

The Effect of the Cognitive Research Trust Program for Development of Thinking Skills on the Achievement of the Jordanian English Language Learners

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ABSTRACT

Aim: To investigate the effect of the CoRT(Cognitive Research Trust) program for the development of thinking skills on the achievement of the Jordanian English language learners. The length of the program did not exceed more than three months and a half, starting from the warming-up period in the first semester to the achievement test. **Methods:** The study sample consisted of (86) students from the seventh grade in Al Nahda Islamic Modern Private Schools, The First Directorate of Education in Zarqa District. The subjects were divided into four groups. Two experimental groups consisted of (34) male students who were taught two units in the curriculum (Aim High1) through the CoRT program. The other two control groups consisted of (34) male students who were taught the same content through the conventional strategy. Analysis of ANOVA was performed to test the statistical significance of the differences between the experimental group who was taught through the CoRT and the control group who was taught through the conventional method. **Result:** It revealed that there was a statistical significant difference at the level ($\alpha =0.05$) in the mean scores between the experimental group and the control group in favor of the experimental group. Interestingly, the current study adopted the experimental design. **Conclusion:** There were statistically significant differences between the mean scores of the subjects of the experimental groups who studied through the CoRT as a new instructional model and the control group who studied through the conventional method in favor of the experimental groups.

Key words: *CoRT program strategies, seventh grade students, conventional method, training program cognitive research trust*

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Introduction

The Jordanian English Language (EFL) context is subject to constant changes and shifts in the EFL curriculum and the teaching methods. English language teachers'

professional challenges may escalate due to the social and parental pressure, and teachers have to provide quality EFL instruction to the students to pass high

school exams and to pursue their higher education which certainly requires a high competency in English. (Alkhaldeh, 2010)

Teachers of English as a foreign language have always tried to find new approaches or strategies that introduce practical uses of EFL in the classroom to replace the conventional methods. Traditionally, teachers serve as the center of knowledge, directing the learning process and controlling students' access to information where the focus is almost exclusively on what is learnt. And students are viewed as 'empty' vessels and learning is viewed as an additive process. Lecturing suffers from a major defect: it is a one-way communication in which students sit, listen and take notes. But students learn best when they take an active role, when they discuss what they are reading, practice what they are learning, and apply concepts and ideas. (Davis, 2009).

The conventional "chalk and talk" method of teaching that has persisted for hundreds of years is now acquiring inferior results when compared with the more modern and revolutionary teaching methods that are available for use in schools today (Sivakumar,2014). One of these new methods is teaching through CoRT.

It has become imperative for modern education to keep up with the tremendous developments that included all walks of life .Since thinking is a necessity imposed by the current era (Bowkett,2006), and because of the rapid developments and changes witnessed by the world, the need to creative minds that are capable of adapting their circumstances with the change that occurs in the surrounding environments has emerged. In addition, the necessity to find different methods and strategies to cope with the new educational development and progress becomes urgent.(Shannak, 2014)

In Jordan, in specific, English language is considered a foreign language in the

Jordanian education system in both primary and secondary schools. However, the English language proficiency among Jordanian students is relatively low despite learning English language for many years. Jordanian students are still weak in English.

Since teachers of English have to equip themselves with new methods and strategies (Vyas and Patel,2009), and because of the benefits reported by many researchers about using the CoRT in teaching different subject matters like history, science and the Arabic language, all of that paved the way for the current study. Therefore, this study attempts to investigate the impact of teaching English language through two sections of the CoRT program (Breadth and Creativity) on the achievement of Jordanian English language learners.

The **CoRT** program was designed by Edward de Bono and was first published in 1973. The name **CoRT** stands for **Cognitive Research Trust** which de Bono established at Cambridge, England (Dingli,2001), but it was in 1976 that his book 'Teaching Thinking' was published 'one of 41 books which he has published on the topic, in 26 languages'(Murphy,Michelle, Bourne,Briggs, 1995)

The essence of the CoRT thinking method is to direct attention on purpose to different aspects of thinking and to crystallize these aspects into definite concepts and tools that can be used deliberately or even artificially.

To the best of the researcher's knowledge, there was no research that studied the effect of CoRT program on the achievement of the Jordanian English language learners in the seventh grade. A few studies were conducted on teaching thinking skills through the CoRT for different school subjects. What distinguishes this study from the previous studies that preceded it was that this study tried hard to study the impact of teaching thinking skills on the

achievement of Jordanian English language learners.

Study Problem: This study seeks to investigate the impact of the CoRT program as a new instructional model on the achievement of the Jordanian English language learners. There is a serious problem among students in primary schools in Jordan. Most of the complaints raised in the local society pertain to the very low achievement of English language which is in need to be improved.

According to Bani Abdo and Breen (2010), some Jordanian students still struggle in their acquisition of English language, because instructors fail to apply effective EFL teaching 14 methods. Al Khairy (2013) supposed that there is one main reason behind the low English language proficiency of Arabic speaking students which is poor teaching methods and insufficient exposure to the target language. The researcher proposed this suggested new instructional model (CoRT) for tackling this weakness.

Objectives: The study aims to find out the impact of the CoRT program on the achievement of the Jordanian English language learners. It highlights the growing importance of the new instructional model (CoRT); and assesses the effect of using two sections of the CoRT program (**Breadth** and **Creativity**).

Study Importance: The findings of this study may be functional for different categories of people; it helps EFL curricula designers and EFL methodologists develop teaching school subjects. Moreover, this study helps teachers by facilitating their role as well as students by helping them absorb the structures and rules of English quite easily and smoothly. Finally, this study motivates students to employ the four skills (writing, reading, speaking and listening) in their daily lessons.

The study question: This study aims to answer the following question: What is the effect of the CoRT program on the achievement of the Jordanian English language learners in the seventh grade?

Procedural Definitions: For the purpose of the study, the researcher defines the following terms procedurally as follows:

- 1- **CoRT Program:** It is designed to equip students with various 'tools' or techniques that can scaffold or support application of different thinking skills. (McGregor, 2007)
- 2- **The Conventional Method:** Lecture method is still the most frequently used method of instruction. It is called teacher-centered instruction.
- 3- **Achievement:** It is the mean scores that learners get after sitting for the pretest and the post test. Achievement is known as the conceptual knowledge and concepts and terminology acquired by the learner as a result of passing through a range of educational experience. (Shamlakh, 2010)
- 4- **Breadth:** It is the first section of the CoRT, and it should be taught at the beginning as a threshold for the whole program.
- 5- **Creativity:** It is the fourth section of the CoRT. It is based on generating new ideas.

Study Limitations: This study has the following limitations:

The study was confined to the seventh grade students in Al Nahda Islamic Modern Private schools in the First Directorate of Education in Zarqa District.

The study was carried out in the second semester of the academic year 2014/2015. Two units were chosen in the curriculum (Aim High 1). The units were; Unit (6) **Out**

and about and unit (7) **World famous** which were prepared in advance to be given according to the annual and semester plan. The study was restricted to two sections of the CoRT program (Breadth and Creativity).

MATERIALS AND METHODS

Methodology and procedures:

Study Approach

The study followed the empirical approach: **Sample:** The sample of the study consists of (86) students from the seventh grade in Al Nahda Islamic Modern Private Schools, The First Directorate of Education in Zarqa District. The subjects were divided into four groups. Two experimental groups consisted of (34) male students who were taught two units in the curriculum (Aim High1) through the CoRT program. The other two control groups consisted of (34) male students who were taught the same content through the conventional strategy.

Tools : The training program based on CoRT strategies

Freely (2000) pointed out that CoRT program is an educational activity that provides students with opportunities to develop proficiency in writing, thinking, speaking, reading, and listening. The lessons of CoRT involves six sections or CoRTs. These six CoRTs involved 10 lessons each. The purpose of these thinking lessons is to develop thinking as a skill that can be applied to any situation (de Bono, 2009). This study is confined to two CoRTs: Breadth and Creativity. The CoRT teachers encouraged the students of the experimental groups to participate in creating new ideas and discussing them.

The researcher tried the training program on the piloting sample which consisted of 12 students before conducting the experimental

on the present study subjects. The researcher taught the experimental groups which was taught through the training program and the control groups which was taught through the conventional method. At the end of the experiment, an achievement test –posttest-was conducted for all groups.

Achievement Test: It was held for the subjects of this study was designed by the researcher. It was used as a posttest in order to find out the impact of the CoRT program on the achievement of the Jordanian EFL learners. The material from the two units of the English textbook for 7th grade was included in the test.

The test comprises (40) multiple-choice items each with three answer choices. The test consisted of two questions. The first questions which was concerned with reading comprehension involved (7) items. These sub questions was written carefully to match all levels of students and were based on high-order thinking. The second question which was concerned with grammatical structures, pronunciation, vocabulary items and writing skills involved (33) items. The achievement test was not designed to measure accurately a specific curriculum, but rather the knowledge generally taught at a particular grade level. It required special readiness to choose the correct answer. At the beginning of the test, the instructions of the test were introduced.

The subjects were asked to choose the correct answer. The time allocated for the test was (50 minutes). Concerning the marking scheme, there is one mark for each item, so the total score is out of (40). The objective of the achievement test was to assess the effect of the both instructional methods (the conventional and the CoRT Program) on the students' achievement. The researcher sought permission from the administrators/principals of the relevant school well before time.

A panel of judges helped validate the appropriateness of the tested linguistic items, the suitability of the test wording, the suitability of criteria wording. The judges suggested more recommendations regarding the use of language or the criteria of evaluating the answers. All their suggestions were taken into account during revising the criteria of evaluating the test. The test was applied on a pilot group of (12) learners. The researcher carried out data analysis for the items of the test: the level of item difficulty was calculated, it ranged between (0.25- 0.92). In addition, the item discrimination was calculated, it ranged between (0.17- 0.83).

Procedures

- **The CoRT Program**
- **The Lesson Plan**
- **The Warming-Up Period**
- **The Implementation of the Program**

The distribution of sessions: all the experimental and the control groups were taught their lessons in the same days. For the CoRT program, the CoRT teachers agreed to give three sessions a week. It is worth mentioning that the other CoRT teacher was qualified in teaching through the training program and he got a license. He got 14-year experience in teaching English language. He taught the same classes that the researcher did.

The home-work was an urgent need to guarantee that the program became a basic and authentic tool used by learners. The general plan of teaching through the CoRT program was carried as follows:

Lesson 1-20: lessons to be taught through twenty tools. The first lesson started on the 9th February 2015, and the last training lesson was on 24th March 2015.

Lesson 21-22: Discussion of the program and its applications on learning English was held as a feedback..

Steps during the CoRT lessons: in order to give a CoRT lesson, the CoRT teachers both followed these steps: **examples, exercises, groups and homework.**

Variables: The independent variables represented in the teaching methods (CoRT, Conventional).

The dependent variable represented in the learners' achievement or the total score of the achievement test in the two units.

Statistical processing: Having entered data, averages and standard deviations were calculated. Also One- Way- ANOVA (Analysis of variance) was used so as to control the effect of the differences between all groups on the pre-test.

RESULTS

The main question asks about the existence of statistically significant differences at the level ($\alpha= 0.05$) between the mean scores of students' achievement of the experimental and control groups that could be attributed to teaching through the CoRT. Analysis of ANOVA was performed to test the significance of the differences between the experimental groups who were taught through the CoRT and the control groups who were taught through the conventional method. Interestingly, teachers were nested within the treatment as shown in Table (2) which shows results of One-Way- ANOVA for the Achievement Test.

Before presenting the findings of the study, it should be beneficial to start with the descriptive statistics and analysis of the students' scores in the achievement test. Table (1) shows the means and standard deviations of the experimental and control groups.

Table 1. Means and Standard Deviations of the Experimental and Control Groups.

Groups	Class	N	Mean	Std. Deviation
Experimental	1	17	32.65	3.297
	2	17	33.24	3.173
	Total	34	32.94	3.200
Control	1	17	27.94	3.455
	2	17	28.24	4.176
	Total	34	28.09	3.777

From Table (1), it was clear that the experimental groups who studied through the CoRT program achieved higher scores in the achievement test than the control group who studied through the conventional method. The mean scores of the experimental group in the achievement test were (32.94) while it was (28.09) for the control group. This indicated that there was a noticeable difference in the students' achievement scores in favor of the experimental group who studied through the CoRT. This difference was similar to that one in Al Faury (2014) and Abdel Amir (2007).

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Table 2. Results of One-Way- ANOVA for the Achievement Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Hypothesis	400.3	1	400.3	217.8	.05
Error	3.676	2	1.838 ^a		
Hypothesis	3.676	2	1.838	0.14	0.8
Error	804.94	64	12.577 ^b		

Sig is the actual level of significance and compares with $\alpha = 0.05$, if the actual level of significance is greater than (α), this of course indicates that the failure to reject the null hypothesis. In Table (1) above sig value in both cases was equal and more than $\alpha = 0.05$.

Table (2), it was obvious that the calculated F which is (217.800) with sig (0.005) more than 0.05. We concluded that the calculated F was crucial, where the new instructional model of teaching (CoRT) was fruitful. In other words, there was statistically significant difference at level ($\alpha = 0.05$) in favor of the experimental groups.

Hence, Table (2) also showed that sig (0.864) is larger than $\alpha = 0.05$, which indicated less statistically significance or less crucial difference within CoRT groups. This difference was referred to the efficiency of the CoRT teachers themselves.

DISCUSSION

ANOVA results showed that there were statistically significant differences between the mean scores of the subjects of the experimental groups who studied through the CoRT as a new instructional model and the control group who studied through the conventional method in favor of the experimental groups.

The chief reason behind this success referred to the use of the CoRT program which enabled students to cope with the targeted content successfully. In addition, teaching through the CoRT gave the students positive feelings about themselves and others and the way they use in thinking.

Findings of this study which employed this new instructional model of teaching allowed for mental activity to break up the routine of sitting in the place throughout the whole class period. It was especially important to establish and maintain a positive, stimulating, encouraging classroom climate for thinking skills instruction, so that students would feel free to experiment with new ideas and approaches. The findings showed that incorporating thinking skills in language classroom is vital to improve language teaching and learning.

The results of the study showed that CoRT program was an appropriate program which can stimulate the students' abilities and provide them with the suitable environment to develop their thinking skills, and that was obvious through their answers in the homework and worksheets given for them during the implementation of the program. The experimentation with CoRT encouraged the hope that CoRT is vital and flexible enough for use in EFL classes in order to stimulate the students' abilities. The program enabled students to talk and listen to each other freely using the target language. The program encouraged them to check out words and meanings hundreds of times vividly.

This indicated that the CoRT developed the students' ability to expand, support and elaborate their ideas by giving many helpful details. Students suggested several solutions for different problems. Students were more able to demonstrate knowledge and it seemed clear that they could deal with the achievement test. The two sections of the CoRT, (Breadth and Creativity)

developed students' high-order thinking levels. They stimulated their desire to work harder and that seemed in their worksheets and their ability to cope with the achievement test. The program trained students to interact with their teacher independently using the target language. Both sections of the CoRT (Breadth and Creativity) helped students deal with test items that was designed carefully in an accurate way.

When comparing the results of this study with the studies' results of the previous related literature such as AL Faoury (2014), Al Rabay'ah (2011) and Abdel Amir (2007), we found that this study was consistent with them. It was consistent with AL Faoury (2014) who proved experimentally that teaching through the CoRT as an instructional teaching model can be an effective method for teaching English as a foreign language.

This study was consistent with the study of Bell & Hinant (1993) which aimed to find out the impact of using the tool of CoRT program, PMI, on improving the English writing. Results of the study showed statistically significant differences in favor of the experimental group, and they showed a clear growth in writing and efficiency than those that follow the conventional approach.

However, the findings of this study was inconsistent with the study of Al Oteibi (2007) which concluded that there were no statistically significant differences between the experimental group and the control group in the academic achievement. But his study assured that the CoRT program could help students broaden their visions and encouraged students to create new ideas.

CONCLUSION & RECOMMENDATIONS

In light of the findings of this study and after discussing the results, the researcher presents a recommendation and a number of suggestions: The program was active, so the researcher recommended text -books designers and developers of English language curriculum in Ministry of Education in Jordan to take the study results into consideration to enrich English language teaching with thinking skills. The result of the study can inspire the syllabus and material designers to include thinking skills issues both in students' text books and in teacher training courses.

Teaching thinking skills is a current crucial issue in most educational systems these days, so many programs of teaching thinking have recently appeared. CoRT program is one of these programs that teachers are advised to train themselves to use efficiently. This study was confined to Breadth and Creativity.

Therefore, Teachers are also advised to carry out other studies that involve other sections of CoRT Program. In addition, teachers have to understand that teaching thinking explicitly through their subjects supposed to lead to the meaningful learning of the subject and to the power of language proficiency.

Breadth is the first part and the most essential component of the CoRT program. So it should be given enough time until students master it. At the beginning, this may be a difficult job for students to do, but later students will do it automatically. There is a need to create materials, ideas, lesson plans, statements for teachers to use in order to teach thinking skills for the early elementary students.

Creativity, the fourth section of the CoRT program, is concerned with generating new ideas, relevant studies should be carried out by other researchers on a bigger sample. A special achievement test should be conducted to check students' creative skills; fluency, flexibility and originality.

REFERENCES

Al khawaldeh, Ahmed. "The challenges faced by Jordanian English language teachers at Amman 1st and 2nd directorates of education", Source Volume: 44 Source Issue: 4 (2010)

Bakr, Samira. The efficacy of some proposed activities for developing creative thinking of English learners at the preparatory stage (second year). PHD Dissertation, 2004, Ministry of Education, Egypt.

Bell, S, and Hinnant, "A study of de Bono PMI thinking tool as a means of enhancing student writing performance". Dissertation abstract international, Vol 46 N. II, (1993)
Beyer K. Barry, Practical strategies for the teaching of thinking, 1987, Allyn And Bacon, INC.

Bowkett, S. 100 Ideas for teaching thinking skills, 2006, Routledge, London.

Davis, Barbara. Gross. Tools for teaching. 2nd New York edition, 2009, John Wiley & Sons, Inc. San Francisco, USA.

De, Bono, Edward. CoRT thinking lessons 2009, The McQuaig Group Inc. www.deBonoForSchools.com

Freeley, A. J. & Steinberg, D. L. Argumentation and debate: Critical thinking for reasoned decision making. 10th ed. 2000, Stamford: Wadsworth.

Freeley, A. J. & Steinberg, D. L. Argumentation and debate: Critical thinking for reasoned decision making. 10th ed. 2000, Stamford: Wadsworth.

Murphy, Patricia. & Michelle, Selinger. & Bourne, Jill. & Briggs, Marry. Subjects

learning in the primary curriculum: Issues in English, science and mathematics.1995, The Open University, Routledge.

Vyas, Manish. A. &Patel, Yogesh. Teaching English as a second language: a new pedagogy for a new century 2009, PHI Learning Private Limited, New Delhi.

المراجع العربية

ربابعة، نسرين، فاعلية برنامج الكورت في تنمية دافعية الإنجاز لدى طلبة الصف السابع الأساسي، رسالة ماجستير، 7011الجامعة الهاشمية، الأردن.

شملخ، فاطمة عبد الكريم خليل، أثر استخدام استراتيجية التعلم المؤلف في تحصيل طلبة الصف الثامن ودافعتهم نحو تعلم العلوم، رسالة ماجستير، 7010الجامعة الهاشمية، الأردن.

شنك ، سميرة أحمد، الذكاء، المهارات التحليلية، المهارات الإبداعية، المهارات العملية، ط: 7012، 1مركز ديونو لتعليم التفكير، الاردن.

عبد الامير، فاطمة، أثر برنامج الكورت لتعليم التفكير، الجزء الاول (توسعة الادراك) في تحصيل تلامذة الصف الخامس الأبتدائي و تفكيرهم الإبداعي، رسالة دكتوراة، 7002جامعة بغداد، العراق.

عتيبي، خالد بن ناهس، أثر استخدام بعض أجزاء الكورت في تنمية مهارات التفكير الناقد و تحسين مستوى التحصيل الدراسي لدى عينة من طلاب المرحلة الثانوية بمدينة الرياض، رسالة دكتوراة، 7002جامعة أم القرى، مكة المكرمة.