

An Investigation of the Impact of Critical Thinking Skills Instruction on the Iraqi EFL Learners' Reading Comprehension Proficiency

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This study examines the effectiveness of teaching critical thinking skills on the reading comprehension proficiency of first year EFL university students in Iraq. In this regard, 100 B.A. freshmen students from the Iraqi University of Thi-Qar were selected as the participants of this study. They were divided into two groups: control and experimental. While the students in the control group were being trained through the traditional method of teaching, the students in the experimental group were being trained in critical thinking skills. Pre-tests and post-tests were used as the instruments of this study. Data were analysed through an Independent Sample T-Test, using SPSS software. The results revealed that there was a significant relationship between critical thinking skill instruction and the Iraqi EFL university students' reading comprehension proficiency and hence, critical thinking skill positively affects students reading comprehension, leading to its development.

Key words: *Critical thinking, critical thinking skills, reading comprehension, EFL Learners.*

Introduction

In the world today the importance of critical thinking has been recognized in every dimension of human life and more particularly in the realm of education, where critical thinking instruction can prepare learners for using such skills in the private, professional, and all general domains of their lives. Accordingly, in recent years, we have born witness to a change in the educational policy of many different countries, shifting their emphasis from knowledge to higher order thinking skills (Fung, Townsend, Parr, 2004), since many scholars believe that the

main goal of education must be cultivating and training thoughtful people with inquiring minds (2004).

Many sources of literature have provided definitions for the term critical thinking. For instance, Whitten, D. (2011) described Critical thinking as a cognitive engine which drives the decision-making and problem-solving processes, and has embodied the cognitive skills including: inference, evaluation, analysis and reasoning. Similarly, Whitten, D. (2011) defined critical thinking as the use of cognitive strategies or abilities. According to him, critical thinking skills include making decisions, formulating inferences, solving problems, and calculating likelihoods. Critical thinking aims to enhance one's thinking ability, therefore it has been called by Ruggiero (2012) "the art of thinking about thinking". It is widely believed that in the age of information, revolution, and technology, critical thinking is of great help to the academic development of learners (Yousefi & Mohammadi, 2016; Kealey, Holland & Watson, 2005; Yeh, 2004; Oliver & Utermohlen, 1995). Critical thinking skills' instruction and practice provide learners with the opportunity to take responsibility for their own learning. Normally, students with critical thinking ability attend the learning process more passionately, ask more challenging questions, and have a more thoughtful approach and effective attitude towards the course of study (Murawski, 2014). Therefore, as D'Angelo (1971) asserted, teachers are supposed to foster critical thinking skills in their students according to the related subjects in the curriculum, in order to enhance their critical thinking ability. Regarding the instruction of critical thinking in class, the teacher's responsibility is to create learning environments that enhance learners' critical thinking skills not only in the classroom but also outside of the educational setting.

Watson and Glaser (1980), defined critical thinking skills as an embodiment of five subskills: Inference, Deduction, Evaluation of Arguments, Recognizing Unstated Assumptions, and Interpretation. In their definition, inference skill refers to the skill of discerning detailed information from general information and facts through the use of brain power (Watson, 1980, p. 61). Skill of deduction refers to recognizing and obtaining the necessary evidence for an argument from observable results, as well as the assumptions and hypotheses used to reach a final conclusion (Watson, 1980, p. 32). Evaluation of Arguments refers to the evaluation of the degrees of validity and accuracy of beliefs, experiences, sentences, provided content, judgments, and information, as well as their relationship with inferences and conclusions (Watson, 1980, p. 89). Recognizing Unstated Assumptions stands for both the ability to choose pre-assumptions that are used to solve a problem and one's thoughts on a controversial issue (Watson, 1980, p. 44). And finally, Interpretation refers to understanding and expressing meanings through classification and highlighting a range of experiences, plans, beliefs, and judgments (Watson, 1980, p.72).



Among the different fields in the curriculum area, reading is the one which provides several opportunities for the learners to enhance their critical thinking ability (D'Angelo, 1971). Due to this fact, the field of reading comprehension has been selected to be included in this study as a field in which the effectiveness of critical thinking training on enhancing student learning will be explored. According to D'Angelo (1971), and based on research in the domain of reading, there is a difference between literal and critical comprehension. While the literal comprehension of the text is an unnecessary interpretation of surface meaning, critical comprehension is a deeper understanding of the text, and is therefore more valuable. Esmaili and Motaghizadeh (2016) defined Reading Comprehension as one of the fundamental and most important skills for understanding the ideas and meanings embedded in a given text. Hence, paying attention to this skill and investigating its effectiveness in the different domains of language learning is important. In this regard, teaching critical thinking skills to students through reading comprehension, according to some researchers, begets critical readers who are characterized by their ability to easily apply the most suitable reading skill for the situation, regardless of its difficulty (Thorndike, 1917; Rivers, 2001; Wolters, Pintrich, & Karabenick, 2005). This emphasizes the importance of the present study, which investigates a similar issue in the context of Iraq, which has still stuck to the traditional methods of teaching, especially at the academic level. If critical thinking really is effective on students' reading comprehension, it will lead to a promising future in the education system of Iraq.

A huge number of studies have been independently conducted on each of the concepts of critical thinking and reading comprehension, and a few of these studies have investigated the relationship between these two variables; however, no similar study has been found in the context of Iraq to explore this relationship. This highlights the importance of the present study.

Some of the studies were conducted on critical thinking skills in the teaching and learning environments, such as Paul and Elder (2002), who studied critical thinking skills and applied it to the process of teaching and learning. According to the results of this study, critical thinkers as those who (a) try to rebuild the writer's thoughts in their own mind; (b) try to get into the author's viewpoint; (c) consider the text they are reading as the verbal representation of its author's thoughts; (d) consider listening, writing, reading, and speaking as the different modes of skilful thinking. Based on his findings, Paul and Elder (2002) also suggested that the main purpose of critical thinkers is to identify the clear instructions given by the thinking process as the key to instruction of behaviour. Gelder (2005) explored the teaching of critical thinking skills from the perspective of cognitive science. In his study, he came to some key conclusions on the teaching of critical thinking, which were as follows: students are likely to preserve their beliefs; it is hard to become an expert in critical thinking; transferring skills requires practice; argument mapping or diagramming arguments develops the critical thinking ability; students need to hold some theoretical knowledge; and practice in critical thinking ability helps to promote this skill.

Some of the studies on the relationship between critical thinking ability and reading comprehension include Yousefi and Mohammadi (2016), who investigated the role of critical thinking ability in the reading comprehension skills of EFL learners, and they found that there was a significant relationship between the learners' critical thinking and their reading comprehension skills. Furthermore, they found that English language proficiency played no role in the relationship between these two skills. Similarly, Chimeh et al. (2017) explored the impact of critical thinking skills on English language learners' reading proficiency, and they found that critical thinking skills positively enhanced the reading comprehension of EFL learners. It can therefore be deduced that critical thinking plays an important role in students' reading proficiency. Moreover, VanTassel-Baska et al. (2009), conducted a study on the enhancement of critical thinking and reading comprehension skills, and they found that implementing high-level curriculum for learners helps to elevate their critical thinking level and enhance their reading comprehension skills. Esmaili and Motaghizadeh (2016) also examined the relationship between critical thinking skills and reading comprehension. They also found that critical thinking skills have positive effects on students' reading proficiency and increase their comprehension of written texts.

Aims of the Study and Research Question

The development of students' critical thinking and intellectual skills has always been an important issue in education, as Khalili et al. (2004) pointed out, and education specialists have expressed their deep concern about students' inability to think critically. Hence, the development of critical thinking skills has turned into one of the main goals of teachers (Elder, 2004) in the education system of most countries. However, in Iraq, and especially in the academic domain, where learners face many general and professional English reading texts, university professors and instructors still use traditional approaches to teaching (i.e. grammar-translation method). Therefore, there is a need to investigate the effectiveness of teaching critical thinking skills in universities of Iraq. Due to the importance of this issue, and due to the benefits that reading comprehension provides and the great role that reading comprehension plays in the academic education of university students, the aims of this study mainly focused on the role of critical thinking instruction on the reading comprehension proficiency of university students in the country of Iraq.

In accordance with its aims, this study addresses the following research question:

Is there any relationship between critical thinking skills instruction and the Iraqi EFL university students' reading comprehension performance?

Methodology

Participants

100 first-year university students from the University of Thi-Qar in Iraq who are studying B.A. in English Language field served as the participants for this study. They were divided into two groups, control and experimental, with each group comprising 50 students.

Instruments

A pre-test and a post-test on reading comprehension were used as the research tools in this study. The test used for pre-test was one of TOFLE Reading Comprehension Tests, which was adapted for use in this study in order to ensure the homogeneity of the students. For the post-test, a researcher-made reading comprehension test was developed to measure the impact of critical thinking skill on the students' reading comprehension performance. It must be noted that the validity and reliability of both the pre-test and the post-test were approved ($r=0.85$ for pre-test, and $r=0.86$ for post-test).

Design and Procedure

This study was conducted in a quasi-experimental, non-randomization control group design. To conduct this study, a pre-test was administered to all freshmen students in the English language field at the University of Thi-Qar to ensure the homogeneity of the participants. Then the participants, who were homogenized according to their level of reading comprehension, were divided evenly in to control and experimental groups. During the research time, the participants in the experimental group undertook a program of teaching with critical thinking skills instruction, while the participants in the control group received the conventional teaching method (i.e. grammar-translation method). After three months of instruction, a post-test was administered to the students to measure their reading comprehension proficiency after the treatment. Finally, the data were analysed and interpreted, as can be seen in the following section.

Data Analysis and Results

To analyse the data collected from the pre-test and post-test of the two groups (control and experimental), and to answer the research question of this study, SPSS software was used.

In response to the research question "Is there any relationship between critical thinking skill instruction and the Iraqi EFL university students' reading comprehension proficiency?" a comparison of mean scores and a T-Test were used in this study. The tables below show the results obtained from the comparison of the reading comprehension performance of Iraqi EFL

university students in the pre-test and post-test of the two groups of control and experimental, in terms of critical thinking skill. It must be noted that the score for each test was considered out of 20.

Table 1: The Comparison of the Iraqi university students' reading comprehension performance in Control and Experimental Groups in pre-test

	N	Mean	Std. Deviation	Std. Error Mean
Pre-test/control group	50	16.0200	1.35511	.19164
Pre-test/ experimental group	50	16.0100	1.34578	.19032

Table 2: The comparison of the t-value and mean differences of the students' pre-test performance in the two groups of control and experimental

Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pre-test/control group	83.594	49	.000	16.02000	15.6349	16.4051
Pre-test/ experimental group	84.121	49	.000	16.01000	15.6275	16.3925

As table 1 and 2 indicate, there is no significant difference between the mean scores and t-values of the two groups of control and experimental in the pre-test, which indicates that both groups were at the same level of reading comprehension proficiency at the beginning of the study, and hence they were homogenized.

Table 3: The Comparison of the Iraqi university students' reading comprehension performance in Control and Experimental Groups in post-test

	N	Mean	Std. Deviation	Std. Error Mean
Post-test/ control group	50	16.6100	1.23011	.17396
Post-test/ experimental group	50	18.2600	1.17907	.16675

Table 4: The comparison of the t-value and mean differences of the students' post-test performance in the two groups of control and experimental, considering critical thinking skill

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Post-test/ control group	95.480	49	.000	16.61000	16.2604	16.9596
Post-test/ experimental group	109.508	49	.000	18.26000	17.9249	18.5951

In the post-test, as tables 3 and 4 indicate, there is a significant difference between the mean scores and t-values of the students' performance in the two groups of control and experimental, which indicates the significant influence of critical thinking skills on Iraqi EFL first year university students' reading comprehension.

Based on the above statistical analysis, it can be seen that there is a positive relationship between the critical thinking skill instruction and the Iraqi EFL university students' reading comprehension proficiency, and therefore, critical thinking skill helps university students to enhance their reading comprehension.

Discussion and Conclusion

This study aimed to explore the relationship between critical thinking skills instruction and first-year Iraqi university students' reading comprehension proficiency. From the findings of this study, it can be concluded that there is a significant relationship between critical thinking skill and EFL learners' reading comprehension, and that critical thinking positively affects students' reading comprehension proficiency at an academic level. Hence, it can be argued that teaching critical thinking skill in reading comprehension class helps learners to enhance their reading comprehension proficiency, which emphasises the importance of paying attention to the instruction of this skill in the classroom.

Accordingly, the results of this study are consistent with the results of similar studies by Yousefi and Mohammadi (2016), Chimeh et al.(2017), VanTassel-Baska et al. (2009), and Esmaili and Motaghizadeh (2016), which also suggested that critical thinking skills have a positive effect on students' reading comprehension skills.



The findings of this study have implications for all teachers, university professors, instructors, policy makers, and all members of the education system, particularly in the country of Iraq.

It is suggested that further research should investigate variables such as sex and educational level of learners, and should further scrutinize the different subskills of critical thinking that has been theorised by other scholars and researchers, such as Watson and Glaser (1980). Moreover, teachers' beliefs on critical thinking skill instruction and their practices in the classroom are also suggested topics for further exploration in different educational contexts in the future.



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