female)	30	18	6	10.83	3.02
Total	120	18	3	10.55	3.28

Since the means of the groups cannot show the significant difference between the groups, an Independent samples *t*-test on the homogeneity test, Males vs. Females, was conducted to show the degree of significance between each group as it is presented in Table 2.

Table 2. Independent samples *t*-test (homogeneity test, Males vs. Females)

Groups	Levene's Test for Equality of Variances				
	F	sig	<i>t</i>	df	Sig.(2-tailed)
Scores Experimental Groups vs. Control Groups	.971	.329	2.846	118	.06

To test the research hypotheses, the researchers dealt with comparing the effect of critical thinking instructions on the groups regarding analyzing the quantitative data. In this way, the study investigated the effect of CT instruction on students' means of descriptive writing among female and male Iranian EFL university students at the intermediate level of English writing proficiency. The results are presented in Table 3.

Table 3. Independent samples *t*-test (post-test, Males vs. Females)

Groups	Levene's Test for Equality of Variances				
	F	sig	<i>t</i>	df	Sig.(2-tailed)
Scores Experimental Groups vs. Control Groups	2.433	.121	5.234	118	.000*

\*Significant at (p<0.05)

#### 5. Discussion and conclusion

This study began with the assumption that teaching critical thinking instructions could enhance the intermediate language learners' writing ability. The instruction lasted for nine weeks. In the course of this time, the researcher (teacher) employed the mentioned critical thinking instructions and instructed the participants in the experimental groups how to use them in their writing. The participant in the control groups, on the other hand, did not receive any instruction on the use of these instructions during their descriptive writing practice.

After the post-test, the results indicated that the instruction of the critical thinking strategies did affect the intermediate male and female language learners' descriptive writing skill. Namely, the writing ability of the experimental groups who had made use of critical thinking strategies among males and females surpassed that of the control groups. At the end of the course both the control groups and the experimental groups were administered the descriptive writing tests and the result of the tests were compared to find the effect of training. The results of the study confirmed that the descriptive writing could be improved through systematic instruction in critical thinking instructions.

The studies mentioned above revealed the fact that instruction of critical thinking strategies for intermediate language learners among males and females was pedagogically effective and precipitate strategy use. If strategy training to enhance the writing skill is felt advantageous, it should be limited to notifying intermediate language learners of critical thinking instructions which they have to apply to make them better write passages.

## References

- Birjandi, P. & Bagherkazemi, M. The relationship between Iranian EFL teacher's critical thinking ability and their professional success. *English language Teaching*, 3(2), (2010), 135-145.
- Buskist, W., Irons, J. G. Simple strategies for teaching your students to think critically. In D. S., Dunn, J. S., Hsalonen, R. A. Smith, (Eds.), *Teaching Critical Thinking in Psychology* (49-59) West Sussex, united kingdom : black well publishing, (2008).
- Carroll, D. W. Thinking about historical issues: Debates in the history and systems class. *Teaching of Psychology*, 33, (2007), 131-134.
- Egege, S., & Kutieleh, S. Critical thinking and international students: A marriage of necessity dealing with diversity first year in higher education conference. Monash University, (2004).
- Eker, H., & Kmr, S. The relationship between critical thinking skills and in-class questioning behaviors of English language teaching students. *European journal of Teacher Education*, 31 (4), (2008), 389-402.
- Elbow, P. *Writing with Power : Techniques for Mastering the Writing process*. New York: Oxford University Press. (1981)
- Ennis, R. H. John Mcpeck's teaching critical thinking. *Educational Studies*, 23(4), (1992), 462-472.
- Ennis, R. H. Critical thinking and subject specificity: Clarification and heeded research. *Educational Researcher*, 18(3), (1989), 4-10.
- Fowler, W. S., & Coe, N. *Nelson English language test*. Canada: Thomas Nelson and Sons Ltd, (1976).
- Kuhn, D. "A developmental model of critical thinking". *Educational Researcher*, 28 (2), (1999), 16-26.
- Liaw, M. L. *Content-based reading and writing for critical thinking skills in an EFL context*. National Taichung University, (2007).
- McPeck, J. E. *Critical thinking and Education*. New York: St Martin's Press, (1981).
- Meins, W. K. A descriptive analysis of teaching of critical thinking skills in teacher education programs in universities and colleges in the state of Arkansas Unpublished PhD. Dissertation. Ann Arbor: University of Arkansas, (1991).
- Miller, S. L. The impact of a program of critical thinking on reading comprehension remediation and critical thinking of middle and high school students. Unpublished PhD. Dissertation. United states International University, (1981)
- Moon, J. *Critical Thinking: An exploration of theory and practice*. New York: Routledge, (2008).
- Oxford, R. L. & Nyikos, M. Variables affecting choice of learning strategies by university students. *Modern Language Journal*, 73, (1989), 291-300.
- Phillips, V., & Bond, C. Undergraduates experiences of critical thinking". *Higher Education Research and Development*, 23 (4), (2004), 277-294.
- Politzer, R. L. An exploratory study of self-reported language learning behaviors and their relation to achievement. *Studies in second language acquisition*, 6, (1983), 54-65.
- Schafersman, S. D. An introduction to critical thinking. Retrieved March 12, 2010 from: [www. Free enquiry/critical thinking .html](http://www.Free enquiry/critical thinking .html), (1991).
- Sharpe, P. J. *How to prepare for the TOEFL test*. New York: Library of Congress Catalog Card, (2003).
- Siegel, H. The generalisability of critical thinking. *Educational Philosophy and Theory*, 23(1), (1991), 18-19.
- Sinclair, S. When I say 'Describe' I don't mean that you should just describe'... Sources of Confusion. National Language and Academic Skills Conference, La Trobe University, (2000).
- Soles, D. *The academic essay: How to plan, draft, write, and revise*. (2<sup>nd</sup> ed.). UK: Study mates, Ltd, (2005).