SciencePG
Science Publishing Group

Methodology Article

Critical Thinking Magnificence in Teaching Reading Comprehension

Mustafa Mohamed Ahmed Younis

Department of Private Education, Alkhaleej for Training and Education, Riyadh, Saudi Arabia

Email address:
mustafaanber3@hotmail.com

Abstract: This study tries to investigate the impact of using critical thinking in teaching reading comprehension on the secondary students' ability to read critically about every textbook issue in particular and further to find out about life needs in general. The study focuses on achieving five goals among which: to recognize the significant difference of knowledge between students who are taught critically and those who aren't. The method to collect data involved two tools. A questionnaire distributed to secondary English teachers (n=70) all over the tripartite capital of Sudan among them were some English native speakers. The second tool was pretest & posttest which carried out to the 3rd grade secondary students (n=30). During this period, interventions were put into place to teach participants how to evaluate, analyze, and synthesize texts instead of keeping rote learning. Statistical systems of SPSS and T-test were used in analyzing data. On the base of analysis, findings indicated that the use of critical thinking in teaching would highly improve students' abilities to think within a discipline and moreover, provide a powerful incentive to look more closely at possible consequences of integrating this model more widely into educational curricula. Due to findings it was recommended that ministry of education should guide schools and institutes to adopt the use of critical thinking in teaching school materials chiefly in high levels.

Keywords: Critical Thinking, Critical Reading, Transfer of Learning, Active Learning

1. Introduction

It is of unanimity that the students' need for reading comprehension to learn, is just like the human's need for water to live. So, these papers aim to address certain study about teaching reading comprehension and how well could it be more profitable if conducted through Critical Thinking. The study sought to figure out a reason behind why does a group of students who receive explicit teaching in analyzing and interpreting texts according to critical thinking model perform better on a test requires them to analyze and synthesize a set of primary sources than a group of similar students who do not receive such specifications? So, after a precise study on both reading comprehension and critical thinking appeared that the latter is one of the most progressive techniques for teaching reading comprehension successfully [1]. Actually, since reading comprehension is defined as the level of understanding a text focusing on the ability to recognize

words quickly and on the other hand critical thinking is defined as a process of actively analyzing, evaluating, and synthesizing information gathered from a variety of sources, then nothing is more relevant as an approach for teaching such reading comprehension than what is worldly renowned as Critical Thinking. Anyhow, the topic of teaching students to think while reading (critical reading) should always be taken in account by instructors [2].

2. The Background of the Study

The reference to using Critical Thinking in teaching all instructional material domains subjected to many studies since the time of Socrates. With this regard, some researchers stress that, since it is embedded in social practice and inculcated through the process of socialization from an early age, then its instinct nature as a part of culture means that it cannot be acquired through instruction [3]. Others dispute the cultural connection as the only basis for explanation emphasizing its

universality and therefore it's teachable [4]. So this study investigates the significance of using critical thinking skills in teaching reading comprehension for Sudanese secondary school students.

In general, advanced methods of teaching Critical Thinking Skills have been implemented in teaching certain subjects, namely mathematics and science [5]. So, most curriculum producers, however, have somewhat ignored the teaching of Critical Thinking Skills in the context of English Language. Although several objectives included in the curriculum require development of Critical Thinking Skills to avoid regurgitation of facts but little attention has been paid.

The teaching objectives of the English curriculum should include methods to develop students' ability so as to use the language in a variety of ways, such as negotiating, questioning, hypothesizing, criticizing, creativity and evaluation and to process information from a variety of sources and to encourage them to develop a life-long interest in learning [6]. Then the question is: How could students be encouraged to become lifelong learners, particularly in English? Therefore, this study considers implementing critical thinking skills in reading. Improving students' reading skills means enabling them to present and defend their views, synthesize information from various sources and encourage critical and creative thinking. The teaching of critical thinking skills in reading may be a method which could not only improve students' reading and thinking abilities but also encourage the formation of lifelong learning habits [7]. It is believed that part of foreign language students' success in higher education lies in their ability to read and engage critically and intellectually with the material they encounter.

3. Proposal

3.1. Statement of the Problem

Many students and teachers alike have constantly lamented that the format of problems in the classroom bears little resemblance to the way the problems look in real life. In fact, one of the most important practical thinking skills one can acquire from critical reading is the ability to identify a problem. (See figure 1 & figure 2 below)
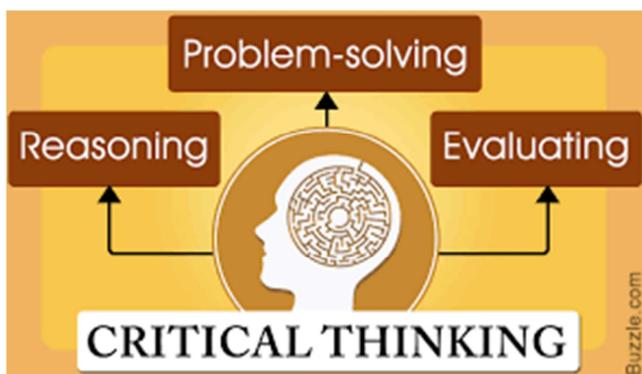

*Figure 1.* *Perspective of reasoning & evaluating a problem.*
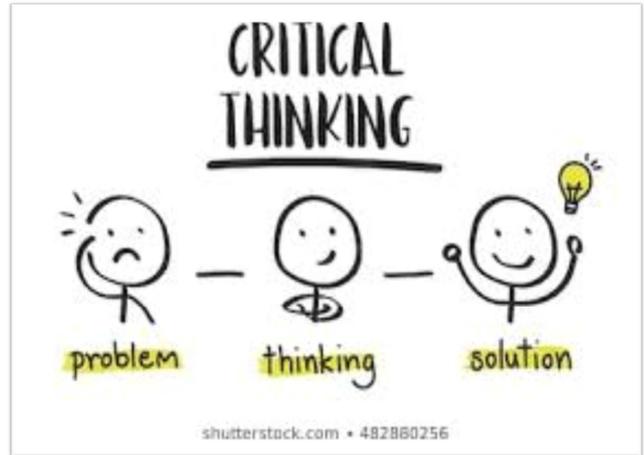
Figure 2. *Inception of Critical thinking to identify a problem.*

The demands of employment in a global economy, the survival of a democratic way of life and personal decision making in a complex and rapidly changing society, require people who can reason well and make good judgments. Sudan has a pluralistic society which needs citizens who can fair-mindedly evaluate the relevance of different perspective on complex problems. For students, workers, and citizens, critical thinking is an essential tool for performing successfully in such a complex, rapidly changing world. Teaching through critical thinking manipulate such obstacles by enabling one to examine the factors so as to guess the possible outcomes, evaluate those outcomes and weigh them relatively to one another and try to maximize positive outcomes and minimize negative ones.

3.2. Objectives of the Study

To shed light on the significance of using critical thinking in teaching reading comprehension, this study tries to:

1. Assess empirically the effectiveness of using critical thinking in teaching reading comprehension on the students' abilities to read critically about every textbook issue and on their dispositions toward critical thinking in general.
2. Develop abilities needed to read critically to find out about life needs in general by interpreting and integrating information from different sources and constructing and arguing a case to explain evidence as accepted.
3. Distinguish the significant difference between students who receive critical reading in teaching texts, and those who do not.
4. Cultivate a sense of competition among the students who are taught critical thinking to do their best while reading critically.
5. Reinforce the relationship between the learners and the foreign languages by motivating the learners to do their best to learn other languages.

3.3. Questions of the Study

Based on the statement of the problem, this study sought to answer the following questions.

1. Why does a group of students who receive explicit teaching in analyzing and interpreting texts according to critical thinking model perform better on a test requires them to analyze and synthesize a set of primary sources than a group of similar students do not receive such specifications?
2. To what extent does the performance of students who receive training in critical reading comprehension model helps their institutions to be outstanding if compared with the non-critical thinking academies?
3. What made the use of critical thinking so highly effective in teaching reading comprehension exclusively and in all other instructional domains generally?
4. How can Critical Reading be assumed to promote learner's language to cope with life needs in general?

4. Literature Review

This unit addresses: (a) definition of critical thinking and its relationship to reading comprehension, higher order thinking or problem solving; (b) definition of reading comprehension and the best way to be taught through. (c) The transfer of learning through critical thinking abilities to reading comprehension that enables the reader to improve both his text understanding and everyday reasoning tasks.

4.1. Defining Critical Thinking

"Thinking about your thinking while you're thinking to make your thinking better" [3] is a way the author preferred to inaugurate this spot about definition of critical thinking, He has viewed critical thinking as a means of combating the influences of the prejudices, unrecognized assumptions, and irrational habits that we all bring to an issue. Generally, a review of literature in the field of critical thinking revealed a general lack of consensus on how critical thinking is best defined, on what are adequately the critical thinking skills and how they can be taught, and on determining the most appropriate framework for this teaching, meanwhile they have unanimously confessed that no brilliant education without being associated with critical thinking. As a whole, educational reformers have not even agreed on terminology. While some scholars use critical thinking and higher order thinking interchangeably [1] others use problem solving [4]. (See figure 3).
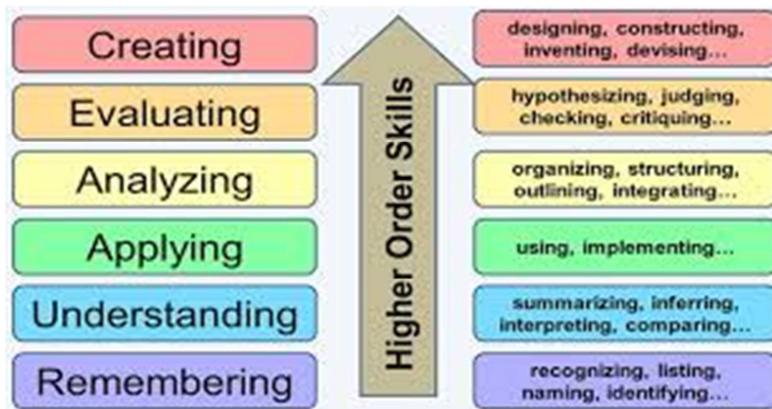

Figure 3. Critical thinking management for higher order skills.
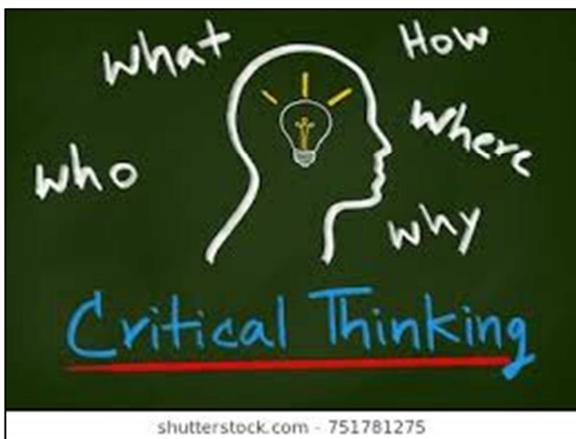
Figure 4. The power of using Wh-questions in critical thinking.

Figure 5. The model treatment with a problem by critical thinking.

Previous studies offered overlapping definitions, which here altogether form a substantive, trans-disciplinary conception of critical thinking. Critical Thinking as defined by Michael Scriven & Richard Paul in the National Council for Excellence "Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying,

analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief an action". This is to be conducted through considering of certain keys to critical thinking (Recognize Assumptions, Evaluate Arguments and Draw Conclusion) which would be more beneficial by utilizing Wh-questions. (See figure 4 & figure 5).

So a critical thinker is an awakening of the intellect. (See the table 1).

Table 1. Characteristics of Critical & Uncritical Thinker.

Critical Thinker	Uncritical Thinker
1- Are honest with themselves, acknowledging what they don't know, recognizing their limitations, and being watchful of their own errors.	1- Pretend they know more than they do, ignore their limitations, and assume their views are error-free.
2- Regard problems and controversial issues as exciting challenges.	2- See problems and controversial issues as nuisances or threats to their ego.
3- Strive for understanding, keep curiosity alive, remain patient with complexity, and are ready to invest time to overcome confusion.	3- Are impatient with complexity and thus would rather remain confused than make the effort to understand.
4- Base judgments on evidence rather than personal preferences, deferring judgment whenever evidence is insufficient. They revise judgments when new evidence reveals error.	4- Base judgments on first impressions and gut reactions. They are unconcerned about the amount or quality of evidence and cling to their views steadfastly.
5- Are interested in other people's ideas and so are willing to read and listen attentively, even when they tend to disagree with the other person.	5- Are preoccupied with themselves and their own opinions, and so are unwilling to pay attention to others' views. At the first sign of disagreement, they tend to think, "How can I refute this?"
6- Avoid extreme views (conservative or liberal) because they are seldom correct, so they, practice fair-mindedness, and seek a balance view.	6- Ignore the need for balance and give preference to views that support their established views.
7- Practice restraint, controlling their feelings rather than being controlled by them, and thinking before acting	7- Tend to follow their feelings and act impulsively.

4.2. Defining Reading Comprehension

Scholars define reading comprehension as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. Briefly, Reading comprehension is a level of understanding of writing [7]. A good reading comprehension should pass through five steps known as SQ3R or SQRRR which indicate survey, question, read, recite or recall and review successively.

4.3. Transfer of Learning

Transfer of learning refers to the extent to which a student can apply what is learned in instruction to a new situation, usually to a real-world context [8]. So to enable a student move out his education from the classroom to general life outside making maximum use of that, he must be trained about how to think but not just educated through learning. (See figure 6 & figure 7)

Figure 7. How does transfer of learning function?

Transfer of learning for critical thinking, then, means that students who have been trained in skills, standards, and dispositions of critical thinking in one domain should be better thinkers in a variety of academic subjects and in real-world contexts such as recognizing unrealistic campaign promises made by a political candidate or making well-reasoned personal decisions.

5. Methodology

5.1. Abstract

Using critical thinking in teaching reading comprehension to Sudanese secondary schools is the study conducted in
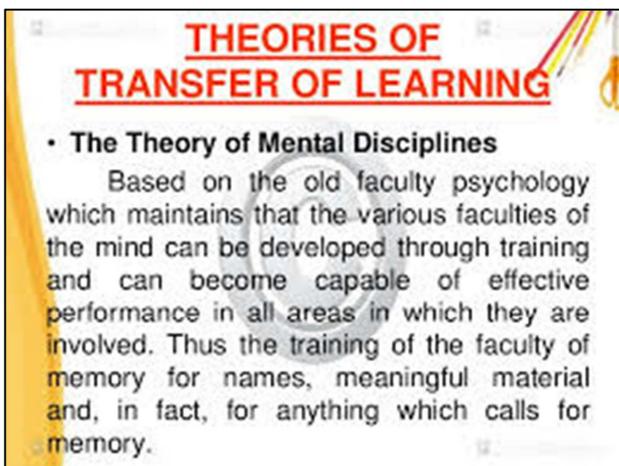
Figure 6. Concept of Mental Disciplines.

African Council for Private Education in 2017. The researcher was one of the officials who have been working in the place where the study conducted by doing pre & posttest to both controlled and experimental group of students successively. Data were collected through descriptive method using both quantitative and qualitative techniques. Quantitative data included the scores of the secondary 3rd grade students (n=30) as well as interim assessments. Qualitative data devoted to participant observations and analysis of student work. The research was conducted during the first semester of the 2017 school year. Questionnaire was used beside Pre & Posttest. The secondary students of African Council 3rd grade were initially tested at the beginning and then again at the end of a semester-long reading course on the ability to analyze and synthesize reading passages, the ability to analyze a text on an educational issue and write a response giving their dispositions toward critical reading in general.

5.2. Sample

Population of this study also included a number of some miscellaneous secondary English teachers in Khartoum State. African Foundation is a large philanthropic institute undertakes refugees, handicapped, poor and private education. This institute encompasses over eight thousand masculine and feminine students. It is regarded as one of the first three outstanding educational institutions in Sudan according to the annual reports issued at the end of each school year by Sudanese certificates.

The questionnaire was formed of sixteen ticked inquiries plus an open one to guarantee more reliability and validity to the result. As for pre & posttest, students received pretest immediately at the beginning of the first semester without viewing critical thinking in teaching reading comprehension then experienced critical thinking and finally had a posttest. (See table 2).

Table 2. Illustration of pre & posttest outcomes.

No.	Pre-test	Posttest	No.	Pre-test	Posttest
1	73	80	16	58	67
2	87	91	17	72	72
3	80	86	18	91	86
4	78	88	19	92	90
5	90	93	20	82	88
6	92	91	21	81	86
7	88	92	22	70	73
8	86	92	23	78	75
9	81	86	24	65	84
10	80	83	25	76	78
11	96	95	26	75	87
12	75	67	27	84	83
13	86	91	28	74	93
14	85	90	29	90	91
15	87	91	30	63	75

This step was done through two stages. Empirical work inside the classroom (3rd class secondary) and the questionnaire distributed to secondary English teachers.

5.3. Questionnaire Procedure

The questionnaire was designed with the aim of assessing the English secondary teachers' views about integrating critical thinking skills in TRC by taking comments, opinions and experiences of their own classes. In line with this regard, [9] argued that if there is a single, fundamental principle for developing a sound questionnaire design it is that the respondent defines what you can do: the types of questions you can reasonably ask; the types of words you can reasonably use; the concepts you can explore; the methodology you can employ [10]. (See table 3).

Table 3. Summary of the questionnaire responses.

Statement	SA	A	UD	D	SD	Total
1	51	17	1	1	0	70
2	38	27	2	2	1	70
3	38	26	3	2	1	70
4	48	18	1	3	0	70
5	31	27	11	1	0	70
6	39	23	2	2	4	70
7	30	28	7	2	3	70
8	30	21	14	4	1	70
9	29	28	8	4	1	70
10	33	21	8	7	1	70
11	29	32	7	2	0	70
12	14	33	11	9	3	70
13	23	21	13	9	4	70
14	40	22	3	3	2	70
15	31	21	11	7	0	70
16	23	17	12	10	8	70
Total	528	380	114	68	30	1120
Percent						100%

As for explaining the Statistics of the Pre & Post-test, the paired samples t-test was chosen as a suitable analytical tool to determine whether there were differences in students' performance in the pre & posttest or not. (See tables 4, 5 & 6)

Table 4. Paired Samples Statistics for pre & posttest.

		Mean	N	Std. Deviation	Std. Error Mean
	PRE	**80.5**	**30**	**9.209**	**1.681**
Pair 1	POST	84.8	30	7.932	1.448

Table 5. Paired Samples Correlations for pre &posttest.

		N	Correlation	Sig.
Pair 1	PRE & POST	30	0.757	0

Table 6. Paired Samples Test.

		Paired Differences					t	df	Sig.(2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Post	-4.3	6.098	1.113	-6.58	-2.02	-3.862	29	0.001

6. Results

With the analysis of data, the study reached the following findings:

(1) Critical thinking can improve students' abilities to think within a discipline and gives general abilities to think worldwide.

(2) Critical Thinking provides a powerful incentive to look more closely at possible consequences of integrating this model of thinking more widely into educational curricula.

(3) The empirical part of the study demonstrated that, students' achievement in learning RC was greatly increased after their teachers had remodeled the way of teaching RC while using critical thinking method [11].

(4) The current shortcoming in the learning of RC is largely attributable to the teaching of this subject by traditional methods and the lack of teacher training in more appropriate approaches.

(5) There was no interaction between the model and gender that would suggest employing a different approach to teaching critical thinking for males and females.

(6) The effectiveness of explicitly training students to use critical thinking did not vary according to age. So the study refuted the idea of that older students are more experienced and better motivated than younger students, and thus are more likely to perform at a higher level on tasks requiring critical thinking [12].

(7) Both, practical and theoretical parts of the present study have revealed that teaching of Reading Comprehension in the Sudanese secondary schools is often done by means of traditional methods. There is no involvement of methods of teaching Critical Thinking skills in the curriculum, which is believed to be a major defect in teaching /learning of RC.

(8) The model of critical thinking applied to few scattered lessons practice is not likely to be effective for most students.

(9) Classroom strategies such as small group discussions, collaborative accomplishment of tasks and students' conscious reflections on their performance, can all lead to improvements in students' results.

(10)The questionnaire elucidated that some teachers had no CRC background which aggravates the crisis of rote learning.

(11)The high level of students' achievement as a result of learning CT style lessons will be a major evidence that teachers will teach and apply CT skills to their own classes instead of traditional methods.

7. Discussion

Being always scared, fragile people who think of every single excuse to procrastinate until the last minute of what we ought to be doing, is the main reason behind the fact that many students find writing difficult [13]. So on the base of findings, many urgent implications concerning introducing critical thinking in educational domain are to be achieved to get rid of deterioration in learning as fast as possible. For example: All teachers should be educated in the philosophy, vocabulary, standards, intellectual traits, skills, and processes of critical thinking in their pre-service and in-service education [14]. Training centers to integrate critical thinking into course content should not be procrastinated until teachers are already in the classroom and possibly entrenched in didactic methods of teaching.

8. Conclusion

Overall, it is important to clear that doing this action on mind mapping as teaching method for writing skill has enriched teaching experience and has made a positive contribution to teachers' professional growth [15]. For instance, doing an investigation help develop one's skills by designing hierarchical and spatial reflection on his teaching strategies. In other words one becomes a more reflective practitioner, where he had opportunities to reflect, modify and improve his teaching strategies. Moreover, from writing and completing the literature review section, one learnt about new teaching approaches and methods from the viewpoints of different researchers and authors. Overall, one can learn and make maximum use of many valuable skills (through critical thinking) which will allow him to deal with obstacles that he/she may face in his future classroom [16].

References

[1] Halpern, (1998: pp, 449 – 455) Assessing the effectiveness of critical thinking Instruction. Aiken, 1997. Openness to Experience and Intellect Differentially Predict Creative Achievement in the Arts and Sciences. pp, 166-169.

[2] Ennis, R. H. (1992). The degree to which critical thinking is subject specific: Clarification and needed research. In S. P. Norris (Ed.), The generalizability of critical thinking (pp. 21-37). New York: Teachers College Press.

[3] Paul, (1993: p, 91) Critical Thinking: What every person needs to survive in a rapidly changing world -Santa Rosa, CA, Foundation for Critical Thinking.

[4] Facione, (1984: pp, 253-261) Toward a theory of critical thinking as a problem solving technique.

[5] Kuhn, (1999), The impact of critical thinking skills on reading comprehension -Journal of Language Teaching Kuhn, (1999: pp, 867-874).

[6] Glaser, R. (1984: pp, 93-104). Education and thinking: The role of knowledge with The use of problem thinking - American Psychologist).

[7] Duke, N. K., & Pearson, P. D. (2002). Effective practices for developing reading comprehension. In A. E. Farstrup & S. J. Samuels (Eds.), what research has to say about reading instruction (3rd ed.) (pp. 205-242). Newark, DE: International Reading Association).

[8]   Clark, & Voogel, (1985: pp, 113–125) Transfer of training principles for instructional design. Educational Communications and Technology Journal.

[9]   Yu J & Cooper H (1983). A quantitative review of research design effects on response rates to questionnaires. Journal of Marketing Research, 20, pp. 36-44 Survey Research Practice.

[10] Cooper H (1983). A quantitative revision of research design effects on regard rates to questionnaires. 1983: pp, 36-44 Survey Research Practice.

[11] Fogarty & Bellanca, (1995). Cognition in practice for the learner centered classroom. pp, 73-100.

[12] Halpern, D. F. (1998). Teaching critical thinking for transfer across domains. (1998: pp, 449-455).

[13] Milambiling, Joyce, "Going Beyond the Native Speaker in Language Teaching" How Nonnative Speakers as Teachers Fit into the Equation, (pp. 324- 328).

[14] Florida International University 1996: Effects of teaching and learning style on students' reflection levels for ubiquitous learning. pp, 57- 147.

[15] Ritchhart, R, Turner, T, & Hadar, L. 2009, p. 145-159 uncovering students' thinking about thinking using concept maps. Metacognition and Learning).

[16] FH Van Eemeren, R Grootendorst, RH Johnson- 2015 - taylorfrancis.com Argumentation theory is a multidisciplinary field of critical thinking inquiry.