

## The Relationship among Critical Thinking, Self Efficacy, and Iranian EFL Learners' Reading Comprehension Ability with Different Proficiency Levels

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### ABSTRACT

*The present study aimed at investigating the relationship among critical thinking, self efficacy, and Iranian EFL learners' reading comprehension ability with different proficiency levels. To do so, 300 students majoring in English Translation and English Literature were randomly selected from among Bandar Abbas Azad University TEFL university students to shape the participants of the study. The NELSON test was administered to the subjects in order to divide them into three equal groups (each 100 subjects) of elementary, intermediate and advanced. Then the subjects received a validated test of reading comprehension comprising thirty items as well as the Cornell Critical Thinking questionnaire, and the self-efficacy scale for reading comprehension developed by Ghonsooly and Elahi (2010). The data were analyzed and the results showed that revealed that firstly, there were significant relationships between critical thinking and reading comprehension at elementary, intermediate and advanced levels. Secondly, there were significant relationships between self-efficacy and reading comprehension at elementary, intermediate and advanced levels, and thirdly, there were significant relationships between critical thinking and self-efficacy at elementary, intermediate and advanced levels. English teachers and learners could employ the present findings and focus on the mismatch between input they receive and their current learning. This way the classroom interactions could be enriched and would help subsequent L2 development of the learners.*

**Keywords:** Critical thinking, self efficacy, EFL learners, reading comprehension

### INTRODUCTION

Reading comprehension is considered a complex cognitive activity essential for sufficient functioning and for obtaining information in modern world. Within the domain of English Language Teaching (ELT), second language reading research has focused on the relationship between reading strategies and personality characteristics or styles (Cohen, 2003; Oxford, 1989; Prat-Sala & Redford, 2010; Riding & Rayner, 1998).

Bandura (1993) argues that perceived self-efficacy contributes to cognitive development and functioning and operates as an important contributor to academic development of the learner. In this respect he asserts that "students' beliefs in their efficacy to regulate their own learning and to master academic activities determine their aspirations, level of motivation, and academic accomplishments". (p.117)

Bandura's (1993) *perceived self-efficacy belief* also has been studied in terms of its relationship with development of different language skills in second language learners: Zimmerman, Bandura, and Martinez-Pons (2010) argue that there is a high correlation

between the goals students set in advance and what they perceive in the classroom. They assert that “the higher the goals students set for themselves, the greater the direct and indirect influence of students' perceived academic self-efficacy on academic attainment” (p.239). Also, Zimmerman, et al (2010, p.241) present that “clearly, a determinant of student aspirations is their belief in their academic efficacy.” Hosseini Fatemi and Vahidnia (2013) argue the association between Iranian EFL learners' motivation and self-efficacy and present that “there exists a significant association between EFL learners' self-efficacy and their intrinsic motivation”. (p.79) They also assert that among subscales of motivation, a motivation is negatively related to students' self-efficacy.

Ghonsooly and Elahi (2010) argue EFL learners' self-efficacy in reading and its relation to foreign language reading anxiety and reading achievement and present that “high self-efficacious participants achieved higher scores in reading comprehension course than low self-efficacious participants”. (p.45)

Khajavi and Ketabi (2012) following their investigation on the influence of concept mapping on reading comprehension and self-efficacy of intermediate EFL students in Iran argue that familiarity with concept mapping ends in greater achievement in reading comprehension and self-efficacy. Eslami and Fatahi (2008) mainly focus on the teachers' sense of self-efficacy and its relationship with teachers' English proficiency and present that “teachers' perceived efficacy is positively correlated with self-reported English proficiency” (p.2). In this respect Ghonsooly and Ghanizadeh (2011) argue that there is a significant relationship between teachers' self-regulation and self-efficacy beliefs.

The relationship between critical thinking with self efficacy and language skills also have been attractive enough to be researched by ELT scholars home and abroad. One of the most influential tools anyone can always have is the ability to think. Critical thinking skills are strategies people use to consider and evaluate new ideas. Renandya (2002, p. 273) postulates that reading receives a special focus in many second or foreign language teaching situations.

The relationship between critical thinking and reading is well established in the literature. For example, Norris and Phillips (1987) point out that reading is more than just saying what is on the page; it is thinking. Moreover, Beck (1989) asserts “there is no reading without reasoning” (p. 677). Also, among those researchers and theoreticians who recognize that reading involves thinking is Ruggiero (1984). He indicates that reading is reasoning. Yu-hui et al. (2010) stated clearly that reading is a thinking process to construct meaning.

Naseri and Zaferanieh (2012) present that there is a high relationship between reading self-efficacy beliefs, reading strategy use and reading comprehension level of Iranian EFL learners. They report a significant strong positive correlation between reading self-efficacy beliefs and reading comprehension and also between reading self-efficacy beliefs and reading strategies use of the learners.

Considering the previous studies done, the possible existing relationship between critical thinking, self-efficacy beliefs, and reading comprehension of Iranian EFL learners seems to be a novel research which is worth doing. The present research hence is an attempt towards investigating the relationship between critical thinking, self-efficacy beliefs, and Iranian EFL learners' reading comprehension ability with different proficiency levels

## **STATEMENT OF THE PROBLEM**

Generally, it is believed that low achievement of EFL learners is related to their low aptitude. Intellectual abilities may be important in the process of learning language but other factors

may also be involved. As Brown (1998) and Chastain (1988) believe the variation in foreign language learning can be explained by aptitude only to some extent. Affective variables, as Chastain (1988) supports, play an important role in developing second language skills.

One of the areas which require investigation is the low achievement of reading comprehension among Iranian learners. Even in the IELTS examinations one of the skills in which the Iranian examinees receive low scores is reading comprehension (Rasti, 2009).

According to Bandura(1989), perceived self-efficacy can affect one's regulation of cognitive processes. Reading comprehension, on the other hand is considered a cognitive-oriented concept (Beeman & Chiarello, 2013; Mahapatra, Das, Stack-Cutler, & Parrila, 2010; Oakley, 2011). Studying the relationship between perceived self-efficacy and reading comprehension of learners as a cognitive process could be significant as its results may help the learners gain better reading comprehension abilities. Critical thinking issues also have been considered important in terms of their effects on the betterment of language skills among ESL/ EFL learners(Kamali & Fahim, 2011). Remediating reading comprehension difficulties and focusing on the concepts of self-efficacy accompanied by critical thinking might lead us towards a better understanding of the problems of low achievers in reading comprehension.

### **SIGNIFICANCE OF THE STUDY**

As Pajares (1996) discusses, perceived self-efficacy can be studied in relation to various language skills and their development. In this regard, the relationship between second language learners' self-efficacy and their critical thinking could be studied. Meanwhile as such a relationship has been rarely focused on in the ELT literature; therefore, the present study can take significant from this respect. MacIntyre, Noels, and Clément (1997) present that low language anxiety correlate with high critical thinking skill among the second language learners. The assumption is that the learners who are able to think critically are more patient and a bit reflective and can control themselves better. Focusing on the relationship between critical thinking and learners' ability in one of the language skills (reading comprehension) could be interesting and informative in its own respect.

The results of the study also could be employed by EFL teachers to help the learners gain better results in their attempts to learn English as a second/foreign language.

Considering the aforementioned issues this study is significant as it is going to investigate the followings: a) the relationship between EFL learners' self-efficacy beliefs and their reading comprehension, b) the relationship between EFL learners' critical thinking and their reading comprehension, and c) the relationship between critical thinking and self-efficacy of EFL learners in the Iranian context.

### **RESEARCH QUESTIONS**

To fulfill the purpose of this study, the following questions wereraised:

1. Is there any significant relationship between critical thinking and Iranian EFL learners' reading comprehension ability with different proficiency levels?
2. Is there any significant relationship between self-efficacy and Iranian EFL learners' reading comprehension ability with different proficiency levels?
3. Is there any significant relationship between self-efficacy and critical thinking of Iranian EFL learners with different proficiency levels?

## **RESEARCH HYPOTHESES**

In order to investigate the above-mentioned research questions, the following null hypotheses are reformulated:

1. There is no significant relationship between critical thinking and Iranian EFL learners' reading comprehension ability with different proficiency levels.
2. There is no significant relationship between self-efficacy and Iranian EFL learners' reading comprehension ability with different proficiency levels.
3. There is no significant relationship between self-efficacy and critical thinking of Iranian EFL learners with different proficiency levels.

## **REVIEW OF THE RELATED LITERATURE**

Reading comprehension is considered a complex cognitive activity essential for sufficient functioning and for obtaining information in modern world. Bandura's (1993) perceived self-efficacy belief also has been studied in terms of its relationship with development of different language skills (e.g. reading) in second language learners. Bandura (1993) argues that perceived self-efficacy contributes to cognitive development and functioning and operates as an important contributor to academic development of the learner. In this respect, he asserts that "students' beliefs in their efficacy to regulate their own learning and to master academic activities determine their aspirations, level of motivation, and academic accomplishments" (p. 117).

From another point of view, several researches have been conducted to investigate the effects of critical thinking on different aspects of second and foreign language learning especially reading (Fahim et al., 2010; Fahim&Kamali, 2011; Gomez, 2010). The relationship between critical thinking and language proficiency has also been considered as another line of inquiry (Rashid &Hashim, 2008).

Considering the previous studies done, the possible existing relationship among critical thinking, self-efficacy, reading comprehension ability and different proficiency levels of Iranian EFL learners seems to be a novel research which is worth carrying out.

### **Reading Comprehension Ability**

Reading comprehension is one of the most significant elements in English language learning for all students because it provides the basis for a substantial amount of learning. According to Rivers (1981), reading is an important activity and it is a means for extending the knowledge of language learners. Reading is considered a valuable skill in language learning.

Jacobs and Paris (1987) define reading comprehension from a cognitive perspective as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (p. 255). The words 'extracting' and 'constructing' are used by Jacobs and Paris (1987) to emphasize both the importance and the insufficiency of the text as a determinant of reading comprehension. They also discuss that understanding how the characteristics of a passage impede or facilitate comprehension is metacognition about reading.

Reading comprehension proficiency has also been defined as a combination of the reader's cognitive and meta-cognitive processes, which a reader has to make inferences on the passage of a text or at the end of a story by using information from different sources: the title, the pictures, or generally from the previous paragraphs. The reading comprehension processes

occur when the reader understands the information in a text and meaningfully interprets it (Ahmadi&Hairul, 2012; Blair-Larsen & Vallance, 2004).

Reading comprehension is the conclusion of recognition and understanding among readers and the context (Eskey, 2005). Accordingly, Rosenblatt (1978) stated that reading comprehension is related to the transaction between the text and reader. It is believed that readers establish and construct their own meanings in the context and can share those understandings and recognitions with other students. One of the most important factors of the beginning stages of reading and reading comprehension development is decoding and the ability to recognize words in texts (Adams, 1990). However, comprehension relates to both vocabulary recognition skills and higher order thinking skills.

### **Reading Comprehension Ability and Proficiency Level**

The Linguistic Threshold Hypothesis (LTH) was developed by Clark (1979) originally as “short-circuit hypothesis”, and is recently more commonly referred to as the Linguistic Threshold Hypothesis (Bernhardt & Kamil, 1995). According to LTH, L2 learners must first gain a certain amount of control over L2, or in other words, cross a critical linguistic threshold, before applying their L1 reading skills to L2 reading. This “certain amount” is referred to as a “language ceiling” by Clark, or a “threshold level of linguistic competence” by Cummins (1979). Below this level of linguistic competence, it is unlikely for L1 reading strategies to be transferred to L2 reading. As a result, good readers’ L1 reading skills are “short-circuited” in the sense that these readers revert to poor reader strategies when engaged in a challenging task in L2 (Bossers, 1991).

### **Self-efficacy**

Self-efficacy was originated from social cognitive theory by Albert Bandura. Bandura proposed a social cognitive theory which states that the belief each individual has about his capabilities is critical to improvement and mastery. Bandura believes how people behave can be predicted by the beliefs they have about their capabilities (Bandura & Locke, 2003).

Subsequently, Bandura (1986) located the construct within a social cognitive theory of human behavior that deviated from the common cognitivism of the day and embedded cognitive development within a socio-structural network of influences. This theory assumes that people are capable of reflecting on their own actions and regulate them and that they can shape their environments instead of just reacting passively to them. Social cognitive theory also assumes that most human behavior is purposive or goal-oriented and is guided by forethought. It also assumes a meta-cognitive activity, which implies that people are self-reflective and capable of analyzing their own behavior and experiences. They are also capable of self-regulation and thus exercise direct control over their behavior by selecting or controlling conditions in their environment.

According to Bandura (2002), increased self-efficacy can positively affect a person's choice of task, the efforts for completing a task and the persistence until mastery of the task. As Pajares (1996) discusses, perceived self-efficacy can be studied in relation to various language skills and their development.

### **Self-efficacy and Reading Comprehension Ability**

Although self-efficacy studies on language learning are limited, existing studies have indicated a positive relationship between key motivational variables like self-efficacy and L2 achievement. Wu (2006) asserts that students' self-beliefs of their capability to learn a second language are significant determinants of their learning behaviors, endeavor, and persistence.



As a result, these efficacy beliefs affect language achievement and course success. Language learners are believed to have different competence-related judgments based on their prior learning experiences, and these judgments influence how they utilize a range of learning strategies during the learning process (Oxford, 1990).

### **Critical Thinking**

One of the most influential tools anyone can always have is the ability to think. Critical thinking skills are strategies people use to consider and evaluate new ideas. Renandya (2002, p. 273) postulates that reading receives a special focus in many second or foreign language teaching situations.

Nowadays critical thinking is one of the major concepts under consideration in education and it has also received a significant position in second and foreign language learning (Atkinson, 1997). Several researches have been conducted to investigate the effects of critical thinking on different aspects of second and foreign language learning. Some of them related to this study have been mentioned here.

### **Critical Thinking and Reading Comprehension Ability**

The relationship between critical thinking and reading is well established in the literature. For example, Norris and Phillips (1987) point out that reading is more than just saying what is on the page; it is thinking. Moreover, Beck (1989) asserts “there is no reading without reasoning” (p. 677). Also, among those researchers and theoreticians who recognize that reading involves thinking is Ruggiero (1984). He indicates that reading is reasoning. Yu-hui et al. (2010) stated clearly that reading is a thinking process to construct meaning.

In Gomez's (2010) study, the impact of structured reading lessons on the development of critical thinking skills in college students learning English as a foreign language was examined: the findings showed that students, who received structured reading lessons, had better performance on California Critical Thinking Skills Test (CCTST) in comparison to those who received traditional reading instruction

The findings indicating that levels of critical thinking had significant effect on the learners' reading ability are consistent with the findings of the previous study (Fahim et al., 2010) that indicated a significant relationship between critical thinking levels of learners and their scores on the reading section of Paper-Based TOEFL.

## **METHOD**

The present chapter deals with explaining participants of the study, instruments used for collecting the data, procedures, data analysis, and the design of the study.

### **Participants**

To accomplish the purpose of this study, 300 students (both males and females) majoring in English Translation and English Literature were randomly selected from among Bandar Abbas Azad University TEFL university students to shape the participants of the study. These participants were mostly juniors of TEFL program and had passed their reading comprehension courses one, two, and three. Therefore they were assumed to be familiar with reading comprehension strategies into some extent. The participants were divided into three groups of learners entitled as elementary, intermediate, and advanced groups with about 100 students in each via employing the NELSON proficiency test.

## **Instruments**

A proficiency test of NELSON which was first piloted was used to place the students into the three proficiency levels. The Nelson-Denny test has been in continuous use ever since, and has been revised and updated several times in the intervening decades, the last revision being in 1993. There are two parts to the exam: Vocabulary, and Reading Comprehension. The Vocabulary section has 80 multiple choice questions, and test takers will choose from five possible answers on each one. For the Reading Comprehension section, the test taker will read five brief passages taken from high school and college textbooks, and then answer 38 multiple choice questions testing both direct comprehension skills, and the ability to make inferences based on what they've read. The entire test takes about 45 minutes, and it is usually given in a group setting. The total score is made by adding all the results together (the total score of the test equals to 50).

In addition to the NELSON test of language proficiency, the participants received a copy of validated self-efficacy scale for reading comprehension questionnaire (Ghonsooly & Elahi, 2010). The scale includes eleven items which are rated based on Likert scale from strongly agree to strongly disagree. In addition, a standard copy of Cornell Critical Thinking Test Series available in Persian was used. The test includes 52 items in 7 sections and should be answered in 50 minutes. The aim of the test is checking the critical thinking and cognitive ability of the learners. The reliability of the test has been frequently checked in different situations and the reported reliabilities have been between .61 and .80 (Houman, 2005). The other instrument used was a piloted and validated researcher made reading comprehension test comprising thirty items which was developed by the researcher based on the reading course books of TEFL program in the Iranian universities offered by SAMT publications. The data collected were put into SPSS version 21 and the results were reported.

## **Procedure**

A proficiency test of NELSON was administered to 300 learners and based on the results (the test's mean and standard deviation) plus and minus half a SD were considered and three groups were selected and randomly assigned to three groups of advanced, intermediate, and elementary groups with about 100 learners in each. Then the validated test of reading comprehension comprising thirty items was administered to the learners in the three groups. The same day the participants received the Cornell Critical Thinking questionnaire, and the self-efficacy scale for reading comprehension developed by Ghonsooly and Elahi (2010).

## **Design**

This study required an Ex post Facto Design as based on Hatch and Lazaraton (1991), there was no treatment involved in the study and the study was not concerned with any leaning process as a significant factor. No control was implemented over the effect of critical thinking and self-efficacy as independent variables of the study on the reading comprehension ability as the dependent variable of the study. The researcher did not manipulate the variables of the study to cause changes.

## **DATA ANALYSIS**

### **NELSON Language Proficiency Test**

The NELSON test was administered to 300 subjects in order to divide them into three equal groups (each 100 subjects) of elementary, intermediate and advanced. A one-way ANOVA was run to prove that the subjects were correctly placed at three proficiency levels. As

displayed in Table 1 there were significant differences between the three groups' means on the NELSON test ( $F(2, 297) = 1283.68, P < .05, \omega^2 = .89$ , enjoying a large effect size).

**Table 1. One-Way ANOVA, NELSON by Proficiency Levels**

	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Between Groups	17447.287	2	8723.643	1283.683	.000
Within Groups	2018.350	297	6.796		
Total	19465.637	299			

Table 2 displays the mean scores for the elementary ( $M = 23.80$ ), intermediate ( $M = 33.19$ ) and advanced ( $M = 42.48$ ) groups.

**Table 2. Descriptive Statistics, NELSON by Proficiency Levels**

	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Std. Error</i>	<i>95% Confidence Interval for Mean</i>	
					<i>Lower Bound</i>	<i>Upper Bound</i>
Elementary	100	23.80	2.913	.291	23.22	24.38
Intermediate	100	33.19	2.304	.230	32.73	33.65
Advanced	100	42.48	2.568	.257	41.97	42.99
Total	300	33.16	8.069	.466	32.24	34.07

The results of post-hoc Scheffe's tests (Table 4.3) indicated that there were significant differences between;

- 1- advanced ( $M = 42.18$ ) and elementary ( $M=23.80$ ) groups ( $MD = 18.68, P < .05$ )
- 2- advanced ( $M = 42.48$ ) and intermediate ( $M=33.19$ ) groups ( $MD = 9.29, P < .05$ )
- 3- intermediate ( $M = 33.19$ ) and elementary ( $M= 23.80$ ) groups ( $MD = 9.39, P < .05$ )

**Table 3. Multiple Comparisons**

<i>(I) Group</i>	<i>(J) Group</i>	<i>Mean Difference (I-J)</i>	<i>Std. Error</i>	<i>Sig.</i>	<i>95% Confidence Interval</i>	
					<i>Lower Bound</i>	<i>Upper Bound</i>
Intermediate	Elementary	9.390*	.369	.000	8.48	10.30
	Elementary	18.680*	.369	.000	17.77	19.59
	Intermediate	9.290*	.369	.000	8.38	10.20

\*. The mean difference is significant at the 0.05 level.



It should be noted that the groups enjoyed homogenous variances on the NELSON test (Levene's  $F = 1.83$ ,  $P > .05$ ) (Table 4).

**Table 4. Test of Homogeneity of Variances**

<i>Levene Statistic</i>	<i>df1</i>	<i>df2</i>	<i>Sig.</i>
1.834	2	297	.162

## Findings

This study investigates the relationships among Iranian EFL learners' critical thinking, reading comprehension and self-efficacy at three proficiency levels. The research questions raised in this study were analyzed through the Pearson correlation which assumes the normality of data and linearity of relationships between variables. Leech et al, (2005) and Field (2013) believe that when sample sizes are large ( $> 200$ ) the absolute values of skewness and kurtosis should be reported. As displayed in Table 5 these values were lower than  $+ - 1$ .

**Table 5. Descriptive Statistics; Tests of Normality of Data**

	<i>N</i>	<i>Skewness</i>		<i>Kurtosis</i>	
	<i>Statistic</i>	<i>Statistic</i>	<i>Std. Error</i>	<i>Statistic</i>	<i>Std. Error</i>
NELSON	300	-.021	.141	-.169	.281
CT	300	.062	.141	-.833	.281
Self-Efficacy	300	-.213	.141	-.583	.281
RC	300	-.005	.141	-.558	.281

## Research Question 1

*Is there any significant relationship between critical thinking and Iranian EFL learners' reading comprehension ability with different proficiency levels?*

The Pearson correlation coefficients were calculated to investigate any significant relationship between critical thinking and Iranian EFL learners' reading comprehension ability with different proficiency levels. The results (Table 6) indicated that; there were significant relationships between critical thinking and reading comprehension at elementary ( $R(98) = .52$ ,  $P < .05$ ), intermediate ( $R(98) = .58$ ,  $P < .05$ ) and advanced ( $R(98) = .47$ ,  $P < .05$ ). Based on these results it was claimed that the first null-hypothesis was rejected. There were significant relationships between critical thinking and reading comprehension at elementary, intermediate and advanced levels. It should be noted that the Pearson values enjoyed large effect sizes.

**Table 6. Pearson Correlations between Critical Thinking and Reading Comprehension by Proficiency Levels**

<i>Group</i>		<i>Reading Comprehension</i>		
		<i>Elementary</i>	<i>Intermediate</i>	<i>Advanced</i>
Pearson Correlation		.528**	.580**	.476**
Critical Thinking	Sig. (2-tailed)	.000	.000	.000
N		100	100	100

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

Based on the scatter plots displayed below it can be claimed that the relationships between critical thinking and reading comprehension were linear at three proficiency levels. The spread of dots mainly fell on the diagonal without any apparent rise-and-fall of scores.

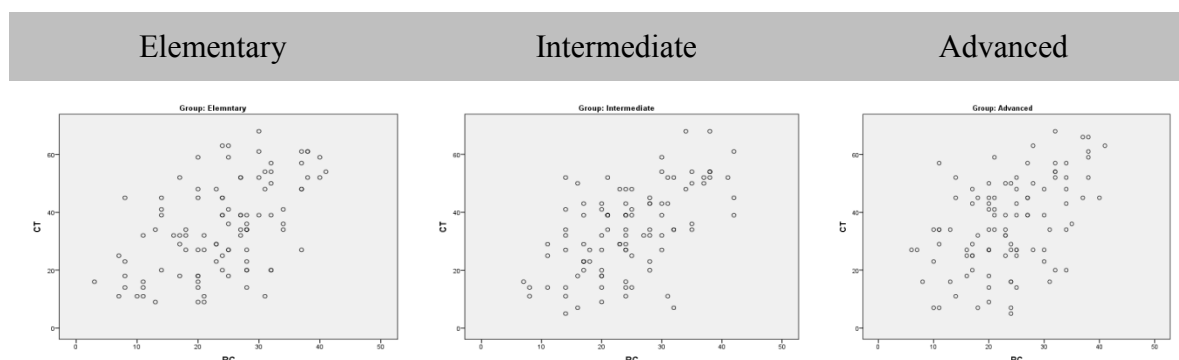


Figure 1: Scatter Plots, Relationships between Reading Comprehension and Critical Thinking by Proficiency Level

## Research Question 2

*Is there any significant relationship between self-efficacy and Iranian EFL learners' reading comprehension ability with different proficiency levels?*

The results of the Pearson correlation coefficients (Table 7) were calculated to investigate any significant relationship between self-efficacy and Iranian EFL learners' reading comprehension ability with different proficiency levels. The results indicated that there were significant relationships between self-efficacy and reading comprehension at elementary ( $R(98) = .55, P < .05$ ), intermediate ( $R(98) = .69, P < .05$ ) and advanced ( $R(98) = .58, P < .05$ ). Based on these results it can be claimed that the second null-hypothesis was rejected. There were significant relationships between self-efficacy and reading comprehension at elementary, intermediate and advanced levels. It should be noted that the Pearson values enjoyed large effect sizes.

Table 7. Pearson Correlations between Self-Efficacy and Reading Comprehension by Proficiency Levels

Group		Reading Comprehension		
		Elementary	Intermediate	Advanced
Pearson Correlation		.556**	.693**	.581**
Self-Efficacy	Sig. (2-tailed)	.000	.000	.000
N		100	100	100

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

Based on the scatter plots displayed below it can be claimed that the relationships between critical thinking and reading comprehension were linear at three proficiency levels. The spread of dots mainly fell on the diagonal without any apparent rise-and-fall of scores.

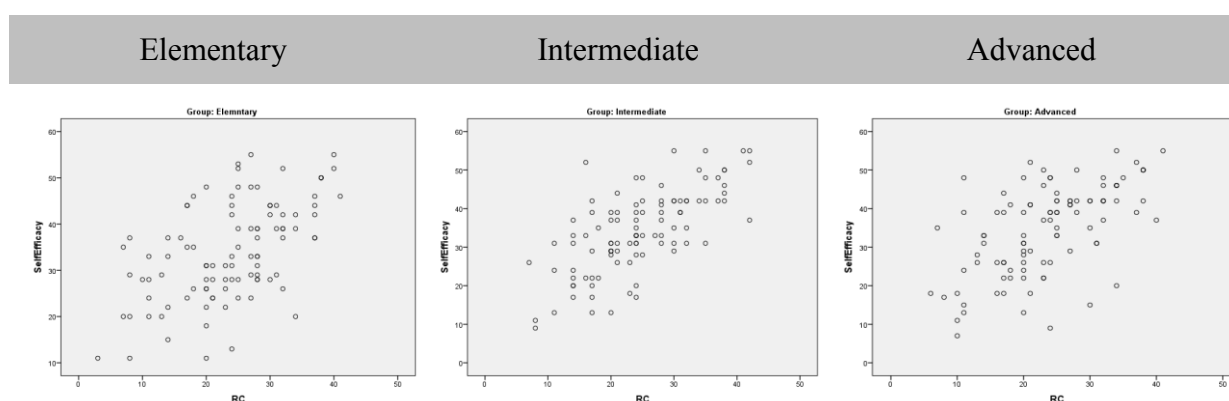


Figure 2: Scatter Plots, Relationships between Reading Comprehension and Self-Efficacy by Proficiency Level

### Research Question 3

*Is there any significant relationship between self-efficacy and critical thinking of Iranian EFL learners with different proficiency levels?*

The Pearson correlation coefficients were calculated to investigate any significant relationship between critical thinking and Iranian EFL learners' self-efficacy ability with different proficiency levels.

The results (Table 8) indicated that there were significant relationships between critical thinking and self-efficacy at elementary ( $R(98) = .55, P < .05$ ), intermediate ( $R(98) = .62, P < .05$ ) and advanced ( $R(98) = .56, P < .05$ ). Based on these results it can be claimed that the third null-hypothesis was rejected. There were significant relationships between critical thinking and self-efficacy at elementary, intermediate and advanced levels. It should be noted that the Pearson values enjoyed large effect sizes.

**Table 8. Pearson Correlations between Critical Thinking and self-efficacy by Proficiency Levels**

Group		Self-Efficacy		
		Elementary	Intermediate	Advanced
Critical Thinking	Pearson Correlation	.553**	.628**	.564**
	Sig. (2-tailed)	.000	.000	.000
	N	100	100	100

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

Based on the scatter plots displayed below it can be claimed that the relationships between critical thinking and reading comprehension were linear at three proficiency levels. The spread of dots mainly fell on the diagonal without any apparent rise-and-fall of scores.

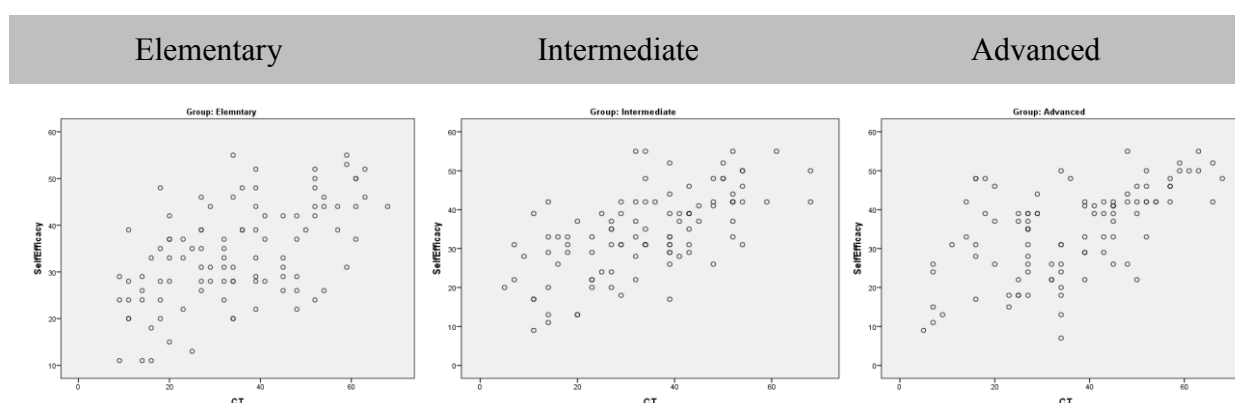


Figure 3: Scatter Plots, Relationships between Self-Efficacy and Critical Thinking by Proficiency Level

### KR-21 Reliability Indices

Table 9 displays the KR-21 reliability indices for the NELSON (.85), critical thinking (.89), self-efficacy (.82) and reading comprehension (.84).

Table 9. KR-21 Reliability Indices

	<i>N</i>	<i>Mean</i>	<i>Variance</i>	<i>KR-21</i>
NELSON	300	33.16	65.102	0.85
Critical Thinking	300	34.96	234.453	0.89
Self-Efficacy	300	34.28	118.917	0.82
Reading Comprehension	300	23.95	71.044	0.84

### DISCUSSION AND CONCLUSION

The study aimed at investigating the relationship among critical thinking, self efficacy, and Iranian EFL learners' reading comprehension ability with different proficiency levels. The results of the data analysis revealed that firstly, there were significant relationships between critical thinking and reading comprehension at elementary, intermediate and advanced levels. Secondly, there were significant relationships between self-efficacy and reading comprehension at elementary, intermediate and advanced levels, and thirdly, there were significant relationships between critical thinking and self-efficacy at elementary, intermediate and advanced levels.

Based on the literature on the relationship between self efficacy, critical thinking, and reading comprehension ability of the EFL and ESL learners (Ahmadi Gilani, et al, 2012; Birjandi & Hadidi Tamjid, 2010; Cohen, 2003; Coronado-Aliegro's, 2006; Ellis, 1994; Eslami & Fatahi, 2008; Fahim & Kamali, 2011; Fahim, et al, 2010; Ghonsooly & Elahi, 2010; Ghonsooly & Ghanizadeh, 2011; Hosseini Fatemi & Vahidnia, 2013; Mahapatra, et al, 2010; Naseri and Zaferanieh, 2012; Nevil, 2008; Oxford & Ehrman, 1995; Usher & Pajares, 2008), one can conclude that learning styles such as self efficacy belief, learning strategies such as critical thinking, and language skills such as second language reading comprehension are in close connection and positive correlation.

The present study demonstrated that there is a significant positive correlation between reading comprehension, self efficacy belief, and critical thinking of Iranian EFL learners. EFL learners need to know native like vocabularies, grammatical points, and preferences, dictions, and the like for a native like performance and a large bulk of such information could be found in reading materials. Therefore, according to the results of the present study, some implications for teaching and learning can be suggested.

The present findings could be employed by second language teachers to make the learners more aware of what they are dealing with. The assumption is being aware of learning styles facilitates learning (Nevil,2008), and learners must pay attention to the features of input they are exposed to and notice the gap between the target like forms in it and the current state of their linguistic knowledge. This could be done through a kind of cognitive comparison which has been seen as one of the crucial processes in language acquisition (Rodgers, 2009).

Ehrman and Oxford (1995), within the framework of SLA pay attention to the role learning styles play in L2 development. Although do not merely focus on self efficacy and critical thinking, they emphasize the significant relationship between such factors and second language development. English teachers and learners could employ the present findings and focus on the mismatch between input they receive and their current learning. This way the classroom interactions could be enriched and would help subsequent L2 development of the learners. Materials developers in the ELT domain also could employ the findings of the present study and those of the similar ones to present tasks in which learners' awareness toward learning is enhanced. Such tasks may help the learners move towards self-correction, autonomy, and meaningful learning.

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