



## **The Effectiveness of CoRT1(Breadth) Program in Developing the Achievement of 1<sup>st</sup> Year University Students in English Reading Comprehension**

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### **Abstract**

The present study aims at examining the effect of CoRT1(Breadth) in developing the achievement of college students in English reading comprehension. This study is limited to the first-year students in the department of English at the College of Education for Humanities/ University of Anbar during the first semester of the academic year 2015-2016. It also deals with the first section of CoRT program as an independent variable.

To achieve the aim of the present study, it is hypothesized that there is no significant differences between the mean scores of the achievement of the first group who has been provided with CoRT1(Breadth) and the second group who has not provided with the same program. To verify the mentioned hypothesis, a sample of (51) first-year students from the department of English at the College of Education for Humanities/ University of Anbar has been randomly chosen and distributed to two treatment groups: experimental group (25) and control group (26). The students of both groups are equalized in terms of certain variables. The experiment has lasted six weeks during which the researcher himself has taught the two groups to control the teacher variable. At the end of the experiment, students have been subjected to an achievement test in reading comprehension which has been constructed by the researcher under the supervision of a number of instructors and specialists in this field. By using t-test formula for two independent samples, the findings have revealed that there is a statistically significant difference between the mean score of the two groups and it is in favour of the experimental group since its mean scores is higher than that of the control group.

In the light of the findings obtained , the study ends with a number of conclusions and recommendations.

**Keywords:** Breadth, Achievement, Reading Comprehension, University Students

فاعلية برنامج كورت ١ (توسعة مجال الإدراك) في تنمية تحصيل طلبة الجامعة للمرحلة الأولى

في الفهم القرائي للغة الانكليزية

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#### الخلاصة

تهدف الدراسة الحالية الى تفحص أثر كورت ١ (توسعة مجال الاداك) في تنمية تحصيل طلبة الكلية في الفهم القرائي للغة الانكليزية. هذه الدراسة حُددت لطلبة المرحلة الأولى قسم اللغة الانكليزية في كلية التربية للعلوم الانسانية / جامعة الانبار اثناء الفصل الأول للسنة الدراسية ٢٠١٥-٢٠١٦ وكذلك تناولت القسم الاول من برنامج كورت كمتغير مستقل. و لتحقيق هذا الهدف افترض الباحث بأنه لا توجد فروق ذات دلالة إحصائية في معدلات تحصيل طلبة المرحلة الأولى بين المجموعة الأولى التي جُهزت بكورت ١ والمجموعة الثانية التي لم تُجهز بالبرنامج نفسه ولاتبات الفرضية المذكورة اختيرت عينة عشوائية مكونة من ( ٥١ ) طالب وطالبة من قسم اللغة الانكليزية في كلية التربية للعلوم الانسانية/ جامعة الانبار ووزعت الى مجموعتين: المجموعة التجريبية وتضم ( ٢٥ ) والمجموعة الضابطة تضم ( ٢٦ ) وكوفئت كلتا المجموعتين وفقا لمتغيرات معينة. حيث استمرت التجربة مدة ستة اسابيع وخلالها قام الباحث بتدريس المجموعتين بنفسه وذلك للسيطرة على متغير المدرس ومن بعدها ادى الطلبة الاختبار التحصيلي في الفهم القرائي الذي اعده الباحث تحت اشراف عدد من الأساتذة المختصين في هذا المجال. وبواسطة استخدام الاختبار التائي لعينتين مستقلتين أوضحت النتائج وجود فروق ذات دلالة إحصائية في معدلات تحصيل تلك المجموعتين ولصالح المجموعة التجريبية حيث ان معدل تحصيلها أعلى من معدل المجموعة الضابطة.

وفي ضوء النتائج المحصلة انتهت الدراسة بعدد من الاستنتاجات التوصيات.



كلمات مفتاحية: توسعة مجال الادراك، التحصيل، الفهم القرائي ، طلبة الجامعة

## Section One

### Introduction

#### 1.1 Statement of the Problem and its Significance:

The main goal of English language teaching is to enable the students to use the language communicatively , express themselves and reflect their ideas, feelings , and their points of view. All fields of language participate in achieving the objective of teaching English. Among these fields, methodology has special importance due to its role in arranging the teaching/learning process by providing it with the suitable strategies and techniques to facilitate the teaching/learning process and presenting the instructional material in its appropriate situations.

Reading is a highly effective means of improving the mastery of language. It has an important place in classrooms where language learning is the central purpose ( Nuttal, 2000:46 ). Reading for comprehension is the main goal of reading. It raises students' awareness of main ideas in a text, exploring the structure of a text. It seems to be essential for good comprehension ( Richards and Renandya, 2002:38 ).

Most university students face the difficulty of how to comprehend a reading text. Moreover, teaching reading comprehension texts in EFL requires exceptional efforts on the part of the teacher and his students as well. To comprehend a reading passage, both the teacher and the students should do their best towards analyzing and then overcoming the difficulties which can be attributed to the familiar teaching strategies used, which involve merely reading the passage, explaining its meaning and answering its questions(Williams, 1988:23).

**One of the main problems behind the present study is the fact that teachers of English do not use the appropriate strategies of teaching that match the learners' learning styles. The majority of teachers of English at university level agree that the students of English depend to a large extent in their learning on what is presented to them from the teacher. Their roles are as a tool only receive the information from the teacher, write it down in their copybooks and study them or even memorize them without any comprehension.**

Teaching reading comprehension is not a matter of dictation in the learners' minds; it is rather a process of helping them to comprehend the given passages by employing effective learning strategies. One of these



strategies that have remarkable impact on the students' achievement is using CoRT program (Brown,2000:75). It is one of the rare programs for developing the thinking abilities of the students in various subject-matters in which learners' cognitive abilities carry out certain tasks effectively and they should be able to combine responses or ideas in novel ways and use complex stimuli and thinking patterns (Feldman, 1997:15). CoRT program helps students' lifelong thinking skills that will enlarge and enrich their perception in any situation by employing each tool to meet specific needs. Students will be more aware and more confident about their own thinking providing them with a framework for organizing classroom activity. After considering the point of view of everyone involved in the process, the students will concentrate on the goal of the lesson by organizing the discussion. Educators emphasize the importance of teaching thinking skills in order to help students enhance their thinking and creative abilities that results in developing reading comprehension at the same time ( Alshaye, 2002:18 ).

Therefore such an important strategy (CoRT program) with all of these previously mentioned advantages is worth to be investigated by conducting a practical study to examine its effect on students' achievement in reading comprehension, hoping that its findings will be useful to Iraqi teachers of English at various levels of learning, their students and those who are specialized in education and teaching English as a foreign language.

### **1.2 Aim of the Study:**

The present study aims at empirically examining the effect of CoRT1(Breadth) Program on the achievement of 1<sup>st</sup> university students in English reading comprehension.

### **1.3 Hypothesis of the Study:**

It is hypothesized that there are no significant differences between the mean scores of the achievement of the first group who receives CoRT1(Breadth) program and the second group who receives ordinary method reading comprehension.

### **1.4 Limits of the Study:**



- 1-This study is limited to the first-year students in the Department of English at the College of Education for Humanities /University of Anbar during the first semester of the academic year 2015 – 2016.
- 2-The instructional Material is limited to the teaching of the first five passages of the book (Developing Skills) written by L.G. Alexander which is prescribed to be taught to the students.
- 3-The independent variable is limited to the first section (Breadth) of CoRT program.

## **1.5 Definitions of Basic Terms**

### **1.5.1 CoRT Program:**

CoRT (Cognitive Research Trust) program is "a collection of simple powerful tools developed by Dr. Edward de Bono that allow the students to get rid of the patterns of traditional thinking through seeing things clearly and more comprehensive which can help thinking, problem solving, and decision-making" ( De Bono , 2007:12).

The operational definition of CoRT program is a set of procedures and practices that are planned in advance by the researcher which aim at developing the skill of reading comprehension.

### **1.5.2 Achievement:**

Good (1973:37) defines it as "an accomplishment of proficiency of performance in a given skill or body of knowledge".

The operational definition of achievement is the amount of knowledge in comprehension that the first-year students at the College of Education for Humanities will achieve during their study of specific passages in English. It is expressed in marks taken on the written achievement test constructed by the researcher to measure the influence of the independent variables on the dependent variable.

### **1.5.3 Reading Comprehension:**

It is defined as " the linguistic process of reconstructing the intended message of a text by translating its lexical and grammatical information into meaningful units that can be integrated with the reader's knowledge and cognitive structures." (Harris, 1982:76)

The operational definition of Reading Comprehension is the cognitive process by which students can understand or perceive the various events which are included in the given passages through reading and analyzing them.

## **Section Two**



## Theoretical Background

### 2.1 CoRT Program

CoRT is an educational program for the direct teaching of thinking skills, designed by Edward De Bono. It was first published in 1973 and developed in 2004. The name CoRT stands for the Cognitive Research Trust which De Bono established at Cambridge. CoRT consists of six sections each includes ten lessons. Each lesson teaches a new thinking tool. It is recommended that CoRT lessons are taught with a mixture of direct instruction by the teacher, student group work, class discussion, individual work and homework projects.

In general, the CoRT operations seem more suitable for contexts of decision making and informal reasoning in humanistic, social, and design contexts. They have a straightforward and immediate application to the sorts of problems that arise in everyday life( De Bono , 2007: 65).

#### 2.1.1 Advantages of CoRT Program

1. Is simple, practical and can be used by teachers in the representation of a wide range of situations.
2. Can be taught as a separate subject–thinking skills or embedded in existing curriculum to strengthen student learning and develop independent thinkers.
3. Focuses on equipping students to become effective, open-minded thinkers and comprehensive.
4. Addresses the increasing interest and recognition for the need to teach thinking as a basic skill along with reading, writing, mathematics and etc.
5. Can be used in a wide variety of situations.
6. Appeals to a wide range of ages and abilities.
7. Makes the student enjoyable with thinking lessons. ( Danawi , 2008: 13)

#### 2.1.2 Sections of CoRT Program

It consists of six sections that represent various aspects of thinking as follows:

<b>CoRT 1:</b>	Breadth	Helps students broaden their perception to think beyond natural explanations.
<b>CoRT 2</b>	Organization	gives students a variety of tools to show them how to organize their thinking.



<b>CoRT 3:</b>	Interaction	Helps students observe thinking involved in discussions, how a point of view is presented or defended, and the value and types of evidence.
<b>CoRT 4:</b>	Creativity	Helps students find out suitable tools and change concepts and patterns to generate new solutions to challenges.
<b>CoRT 5:</b>	Information and Feeling	tools to separate emotions from facts asking what information do we have? What do we need? How can we get it? What values and feelings can we apply to the information?
<b>CoRT 6:</b>	Action	Introduces visual symbols that can be used to direct thinking by beginning with the purpose and ends with specific action steps for the implementation of the outcome of thinking. ( De Bono , 2007:68 )

In this study, the researcher will deal with the first section and use its tools as follows:

#### **CoRT 1: Breadth**

CoRT1 is the most popular framework because its tools are designed to provide students with fundamental thinking skills that broaden their perception in any separate subject-matter they choose to think about and see more broadly into the future. These tools have very particular names, each one is abbreviated in three letters as symbols for short-term recognition and application by the students. They are designed to be used objectively with an open mind to broaden perception instead of defending a particular view. They emphasize thinking as a deliberate act rather than a reactive one. De Bono describes them as the carpenter's tools are designed to carry out a specific function. The carpenter begins to learn when and how to use each of the tools one by one. A lot of practice is required to become a skilled carpenter. Learning to become a skilled thinker is the same thing to learn the basic operations of thinking so that those tasks will be carried out automatically, smoothly, and without effort. With repeated use, the students become familiar with these tools and its acronyms when they read and deal with their problems and decisions (Ubaidat , 2005:42).

De Bono arranges these tools as follows:

#### **1. PMI = Plus, Minus, Interesting**



It is a very basic process which is introduced at the beginning by which students can use it as a tool to help them find out the good points (P=Plus), the bad points (M=Minus) and the interesting points (I=Interesting) in a situation for making a right decision. The interesting points are those which are neither good nor bad but are worth noticing. The natural reaction to an idea is to like or dislike it, to approve or disapprove. Using PMI as a deliberate operation enables students to overcome the natural emotional reaction to an idea. Simply, the objective of PMI operation is to enlarge the view of a situation because emotional reaction to an idea narrows the way students look at it.

## 2. CAF = Consider all Factors

It is a process of trying to consider all the factors in a situation. Students naturally assume that they have considered all the factors, but usually their consideration is limited to the important ones. They should turn CAF into a deliberate operation in order to pay their attention from the importance of the factors to looking around for all the factors. CAF is an exploration of a situation before coming up with an idea. The intention of CAF is to consider all factors rather than looking at them in terms of favourable or unfavourable factors.

## 3. C&S = Consequences & Sequel

It is a process of looking ahead to see the consequences of action, plan, decision, rule, etc. There are immediate, short-term, medium-term and long-term consequences. C&S deals with the action that one intends to take or the action that others are taking and with what may happen after the decision has been made. Students should look deeply for enlarging their views beyond the immediate effect of that action and focus directly on the future.

## 4. AGO = Aims, Goals, Objectives

It is a device to help students focus directly and deliberately on the intention behind actions by broadening the perception of a situation. AGO stage motivates the student's thinking in such areas as decision, planning, and action of any kind which has a purpose. Teacher should help students by making an appropriate distinction among them as follows:

- aim is the general direction. - goal is an ultimate destination.
- objective is a recognizable point of achievement along the way.

Student must be advised to concentrate on the general idea to focus attention directly on purpose overcoming natural reaction.

## 5. FIP = First Important Priorities

It is a process of picking out the most important ideas, factors, objectives, consequences, etc. If students try to pick out only the most



important points from the beginning, they will be able to see only a small part of the picture. But if they begin by trying to see as large a picture as possible, their assessment of importance will be more valid and they can generate as many ideas as they like. FIP is a judgment stage by which students can list the most important obvious priorities in a situation.

#### **6. APC = Alternatives, Possibilities, Choices**

It is a process of trying to find satisfactory alternatives for the same situation by which students can look beyond natural explanations. This deliberate search for APC in taking action or making a decision may change the whole situation and it can be an antidote to emotional reaction or a rigid looking.

#### **7. OPV – Other People’s View**

It is a process of looking at other people's view for enlarging the situations involved. Appreciating OPV consciously and deliberately is indeed an essential part in teaching because it reinforces the learning process and develops thinking skill by entirely various views in the same situation. OPV may come up with useful new ways of looking and it is considered as an antidote to selfishness. This deliberate attempt to see OPV enables students to get rid of a general vague feeling that they have. ( Tuama and Adhama,2003:13 ).

### **2.2 Previous Studies**

No doubt that analysis of the previous relevant studies will inevitably enrich the present study to a great extent. This section deals with a number of related studies that examine the effect of thinking programs (CoRT or other programs) on students' achievements at different disciplines which are carried out in other countries. The researcher focuses only on those studies that are, in his opinion, useful and similar to his work.

#### **2.2.1 Bakr (2004)**

The aim of this study was to investigate the effect of CoRT program in developing 5<sup>th</sup> preparatory students' thinking in English. The experiment was carried out with (122) students equally and randomly assigned to two groups chosen from Por Saeed schools in Eygpt. The experimental group received CoRT program to guide their thinking of the material whereas the control group taught the same material without receiving the mentioned program. ANOVA showed that CoRT program got statistically significant effect in developing students' skills of thinking fluency, automatic flexibility and originality. The study recommended the



necessity to pay greater attention for teaching thinking programs in colleges of education.

### 2.2.2 Al-Mahemeed (2006)

This study conducted to explore the effectiveness of CoRT program on 4<sup>th</sup> preparatory students' achievement in teaching the skills of thinking in Physics. The Participants of the study were (78) students chosen randomly and divided into two groups (experimental and control). The experimental one was taught the two chapters integrated with CoRT 1 "Breadth", 2 "Organization" and 4 "Creativity" whereas the control group was taught the same chapters according to traditional method. Using t-test, the findings revealed that there was a significant difference in the achievement between the two groups in favour of the experimental one. Based on the findings, the researcher suggested that CoRT program could be more beneficial in improving the skills of thinking in Physics.

### 2.2.3 Al-Jalad (2006)

This study examined the effectiveness of using CoRT program to develop thinking skills of student in Islamic studies. The participants of the study were (94) students from the second stage in the Department of the Holy Kuran Sciences/ Ajman University. They were purposefully chosen and assigned to an experimental group and to a control group. The instructional period lasted two months and the students were submitted to a post test constructed by the teacher for knowing the extent of influencing CoRT program in developing students' thinking skills. Using t-test, the findings indicated that using CoRT program had a positive effect on developing the three skills of creative thinking (fluency, flexibility, and originality) in favour of the experimental group that used the mentioned program over the control one.

### 2.2.4 Al-Muhtaseb (2010)

The study aimed at investigating the impact of integrating the first three parts of CoRT program in teaching science on achievement , scientific skills and decision making ability of 1<sup>st</sup> intermediate students. The sample of study was chosen intentionally of (72) female students equally distributed into two groups, one was assigned as the experimental group who was taught by using CoRT program, and the control group was taught according to traditional methods. The researcher constructed an achievement test, test of scientific skills, and the measurement of decision making. Using t-test, it was empirically revealed that the use of CoRT program had significantly proved effective in developing 1<sup>st</sup> female



students' achievement in science, scientific skills and decision- making ability.

### **2.2.5 Al-Khizi (2010)**

The aim of this study was to examine the effectiveness of CoRT in developing creative thinking skills including: fluency, flexibility, and originality. The Participants of the study were (100) students, divided into two groups (experimental and control). To achieve the aim of the study, the researchers prepared a post-test of creative thinking. After analyzing the data by using ANOVA, the findings showed that the experimental group was statistically more effective in fluency, flexibility, and originality skills than the control group.

### **2.2.6 Attar (2013)**

The aim of this study was to examine the effect of CoRT program in developing the skills of mathematical thinking of 2<sup>nd</sup> intermediate students. The sample of study consisted ( 80) female students from second intermediate class in the holy city of Mecca who were distributed to two equal groups. The experimental group was taught according to the CoRT program whereas the control group was taught according to common ways. Using t-test, the researcher concluded the superiority of the experimental group over the control one in the post test of every skill of mathematical thinking.

### **2.2.7 Discussion of the Previous Studies**

Having reviewed the previous studies, the researcher has found that studies concerned with CoRT program inside Iraq are rare and none at the university level. This gives a clear indication that this strategy is still suffering from negligence specially by researchers in the field of ELT.

After reviewing these studies, it is stated that each one deals with certain aims, samples, procedures and statistical tools used for collecting the required data.

Concerning the aims of these studies, it has been found out that most of them had a similar aim in common (investigate the effect of the CoRT program on students' achievement and developing their thinking skills. In correlation with the above studies, the present study tends to be more diagnostic than the studies surveyed because it focuses on the most important section CoRT 1 and its effect on English reading comprehension. This study is characterized that it deals this aspect which has not been fully covered at the college level.



Regarding the procedures, it has been explored that the samples are different in size. They ranged from (72) students as in Al-Muhtaseb's study (2010) and (122) as in Bakr's study whereas the present study consists of (51) male and female students at the College of Education for Humanities/ University of Anbar who are distributed to two groups ( experimental group and control group). Subject-matter was heterogeneous in all previous studies. Two of them dealt with scientific materials like physics as in Al-Mahameed's study (2009) and Attat's study(2013). And the other dealt with social subjects and Islamic studies as in Al-Jalad's study (2006), and Bakr's study (2004), while the present study is done in the area of English comprehension. An achievement test was administered to the students at the end of the experiment in all studies in order to measure the effect of CoRT program as an independent variable.

Various statistics for analyzing the data were used in the previous studies according to their aims and instrument. These means involves t-test, ANOVA and Chi-square. In the present study, the researcher has used the mean, t-test for two independent samples, chi-square and Pearson formula of correlation Coefficient to achieve the aims of the study and test its hypothesis.

### Section Three Procedures of the Study

#### 3.1 Experimental Design

An experiment was conducted by the researcher to achieve the aim of the present study and test its hypothesis. The experimental design followed in this experiment is as follows:

Table (1): The Experimental Design of the Study.

Groups	Independent Variables	Instrument of Measurement	Dependent Variable
Experimental	CoRT I Program	Achievement Test in Reading Comprehension	Students' Achievement
Control	Without CoRT I Program		



Group (1) is the group that is provided with CoRT1 Program, whereas group(2) is the group that is not given the mentioned Program.

### 3.2 Population and Sample of the Study

The population of the present study includes all the students of the Department of English at the College of Education for Humanities/ University of Anbar during the academic year 2015-2016. The total number of students was (415) depending on the data available in the college.

The sample of the study consists of (59)students representing the first year students who study reading comprehension as one of the prescribed subjects. They are distributed to two groups: group(A) represents the experimental group which receives CoRT1 program and group (B) represents the control group which doesn't receives the suggested Program. After collecting data, the researcher has excluded four repeaters from each group because they affect the findings of the study. Therefore, the total number of the sample becomes (51) ; (25) students for group(A) and (26) for group(B), as shown in Table (2).

Table (2): The Sample of the Study.

University	College	Groups	Type of Treatment	Number of Students before Excluding	Number of Students after Excluding
University of Anbar	Education for Humanities	Experimental	CoRT 1 Program	29	25
		Control	Without CoRT 1 Program	30	26

### 3.3 Equalization of the two groups

In order to make the two groups of treatment are equivalent well, the researcher tries to neutralize the effect of certain variables which may affect the findings of the experiment. Based on the information taken from the students archives available at the college, the two groups have been equalized on these variables: the age measured in months, the general averages in the previous year, students' scores in English in the previous year( Table 3) , and the academic level of parents, see Table (4).

Table (3): Statistical Data Concerning the Equivalence



Between the Two Groups in Certain Variables.

Variable	Groups	N	Mean	Standard Deviation	T – value		Level of significance
					Calculated	Tabulated	
Age	Group 1	25	127.96	5.144	1.013	2.021	0.05
	Group2	26	126.57	4.597			
General averages	Group 1	25	72.81	17.35	0.739	2.021	0.05
	Group2	26	73.39	15.52			
Students' scores in the previous year	Group 1	25	71.800	19.279	0.891	2.021	0.05
	Group2	25	67.115	18.257			

Table (4): Frequency of Parents' Education and Related Chi-Square Data.

Variable	Groups	N	Read & Write Primary	Intermediate and secondary	Diploma B.A. M.A. Ph.D.	Chi- square value		Level of significance
						Calculated	Tabulated	
Fathers' Education	G 1	25	6	8	11	0.368	5.99	0.05
	G2	26	7	7	12			
Mothers' Education	G 1	25	10	10	5	0.392	5.99	0.05
	G2	26	13	7	6			

Based on the above statistical data, the researcher concludes that the students of the two groups are equivalent since the statistical manipulation of these variables have revealed no significant differences at 0.05 by the use of t-test for two independent samples and chi-square.

### 3.4 The Instructional Material

The instructional material of the present study consists of five passages taken from the book entitled ( Developing Skills) written by



L.G.Alexander which is prescribed for teaching the first year students in the Department of English at the College of Education for Humanities.

### 3.5 Instructions

After preparing all requirements of the experiment and the instruments, the experiment began on the 12<sup>th</sup> of December, 2015. The researcher himself has taught both treatment groups in order to control the teacher variable. The five passages( A puma at Large, Thirteen Equals One, An Unknown Goddess, The Double Life of Alfred Bloggs, and The Facts) of the prescribed textbook were covered during the experiment. Each group attended two lectures a week for the purpose of comprehension.

As mentioned earlier, the experimental group was taught by giving the students the independent variable( CoRT1 Program) and explaining all the necessities they need in order to read and understand the passages precisely.

In the first lecture , the teacher ( researcher ) arranged the students in groups and used communicative approach integrated with CoRT1 devices to guide them step by step in every situation they faced. He provided them with the appropriate tool (CoRT tools) they need to comprehend and generate new ideas about the indented situation. The participant were not told that they submitted to an experiment to avoid hawthorn effect. In the second lecture, the teacher noticed that the student gradually developed their thinking skills by practising and class discussion.

The control group was taught by using the same way (communicative approach ), but without mentioning anything about the independent variable (CoRT1 Program). The experiment lasted for six weeks and ended on the 23<sup>rd</sup> of January, 2016 by applying the post test.

### 3.6 Instrument of the Study

In order to achieve the aim of the present study, the researcher has constructed an achievement test depending on the careful analysis of the content of the subject-matter to examine the effect of the suggested program on the dependent variable (students' achievement in reading comprehension). This test has exposed to several instructors who are specialists in ELT and linguistics to verify its suitability for the study



experiment. They all agreed upon their suitability, with modifications of few items that are taken into the consideration by the researcher.

The first step involved in constructing the test is to determine its general objectives. The purpose behind constructing the test in the light of the behavioral objectives of the material is to evaluate students' achievement in English reading comprehension. Moreover, it should be comprehensive with reference to the behaviours to be tested in order to cover all the components of the material to be tested.

The initial form of the achievement test consists of five questions. The first question includes unseen passage of a suitable length followed by five items. The students are instructed to read the passage carefully and then to answer each item depending on their comprehension of the same passage. The second question consists of ten short-answer questions to be answered depending on the comprehension of the studied passages. Question three has ten words to be replaced or given their suitable equivalences. The fourth question consists of ten words or combinations that requires writing them in meaningful sentences. Finally, the fifth question deals with ten various comprehensive activities concerning the suitable prepositions, articles, derivations, negative, etc., as shown in the Appendix at the end of the study.

### **3.6.1 Validity and Reliability of the Test:**

To check the face validity, the initial form of the test has been exposed a jury of university teaching staff who are well-known for their long experience and efficiency in the field of ELT, linguistics, language testing, and statistics. The items are discussed with them and their directions and modifications are taken into the consideration before putting the test in its final form.

Concerning the content validity, the researcher has made an analyses of subject-matter to in order to cover most of the material. It is agreed among the experts that the test is appropriate to the sample of the study and it has measured the purposes they are designed for and gains 0.80 agreement. All the recommendations and modifications are adequately employed in constructing the final form of the test.

The pilot administration of the test was carried out on the 16<sup>th</sup> of January 2016 and randomly given to (24) male and female students from the first year in the Department of English at College of Education for Humanities/ University of Anbar / Baghdad position. The instructions regarding what the testees are to do during the test were explained by the



researcher to avoid any misunderstanding could occurs. All students finished their answers without any problem and indicating that the instructions of the test are clear and that there is no ambiguity in it. When the pilot test was conducted, the researcher recorded the time when the first student answered the questions (34 m) and the last student that finished the test in (93 m) calculating the average time for answering the items of the test which is (60 m) by using the range formula: " $Range = H - L + 1$ " (Brown and Rodgers, 2002:39).

The researcher has used the split-half method to estimate the reliability of the test scores since it requires only one form and one administration of the test. The test papers are numbered and then divided into two halves according to their odd and even numbered items (Vandalen,1979). After applying statistics by using Pearson Correlation Coefficient bellow, it has been found out that the Calculated value is (0.79) which is considered acceptable in educational studies (Brown , 2001).

$$r = \frac{n \sum xy - (\sum x) (\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2] [n \sum y^2 - (\sum y)^2]}} \quad (\text{Glass and Stanley, 1970:295})$$

### 3.6.2 The Scoring Scheme

**The total mark of the test is fifty which is distributed among the five questions: ten marks for each one. Since each questions includes ten items, so one mark is given for any correct answer except the first question consists of five items two marks for each correct one.**

### 3.6.3 Item Analysis

After finishing and scoring all papers, the researcher puts them in order from the highest to the lowest score. Then, he divides the test papers into two groups: an upper group consisting of the top (27%) of the total number who achieved highest scores and a lower group including the bottom (27%) who achieved lowest scores.

Based on these requirements, the researcher has calculates the difficulty level of each item by using the formula below. The difficulty



level of items ranges from (0.28) to (0.71) percent; see Table (5) that means all items are suitable according to Bloom, et al. (1981) who state that a good spread of results can be obtained if the test items vary in difficulty from 20% to 80% .

$$DL = \frac{\text{High Correct (HC) + Low Correct (LC)}}{\text{Total Number in the Sample}}$$

(AlKubaisy,2007:58).

To find out the discrimination power for the items in the test, the formula below is applied. The results have indicated that the items discrimination power ranges from (35 %) to (62%) , see Table(5). It is considered acceptable according to Ahman & Glock (1975) who contend that the item is considered acceptable if its discrimination power is 0.30% or above.

$$DP = \frac{\text{High Correct (HC) - Low Correct (LC)}}{\text{Total Number of Testees (N)}} \quad \text{ibid:60}.$$

Table (5): The Difficulty Level and the Discriminatory Power of the Test Items.

No. of Question	No. of Item	Difficulty Level	Discrimination Power	No. of Question	No. of Item	Difficulty Level	Discrimination Power
Q1	1	<b>0.51</b>	<b>0.45</b>	Q4	1	0.59	<b>0.48</b>
	2	<b>0.44</b>	0.44		2	<b>0.61</b>	<b>0.51</b>
	3	<b>0.66</b>	0.59		3	<b>0.42</b>	<b>0.59</b>
	4	<b>0.71</b>	0.55		4	<b>0.54</b>	<b>0.42</b>
	5	<b>0.51</b>	<b>0.48</b>		5	<b>0.30</b>	<b>0.49</b>
Q2	1	<b>0.38</b>	<b>0.51</b>	6	<b>0.45</b>	<b>0.51</b>	
	2	<b>0.61</b>	0.62	7	0.65	<b>0.48</b>	
	3	0.52	0.51	8	0.51	<b>0.51</b>	
	4	0.40	0.48	9	0.55	<b>0.37</b>	
	5	0.51	0.50	10	<b>0.42</b>	<b>0.61</b>	
	6	<b>0.62</b>	<b>0.51</b>	Q5	1	<b>0.37</b>	<b>0.44</b>
	7	<b>0.51</b>	0.44		2	<b>0.48</b>	0.51
	8	<b>0.30</b>	0.51		3	<b>0.59</b>	0.35
	9	<b>0.51</b>	0.46		4	<b>0.45</b>	<b>0.44</b>

	10	<b>0.58</b>	<b>0.48</b>		5	<b>0.61</b>	<b>0.51</b>
Q3	1	0.61	0.51		6	<b>0.28</b>	0.44
	2	<b>0.50</b>	0.47		7	<b>0.55</b>	0.59
	3	<b>0.42</b>	<b>0.39</b>		8	<b>0.59</b>	<b>0.55</b>
	4	<b>0.33</b>	0.55		9	<b>0.50</b>	<b>0.49</b>
	5	<b>0.55</b>	0.45		10	<b>0.41</b>	0.45
	6	<b>0.68</b>	<b>0.60</b>				
	7	<b>0.60</b>	0.61				
	8	<b>0.52</b>	<b>0.51</b>				
	9	<b>0.48</b>	<b>0.44</b>				
	10	<b>0.51</b>	<b>0.51</b>				

### 3.7 Administration of the Test

At the end of the teaching period, The total number of the students who took the final test was (51). The test took place on the 23<sup>rd</sup> of January 2016 under the supervision of the researcher. The students of both groups were informed in advance to be ready for the test. They were told that a good mark would be taken into the consideration in the assessment of their class effort to motivate them. The researcher provided them with all necessities to allow all students perform at their best under identical conditions, and to avoid any extraneous factor that may interfere as a possible variable in the discrimination of the test. The time required for the test was (60-70) minutes and all students smoothly answered the questions.

## Section Four Result

### 4.1 Data Analysis

This section deals with the presentation of data analysis obtained from the students' replies to the achievement test. In order to realize the aim of the present study and test its hypothesis, the researcher has statistically used t-test for two independent samples, the mean and standard deviation. Moreover, data was analyzed by the use of “the statistical package for social sciences” (SPSS). It has been found out that there is a significant difference between the two means in both groups because the calculated t-value (4.175) is higher than the tabulated t-value (2.750) and it is in favour



of the experimental group since its mean score is higher than the mean score of the control group. In other words, the null hypothesis that is presented earlier is rejected. see Table (6):

**Table(6):The Mean, Standard Deviation and T-Value of Students' Achievement**

Groups	Number	Mean	Standard Deviation	D F	T-Value	
					calculated	Tabulated
Group 1	25	32.45	3.46	60	4.017	2.021
Group2	26	2.77	5.73			

#### 4.2 Discussion of the Result

This study has revealed that there is a statistically significant difference between the mean scores of the students of the experimental group who has received CoRT1 and that of the control group who has not received the program and it is in favour of the students of the first group. Likewise, most the findings drawn in the previous studies such as: Al-Mahemmed's (2006), Al-Khizi (2010) and Attar's (2013) have shown that the use of CoRT program has revealed certain effectiveness in developing students' abilities and achievement in various subject-matters. This means that CoRT1 has a positive influence in developing thinking skills that lead to improve the achievement of the freshmen of the College of Education for Humanities, Department of English in reading comprehension. This may be attributed to the fact that this program helps the teacher increase his students' attentions and attitude towards the material to be taught since this program gives opportunities and encourages them to go beyond through the reading material. In addition to that CoRT program makes the reading more enjoyable by employing the suitable thinking tools in any situation that faced students.

#### 4.3 Conclusions

The results obtained in the present study has led to the following conclusions:

1. It is concluded that the application of CoRT1 strategy provides EFL college students with opportunities which help them improve their level of comprehension of various texts.
2. Using CoRT1 facilitates learning of thinking skills in various subjects.



3. By applying this suggested strategy, students can be such good and mature readers to process the text actively and monitor their comprehension.
4. Employing this program makes the students feel more confident to read and continue reading their reading texts.
5. Using such strategies enhances the relationships among the students and between students and their teachers, and creates a suitable atmosphere. Reducing of stress and feeling of success facilitate the process of learning.

#### 4.4 Recommendations

In the light of the findings of the present study, the researcher recommends the following:

1. Providing students with CoRT1 and other learning strategies of thinking that promote their thinking and encourage them to better read and understand what they read.
2. Encouraging teachers to reinforce their lectures by using various strategies to make their lectures as enjoyable as possible.
3. Investigating other techniques and methods to teach reading comprehension. Teacher should prepare students to reach a deeper level of understanding in reading various texts.

**4. It is preferable for textbook authors to imply some thinking strategy in designing instructional materials to meet most of students' needs in university.**

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### **The Appendix**

#### **The Final Form of the Achievement Test in Reading Comprehension**

*Note : Answer all questions. 10 marks for each.*

**Q1/Read the following passage carefully:**

Pearl says that all of her friends have a cell phone, but Pearl's mom does not want to buy her one. Pearl's mom does not want Pearl to play video games either. What is more, the Internet scares her. Pearl's mom says, "If Pearl has a cell phone, how do we know whom she is talking to? Video games are bad for you. The Internet is dangerous and uncontrolled. It's like having a gun in the house. We should just ban her from using the computer, and I am not buying her a cell phone until she is eighteen. This is the only way we can be sure that Pearl is safe."

Pearl's dad disagrees with Pearl 's mom. Although he agrees that there are some dangers to it, he likes the Internet, and finds it to be very useful. "The trouble is," he says, "We just can't stop Pearl from using the Internet, as this would put her at a disadvantage. What is more, I like



video games. I think that, when played in moderation, they are fun. Obviously, it is not good to play them without restraint or self-control. Finally, I think Pearl needs a cell phone. We can not take these things away.”

**Now answer the following questions:**

- 1-What does Pearl say about her friends?
- 2-Why does Pearl's mom want to ban her from using the computer?
- 3-What is the condition of Pearl's mom to buy her a cell phone?
- 4-Can you describe Pearl's dad and mom in one word for each?
- 5-Give a suitable title for the passage.

**Q2/ Answer the following questions from the reading passages that you have studied:**

- 1-By whom the first hunt for the Puma was began?
- 2-Would a puma attack a human being or not ?
- 3-How did the vicar wake up ?
- 4-What the Vicar caught a sight of?
- 5-Who discovered a temple which stands in an ancient city?
- 6-Where did the woman put her hands?
- 7-How did Alfred dress each morning when he left home?
- 8-Did his friends keep his secret or not?
- 9-Why do editors of newspapers often go to extremes?
- 10-Why had the journalist been imprisoned?

**Q3/ Use the following words or combinations in meaningful sentences of your own:**

- 1-century
- 2-manual
- 3-fellow
- 4-flour and milk
- 5- for along time
- 6-ever
- 7-say/every thing/him
- 8-explain/the lesson/brother
- 9-story
- 10-industry

**Q4/ Give the equivalent meaning for the following words:**

- 1- private
- 2- convinced
- 3-fired
- 4-equipped
- 5-status
- 6-explored
- 7-fragments
- 8- well-known
- 9- privilege
- 10-embarrassed

**Q5/ Do as required:**

- 1-He is the man **about** whom we have heard so much. (Change the position of the underlying word )
- 2-The bag **in** which I put my pens is here. (Change the position of the underlying word)



- 3-In darkness there was nothing *to be seen*. (Substitute the italics)
- 4-I found that little baby *crying*. (Substitute the italics)
- 5-My favourite food is ..... rice. ( choose : a , an , the , x )
- 6-He is working **hard**. (change the adjective into an adverb).
- 7-Iraq is the country he lives ..... ( add a suitable preposition)
- 8-Where is he going.....? ( add a suitable preposition)
- 9-We travel Paris to will week shopping next for. (rearrange the sentence)
- 10-**Hardly** had I finished speaking. (Change the position of the word in italics)

