



# The Relationship between Critical Thinking and Performance of Iranian EFL Learners on Translation Tests

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## ABSTRACT

To investigate the relationship between critical thinking and translation performance of Iranian EFL learner, 100 seniors of English translation major at Islamic Azad University- Tonekabon Branch were presented. After running the proficiency test, 84 students were chosen as a homogenous group for this project. One questionnaire of critical thinking and one test for measuring their translation skill were administered to find out the relationship between critical thinking and translation ability of EFL learners. The participants were first given the Persian version of critical thinking questionnaire including 30 items. After the administering the questionnaire, a multiple choice translation exams including 50 items was given to the participants. Strong correlation was found between the two variables through using Pearson Product Moment Correlation. In addition, dividing the participants into two groups of high and low groups of critical thinking showed that there was a difference between high and low group and their performance on translation test. Analyzing the data through running T-test discovered that the higher the participants' ability of critical thinking, the better their performance on translation tests. The findings of the present study can have theoretical and practical implications for improving EFL learners' ability of translation potential.

**Key words:** Critical Thinking, Critical Reading, Inferential Reading, Comprehension, Inference

## INTRODUCTION

Recent trends in the education domain emphasize the importance of critical thinking skills for academic success and life. Carr (1990) emphasizes the significance of teaching high order thinking skills and mentions that students should be taught to think logically, analyze, compare and evaluate questions. Translating is deeply dependent to reading comprehension. Mason (1985) argued that reading comprehension depends upon the readers' ability to interrelate acquired knowledge with the information suggested in the text. To improve this ability, Neilsen (2002) believed in providing students with opportunities to become actively involved in constructing their own knowledge for their own purpose. Commeyras (1989) believed that using reasoning to evaluate possible interpretations to determine the meaning of the text is necessary to comprehending a text. Because reasoning is one of the characteristics of critical thinking, the need to use critical thinking strategies and its direct relation to reading comprehension and translation is clearly felt. He elaborated on the students' need to use critical thinking strategies as they read a text such as clarifying what they mean, giving reasons, evaluating reasons, elaborating, supporting their evidence and so on. Also, Neilsen (2002) does not accept the way teachers used to teach students and notes: When the teachers always originate the questions and sanction the answers, there is little opportunity for the students to develop the critical spirit and to become independent learners (p. 29). Translation, especially translation of journalistic texts, directly links with a variety of cognitive or critical thinking abilities. In other words, critical thinking ability is the one that deals with deep understanding of reading and translating.

Baker (1985) stated that college students with lower verbal ability were unable to match the information in the text with their background knowledge. Stapleton (2002) reported that Asian learners of English are characterized by constructs claiming that they lack an individual voice and critical thinking skills. In accordance with this claim, Waters (2006) conducted an observation of secondary-level EFL lessons in an Asian country and found that nearly all the teaching activities involved a relatively mechanical type. He reasoned that the lack of awareness about the way in which the thinking level of activities conceptualized, and the implications for lesson design leads to this situation.

It is clear that reading and translating problems have long been common among Iranian students and they have remained unsolved because translation is a difficult and challenging area for students. This study identifies how much our students think critically in a language learning environment and how much it relates to their performance on a translation test. This study also investigates the difference between high and low levels of critical thinking on a translation. Thus, university professors and lecturers can evaluate their students in a new way and it can be taken into consideration as a factor in the pedagogical process.

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There are some limitations to this study in application and in results. They are related to age and socioeconomic classes. Thus, the possible effects of these variables were not included in this study. To handle them the researcher assumes that no significant differences exist between different ages and different socioeconomic classes. In addition, data collection from one university causes many different limitations such as time shortage in classes.

Critical thinking research reveals the intimate role thinking plays in the constructing of meaning. Kurland (2000) claims comprehension requires higher-order thinking. He states that reading is actually a problem solving process requiring cognition. According to Kurland (2000), "we do not simply read the words; we read ideas, thoughts that spring from the relationships of various assertions" (p. 2). Understanding text deeply requires construction of meaning through concoction and interpretation of the author's ideas. Balasubramaniam (1999) defines deep comprehension as the ability to recognize, organize, and articulate the central idea of a text without conflating them with peripheral details.

Knowledge structuring, problem solving, logical thinking, and new understanding application depend on deep comprehension (cited by Washburn, 2006, p. 36). Byrnes (2001) believes that good readers can recognize words automatically which enables the individual to focus on higher order thinking by utilizing sentence integration and to make semantic connections. Secondly, good readers quickly recognize words. Speed is important because readers have to be able to operate information in working memory before it disperses (Byrnes, 2001). The third characteristic of good readers is their ability to record words into phonological representations. The phonological skills help the learners to create a code and pave the pathway of the working memory to effectively access sentence meanings.

There are different definitions of critical thinking based on different goals. These different dimensions are discussed below: From philosophical perspective, the most common of these hindrances to critical thinking fall into two main categories: those obstacles that happen because of how we think and those that occur because of what we think. The first category consists of psychological factors such as fears, motivation, attitudes and desires and the second one includes certain philosophical beliefs (Vaughn, 2008). From psychological perspective of critical thinking, Sormunen (1992) identified dimensions of thinking as "cognitive processes" (including problem solving and decision making), "metacognition" (being aware of how we think), "core thinking skills" (including summarizing and elaborating), "creative thinking" and the role of content knowledge in facilitating thinking.

The Cognitive dimension of Critical Thinking: Facione (2007, p. 6) mentions six cognitive skills of critical thinking: interpretation: Categorization, decoding significance, clarifying meaning, analysis: Examining ideas, identifying arguments, analyzing arguments, evaluation: Assessing claims, assessing arguments, inference: Querying evidence, conjecturing alternatives, drawing conclusions, explanation: Stating results, justifying procedures, presenting argument, self-regulation: Self-examination, self-correction.

Affective dimensions of critical thinking: The affective domain of critical thinking includes four characteristics: critical attitude, cultural consideration of conflicts, personality types and a friendly atmosphere which encourages questioning (Chiu, 2006). People can think critically more, if they possess the following affective dispositions: analyticity, inquisitiveness, open-mindedness, systematicity, cognitive maturity.

Longman and Guice (1997), in their famous book "strategic thinking and reading", tried to apply some standards to thinking which are used to evaluate critical thinking in reading. To achieve this goal, they defined and explained different concepts which are listed below. Standard, clarity, relevance and significance, breadth, depth, and completeness, fairness and consistency, logic and justifiability, accuracy, precision, and specificity.

Schafersman (1991) characterizes a good critical thinker in terms of knowledge, abilities, attitudes, and habitual ways of behaving. Here are some of the characteristics of such a thinker:

- Uses evidence skillfully and impartially
- Organizes thoughts and articulates them concisely and coherently,
- Distinguishes between logically valid and invalid inferences,
- Suspends judgment in the absence of sufficient evidence to support a decision
- Understands the difference between reasoning and rationalizing,
- Attempts to anticipate the probable consequences of alternative actions,
- understands the idea of degrees of belief,
- Sees similarities and analogies that are not superficially apparent,
- Can learn independently and has an abiding interest in doing so,
- Applies problem-solving techniques in domains other than those learned,
- Can structure informally represented problems in such a way that formal techniques, such as mathematics, can be used to solve them
- Can strip a verbal argument of irrelevancies and phrase it in its essential terms

Sheikhi (2009) conducted a research study which showed revealed the autonomy is significantly related to critical thinking. The learners' critical thinking correlated with their reading comprehension. The findings also revealed a strong relationship between autonomy and reading comprehension. Mirzai (2008) investigated the relationship between critical thinking and lexical inferencing of Iranian EFL learners. He concluded high critical thinking students outperformed the low critical thinking ones in lexical inferencing.

In order to find the critical thinking relationship with the other branches of science, Khamesian (2008) tried to find the relationship between critical thinking skills and writing in EFL Engineering learners. Comparative analysis indicates that there is a significant difference between males and females in their expertise on critical thinking

skills, but learners cannot increase critical thinking skills ability in their writing assignment significantly. Also, there is no significant relationship between the critical thinking skills preferred by the instructor and used by students in their exams. Khamesian (2008) also found the relationship between using critical thinking skills and improvement in the learners' grammar. It can be concluded that applying critical thinking skills to all domains of teaching and learning especially inferential reading comprehension results in students' progress.

## METHODOLOGY

The intended plan of this study is to evaluate the predictive power of critical thinking of Iranian English language learners and their performances in translation tests. For this purpose, one translation test of journalistic text and one questionnaire of critical thinking were administered and the results were obtained. In this study, 100 students from Islamic Azad University-Tonekabon Branch were selected. They were all senior students, majoring in English translation field. The age of the participants ranged from 20 to 29 years old. The materials used for this study include a proficiency test, a critical thinking questionnaire, and a translation test including 50 items of journalistic text to measure students' ability to read the texts and choose the best translation. The critical thinking questionnaire was taken from Naini (2005) thesis. She stated that the questionnaire was provided by Peter Honey. Honey (2004) says that their mission is to "help organizations to be successful through learning" (cited in Naini, 2005). This questionnaire included 30 items to evaluate critical thinking skills. These 5 skills are as follows: Analysis, inference, evaluation, inductive reasoning and deductive reasoning. Naini (2005) claims that Persian version of the questionnaire was studied and modified by some professors at Tehran Azad University. The corrected version, then, piloted and administered to 20 students at Tehran Kish institute. As she stated, after she got feedback from the students, the SPSS was employed to calculate reliability of the questionnaire. The reliability was estimated 0.86 and considered acceptable. The design of this research is ex-post facto type (also called Causal Comparative Research) because there is no treatment and the researcher has no control over what has already happened to students. Critical thinking considered as independent variable and translation skill is dependent variable.

The present research starts with engaging 100 students of Tonekabon Azad University for the data. The proficiency test and critical thinking questionnaire both were administered in one session. Proficiency test took almost 80 minutes; next, the questionnaire was given to the students. It took 15 minutes, although there is no time limit for answering the questionnaire. Translation test was administered in the other session as well, which 50 questions of journalistic text and took 70 minutes.

## RESULTS

### Proficiency TOEFL test

As it was stated in the previous chapter, among 100 participants, 84 students were chosen as the homogenous group to conduct the study. The scores with one standard deviation above and one standard deviation below the mean were selected as one homogenous group. The result is given in Table 1.

### Critical thinking questionnaire

One of the instruments used in this research was the Honey critical thinking questionnaire (Table 2). The maximum possible score on this questionnaire was 150 and the minimum score was 30. Descriptive data of participants on critical thinking questionnaire is illustrated in table 2. As it can be seen, the maximum score on this questionnaire was 141 whereas the minimum score was 43. the mean of scores was 93.

### Translation test

The other instrument used in this study was translation test. After deleting and adding necessary items, 50 multiple-choice inferential items were prepared. One point was given to each correct response, and for incorrect or unanswered items, no score was given. The readability of each sentence was calculated through SMOG formula. Then comparing the mean of the sentences to the mean of the sentences from students' textbook, suitability of the sentences in the translation test was found. The sentences were of relatively the same lengths as well.

**Table 1.** Descriptive data of participants' English language proficiency

Parameters	N	Minimum	Maximum	Mean	Std.Deviation
Proficiency	84	60.00	83.00	70.9405	6.8025
Valid N (listwise)	84				

**Table 2.** Description of participants' score on critical thinking questionnaire

Mean	Median	Std. Deviation	Variance	Range	Minimum	Maximum	N Valid	Missing
93.1429	93.5000	26.4822	701.3046	98.00	43.00	141.00	84	0

**Table 3. Description of participants' translation test scores**

Mean	Median	Std. Deviation	Variance	Range	Minimum	Maximum	N Valid	Missing
24.78	24.00	6.44	41.43	22.00	15.00	37.00	84	0

The maximum score gained by the participants on translation test was 37 and the minimum score was 15. The mean of scores was 24.

Research hypotheses: 1. there is no relationship between critical thinking and the performance of Iranian university students on the inferential reading comprehension. 2. There is no significant difference between high and low levels of Iranian EFL learners' critical thinking and inferential reading. The first research question sought to investigate the relationship between critical thinking and translation ability (Table 4).

In order to see whether the relationship between the variables is significant or not, Pearson Product Moment Correlation used to analyze the two tests' scores. In fact, it shows the degree of togetherness of the two variables (Table 5).

Regarding the calculated correlation coefficient estimated to be 0.734, there is a significant correlation between critical thinking and translation ability. The second research question investigated the difference between high and low levels of Iranian EFL learners' critical thinking and translation ability. To divide the participants to two groups of high and low critical thinking, the scoring method of the questionnaire was utilized. It means the scores above 90 were considered as high group and the scores below 90 were regarded as low ones. After adding the scores of each student on critical thinking questionnaire, the following results obtained. Table 6 Shows the descriptive statistics.

As it was shown in table above, 43 participants were considered as high group of critical thinking. The mean on translation ability test is 29.95 and standard deviation is 4.26. Table 7 illustrates the description of low group of critical thinking and their performance on inferential reading test. As table 6 and 7 show, 43 participants are high critical thinkers whereas 41 of them were considered as the low group. The standard deviation of high group is 4.26 and the standard deviation on low group is 2.89. Thus, the high group scores on the translation test are better than low group scores. High and low levels of critical thinking were considered as independent variables and translation was regarded as the dependent one. Thus, to find the difference between high and low group of critical thinkers on translation, the Independent sample t-test was used.

Leven's test for equal variances (Table 8) compares within group deviation from the mean between group deviations from the mean, indicating whether the two variances are significantly different. The results ( $F=2.3$ ,  $sig=.133$ ) indicate the difference between the groups are not significant, allowing the results based on the assumption of equal variances to be used. Using  $p_{.05}$  as the indicator of significance, the t-test results show the significant difference in the mean gain of the two groups (high and low critical thinking groups). Thus, the difference found between the two groups and their performance on translation test and the second null hypothesis is rejected as well.

**Table 4. Relationship between critical thinking and translation ability**

Parameters	N	Minimum	Maximum	Mean	Std.Deviation	Variance
Translation ability	84	15	37	24.79	6.45	41.544
Critical thinking	84	43	141	93.14	26.48	701.305
Valid N (list wise)	84					

**Table 5. Correlation of critical thinking and translation ability**

	Translation ability	Critical thinking
Translation, Pearson Correlation	1.000	0.734
Sig. (2-tailed)	0.000	0.000
N	84	84
Critical, Pearson Correlation	0.734	1.000
Sig. (2-tailed)	0.000	0.000
N	84	84

Correlation is significant at the 0.01 level (2-tailed)

**Table 6. Descriptive statistics of high group of critical thinking**

High CT (above 90)	N	Mean	Std. Deviation	Std. Error Deviation
Translation ability	43	29.95	4.26	0.65

**Table 7. Descriptive statistics of low group of critical thinking**

Low CT (above90)	N	Mean	Std. Deviation	Std. Error Deviation
Translation ability	41	10.37	2.89	0.45

**Table 8.** Shows the result of Independent t-test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. 2tailed	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Translation Equal variance assumed	2.3	0.133	13	82	0.000	10.59	0.80	9.00	12.17
Equal variances not assumed			13	74	0.000	10.59	0.79	9.01	12.16

## CONCLUSION

Using critical thinking skills can be useful to improve students' ability in translation skill. In addition, comparing high and low groups of critical thinking shows a great effect on students' performances on translation ability. The findings of the present study confirm Mirzai's (2008) study who reported that critical thinking had significant relationship with lexical inference. She also found a difference between high and low groups of critical thinking and lexical inference that is in accordance to the result of the present study. Sheikhi (2009) who investigated the relationship between autonomy, critical thinking and reading comprehension of Iranian EFL learners, also found a positive relationship between critical thinking and reading comprehension, which partly confirms the result of the present study. Also, Naini (2005) found progress by using critical thinking strategies in cooperative groups of learners and their progress in comprehension, analysis and evaluation on post-test. Mason (1985) believes that the goal of critical thinking is to reform the educational system all across the world. Considering the findings of related literature in critical thinking indicates its significant impact on improving the traditional methods of teaching, learning and the educational system. Since there is a strong relationship between critical thinking and translation ability, it can be concluded that the utilization of critical thinking strategies would help learners work better in learning foreign language. Since translation skill improves due to using thinking strategies, translation instructions should focus on the teaching thought process. In order to function properly in society, and promote independent learning, individuals must be able to think critically and reason effectively. Thus, using critical thinking strategies would help students read more effectively and, therefore, translate better. Students need the course books, which invoke their critical thinking abilities as well.

The first suggestion would be directed to syllabus designers and course book writers to consider more self-assessment tasks which show students' progress. They should consider critical thinking as an effective element in course books. To develop teachers capable of teaching the thinking necessary for translation skill, schools must devote significant time and resources to professional development. In addition, students can gain benefits from their learning, if they have control over their own learning. It means incorporating critical thinking skills to students' learning process help them be independent and responsible in their own learning. Also, teaching critical thinking strategies to the teacher, he/she would observe the progress of the students on reading comprehension. Furthermore, the present findings may provide additional direction for school leaders in the evaluation and selection of instructional reading programs. Thus, using critical thinking skills is fruitful in both everyday life and academic success.

Suggestion for further reading: Considering the result of the present research, the following recommendations are suggested for further studies: Because of the limited scope of this research, it can be repeated with broader sample to investigate whether the same result would be obtained or not. It can be done on different ages and different majors. This research can investigate the effect of gender on critical thinking and translation skill, such as: is there any difference between males and females on critical thinking and translation test?

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