International Journal of advanced humanities Research" (IJAHR)
Online ISSN: - 2812-5940
https://ijahr.journals.ekb.eg/

The Effectiveness of CoRT Program for Teaching Thinking in Developing the Intellectual and Imaginative Side in Creative Writing among Pupils of the Second Cycle of Basic Education Stage

Taha Hussien,
Ph.D. Educational psychology, Faculty of Arts,
Tanta University, Egypt,
dtaha_shaban2020@yahoo.com

Abstract

CoRT program is one of the most famous programs for teaching thinking. the current research is trying to determine the effectiveness of training on the thinking tools of the parts: the first " Breadth ", the fourth "Creativity", and the sixth " Action " from the CoRT program after integrating them into the Arabic language curriculum for the second year of preparatory school, the second semester , in the creative writing skills of the experimental study sample. The current research used the experimental method with two groups: experimental and control, with a pre and post-tests for each of the two groups. The research was conducted on (54) male and female students of the second year of middle school, divided into two experimental and control groups, each group consisting of (14 males and 13 females). The training program consists of thirty sessions. The results indicated that there were statistically significant differences between the experimental and control groups in the post-test of the intellectual and imaginative aspects in creative writing after isolating the effect of the pre-test.

Keywords: Teaching Thinking, Creativity, Creative Writing

Article History
Receive Date: 2023/5/28
Accept Date: 2023/9/12
Publish Date: 2023/11/24

Volume 3/ Issue2, December, 2023
DOI: 10.21608/ijahr.2023.170191.1006

CITATION:
Hussien, T. (2023). The Effectiveness of CoRT Program for Teaching Thinking in Developing the Intellectual and Imaginative Side in Creative Writing among Pupils of the Second Cycle of Basic Education Stage.. International Journal of Advanced Humanities Research, 3(2), 187-205. doi: 10.21608/ijahr.2023.170191.1006

Introduction

Educators recommended the necessity of placing thinking education at the forefront of our educational goals, for the sake of learners' personal and professional lives. This is because it gives learners pleasure, mental excitement, and cognitive challenge. It also achieves moral and cognitive values such as: curiosity, mental courage, perseverance in the search for truth, and open-mindedness to others' perspectives (Habib, 2007).

Thinking skills don't grow with maturity, but there must be organized teaching and learning, and sequential practical training that begins with basic thinking skills and progresses to higher thinking processes using programs to teach and learn thinking skills; Therefore, the Ministry of Education has taken care of developing thinking skills at all educational levels by integrating it into the various academic subjects (Ministry of Education, 2016: 1-2).

There is a deficiency in the creative thinking skills of the pupils, although creativity is one of the skills that all pupils can acquire at different levels of intelligence. Everyone can improve their creativity if they can learn to leap their imaginations in an innovative and effective manner. Improving creativity is not limited to the superior because it is acquired and not An extraordinary talent. If the pupil thinks in a new and distinctive way, he becomes creative, provided that there is motivation and training to think as a mechanical skill to come up with new things and values. So, thinking is the engine of creativity (de Bono, 2018).

There are many programs that are interested in teaching thinking, and the most famous of these programs is CoRT program for teaching thinking prepared by the scientist Edward de Bono. The basic principle on which this program is based is that thinking is a skill that can be learned through training and practice. Learning thinking skills is essential for all learners and is not limited to gifted and talented pupils only (de Bono, 2008).

(Akdal & Sahin ,2014) believe that thinking is the basis of creative writing because creative writing is the process of putting ideas and feelings about a specific topic on paper using imagination and mental skills to generate ideas that differ from the ideas of others.

(Hooshang,2015) adds that creative writing includes thinking and mixing cognitive mental processes during writing. The pupil contemplates the subject, then plans it, then explores the relationships, then reviews and amends what he wrote as a result of evaluating his writing.

Also, thinking is one of the means of developing the language ability of the individual. In addition, writing is a powerful thinking tool because it works to get away from old patterns of thinking (de Bono, 2020).

Creative writing is not a simple cognitive process, but a complex process in which language and cognitive abilities are exercised, and It can be sought to develop through the work of the mind, reconstructing and organizing knowledge in a new form, making treatments, and good handling of the ideas of the subject. So, it is necessary to develop thinking skills while writing, provide learners with thinking skills that lead them to good written productive performances. Also, it is necessary to

provide them with the tools they need to enrich their information, develop their creativity, and produce new and different things. Creative writing is a practical training in thinking on the one hand, and on using language in a new way on the other (Tok & Kandemir, 2015).

When initiating the assessment of creative writing, it is necessary to take into account the assessment of creativity. This is because creativity is the most important aspect that must be evaluated, according to clear and specific criteria (Suarez, 2015).

(Habib ,2007) Says that imagination is one of the elements of evaluating creative writing because it is a mental process that establishes a new idea or image that did not exist before. Creative writing requires an imaginative activity in order to produce outputs characterized by both originality and value.

Therefore, the current research used three parts of the CoRT program: the first CoRT (Breadth), then the Fourth CoRT (Creativity), followed by the Sixth CoRT (Action) based on what was indicated by the program developer (Edward De Bono. Because of the advantages of this program, the most important of which is its simplicity, coherence, its relevance to the chronological age of the study sample, its relevance to the different mental abilities of the pupils, and the possibility of integrating it with the academic content. Through it, pupils can be taught CoRT thinking tools with the content of the Arabic language, and the relationship of thinking tools included in it with creative writing skills.

The first part, " Breadth" stresses the importance of thinking about a situation in different ways, and the main objective of it is to expand the circle of understanding and perception among pupils by paying attention to all the consequences of the different methods that have been employed. It is a basic part, and it must be taught before any of the other parts.

The fourth part, "Creativity" sees creativity as a natural component of the thinking process. It can be taught and trained for pupils. The main objective of this part is to train pupils to consciously escape from limiting ideas, and to emphasize the importance of generating new ideas through the use of creativity strategies. Creativity is always entertaining and motivating for people who think creatively, and this sense of fun must develop. At the same time, creativity is an important process, the goal of which is to reach a new, unconventional idea.

The sixth part " Action " is concerned with the process of thinking as a whole, starting with choosing the goal and ending with the formation of the plan to implement the solution.

There are basic postulates that the researcher relied on to teach thinking, the most important of which are:

1 .Thinking is a skill that every pupil can learn through training, with some individuals being able to master it more than others (de Bono, 2008).

2. Thinking skills can be integrated into the content of a particular course (Nofal et al, 2011).

3. Thinking skills are employable in new situations. (Abdul Wahid Hamid al-Kubaisi, 2013).

Problem:

The problem of the research is the weak level of the pupils of the second cycle of the basic education stage in the intellectual and imaginative aspect of creative

writing. The most important reason for this weakness is: the deficiency in their thinking skills. Therefore, the current research is trying to determine the effectiveness of training on the thinking tools of the parts: the first " Breadth ", the fourth "Creativity", and the sixth " Action " from the CoRT program after integrating them into the Arabic language curriculum for the second year of preparatory school, the second semester , In the creative writing skills of the experimental study sample.

Significance:

1. Directing the attention of educators to the need to pay attention to the development of thinking skills. Academic excellence requires a set of mental abilities such as comprehension, linkage, verbal fluency, clarity of expression, and an imaginative ability that allows the pupil to adapt to complex situations, and all of these abilities are practically trained in the CoRT program for teaching thinking.
2. The development of creative writing achieves psychological pleasure for the individual, refines the pupil's literary talents, achieves himself and his personality, increases his self-confidence, develops his intellectual and linguistic abilities, helps him solve problems by exchanging and discussing opinions, and is an important factor for social acceptance and psychological stability.

Purpose:

Creative thinking is the type of thinking most closely related to language. Therefore, the current research aims to: Identify the effectiveness of training on three parts of the CoRT program, t the first CoRT (Breadth), then the Fourth CoRT (Creativity), followed by the Sixth CoRT (Action) in developing the intellectual and imaginative aspect of creative writing among the research sample.

Hypotheses:

1. There are no statistically significant differences between the mean ranks scores of the pupils of the experimental and control groups in the post-test of the intellectual aspect of creative writing, excluding the effect of the pre-test.
2. There are no statistically significant differences between the mean ranks scores of the pupils of the experimental and control groups in the post-test of the imaginative aspect of creative writing, excluding the effect of the pre-test.

Terminology

1. Effectiveness: the efficiency of the procedures used to achieve the desired goals and produce the expected effect in comparison to the amount of time and effort expended (El-Dirini, 2019).

2. Program: A set of educational procedures derived from Edward de Bono's teaching thinking program, carried out by the trainer to train the pupils of the second cycle of the basic education stage on specific thinking tools that are integrated within the Arabic language curriculum for the second year of preparatory school, the second semester. These procedures are carried out in a picture of sessions organized by the researcher, and each session is determined by a specific goal and content and takes place in a specific period of time.

3. CoRT: is an acronym for Cognitive Reserch Trust. It is a set of thinking tools aimed at teaching thinking as a skill by training pupils of the second cycle of the basic education stage on the tools of the first, fourth and sixth parts of the CoRT program after incorporating them into the Arabic language curriculum for the second year of preparatory school, the second semester.

4. Creative writing: a written performance in which the pupil expresses his thoughts and feelings. This performance includes two aspects:

- The intellectual aspect: choosing a new title for the topic, putting forward new ideas, looking at the matter from different points of view, developing multiple solutions to the surrounding problems, developing various alternatives to solve the problem, giving new solutions to the surrounding problems, using evidence to convince the reader.

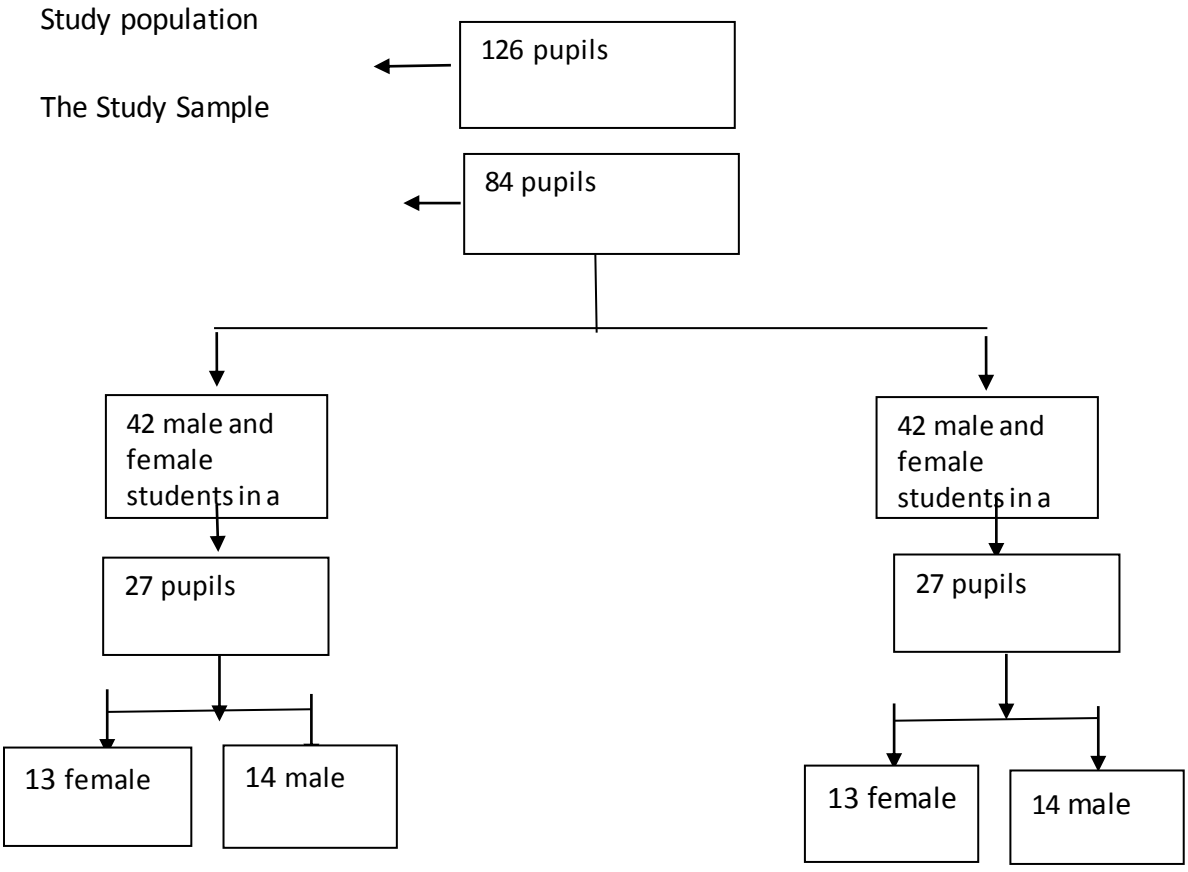
- The imaginative aspect: envisioning the future, imagining events, making the familiar strange and the strange familiar, anticipating causes and predicting outcomes, breaking into ambiguous matters, linking divergent elements.

Methodology:

experimental method with two groups: experimental and control, with a pre and post-tests for each of the two groups.

The sample:

The following figure shows the steps for selecting sample members:



Figure(1) Steps of selecting the study sample

The research sample consisted of a group of second year preparatory pupils at Al-Shaheed Essam Al-Fishawy School for Basic Education in the village of Al-Haddad, affiliated to Basyoun Educational Administration in Gharbia Governorate. The sample selection process went through the following stages:

1. Applying the creative writing test to a sample of (84) male and female pupils in the second year of middle school, out of (126) male and female pupils.

2. Distributing randomly the sample into two groups; Experimental and control, the number of pupils in each group (42 male and female pupils).
3. After applying the tribal tests and implementing the training program, and then applying the post tests, (15 male and female pupils) were excluded from the experimental group for not attending the program sessions, and (15 male and female pupils) were randomly excluded from the control group after applying the tribal and remote tests. To achieve equality in the number of each of the experimental and control groups, and therefore the final sample of the study consists of (54) male and female pupils of the second preparatory grade at Al-Shaheed Essam Al-Fishawi School for Basic Education in Haddad, divided into two experimental and control groups, each group consisting of (14 males, 13 females).
4. Homogeneity between the two groups was confirmed. Both groups belong to the same school grade, and the cultural environment and social level are similar. Homogeneity in chronological age was verified using a t-test for differences between independent averages.

Table(1) Differences between the average ages of the experimental and control group students in months

	Group	Mean	Standard deviation	T value	sig
Chronological age	Experimental (n = 27)	150.93	4.39	0.47	Not significant
	Control (N = 27)	150.44	3.09		

It is clear that the value of (t) for the two independent means (0.47) is not statistically significant, which indicates that there are no statistically significant differences between the students of the experimental and control groups in chronological age. That is, the two samples are homogeneous in chronological age.

Instruments:

1- Creative writing test (prepared by the researcher):

It aims to assess the ability of pupils in the second cycle of the basic education stage to write creatively using three topics. The first question completes a story that ends with a situation that may have multiple interpretations, the second question completes a story that begins with a situation that potentially has multiple interpretations, and the third question writes an article on a topic that has a general framework, and these questions reflect the extent to which pupils have creative writing skills, and this test is applied collectively, and the pupil is given one score if the indicator is available in writing, and zero score if the indicator was not noted in writing, on each question separately, and the indicators are (15) indicators.

The validity of the test was calculated by:

A - The arbitrators' validity: The creative writing test was presented to experts for judging, and the results were:

International Journal of advanced humanities Research" (IJAHR)
Online ISSN: - 2812-5940
https://ijahr.journals.ekb.eg/

Table (2) Percentages of approval for the creative writing skills test questions (n =7)

NO.	Approval	Not approved
1	71	28
2	85%	14%
3	71	28
4	71	28
5	85%	14%
6	71	28
7	100%	

It is clear from the previous table that the rates of agreement on the test questions ranged between (71.4%, 100%), which are high. This calls for confidence in the test after making the required adjustments.

B - Correlative validity or criterion validity: By applying the test "Creative writing skills among students in the second preparatory grade", the correlation coefficient between students' scores was calculated on both tests (the creative writing test for the researcher – the creative writing test as a criterion). The correlation coefficient between the two tests was (0.70), and this indicates the validity of the researcher's test.

Table(3) Pearson correlation coefficient between the test scores for creative writing skills and the test scores for creative writing skills among the respondents (n=30)

Testing	n	Mean	Standard deviation	Correlation coefficient	Correlation Significance
Researcher's Creative Writing Skills	30	32.10	9.97	0.70	0.001
Creative Writing Skills (Criterion 1: Mohammed Majed)	30	27.20	9.93		

It is clear from the previous table that the correlation coefficient between the two tests was (0.70), which indicates that there is a statistically significant correlation at the level of (0.001) between the two tests, and this indicates the validity of the researcher's test.

This indicates the validity of the researcher's test. The researcher also verified the validity of the test by using another test, which is the identification of the achievements of creative talent (Shelly Carson et al.). The correlation coefficient between the two tests was (0.76).

Table(4) Pearson correlation coefficient between creative writing test scores and creative writing questionnaire scores (n=30)

Testing	n	Mean	Standard deviation	Correlation coefficient	Correlation Significance
Researcher's Creative Writing	30	32.10	9.97	0.76	0.001
Creative Writing Questionnaire (Criterion 2: Shelley Carson)	30	17.13	5.11		

It is clear from the previous table that the correlation coefficient between the two tests was (0.76), which means that there is a statistically significant correlation at the level of (0.001), and this indicates the validity of the researcher's test.

C - Validity of the internal consistency of the creative writing test: by calculating the correlation coefficient of each of the three questions with the total score of the test, and the results were as in the following table:

Table(5) Internal consistency of the creative writing test n = 30

	Q1	Q2	Q3	Total score
Q1	___	0.66	0.47	0.79
Q2		___	0.77	0.89
Q3			___	0.83
Total score				___

It is clear from the previous table that the values of the correlation coefficient of each question and the other two questions and the total score ranged between (0.47, 0.89), all of which are a function at the level of (0. 05), which indicates the internal consistency of the creative writing test.

The stability of the test was calculated by reapplying it to the same survey sample of (30) students, and the difference between the two applications was fifteen days, and the Pearson correlation coefficient was calculated between the scores of students in the first and second applications and the results were as follows:

Table (6) Pearson correlation coefficients between pupils' scores in the first and second applications on each dimension of creative writing (n=30)

DIMENSION	Pearson correlation coefficient between the first and second measurements	Significance level
Intellectual dimension	0.61	0.001
Imaginary dimension	0.68	0.001
Total score	0.76	0.001

It is clear from the previous table that the correlation coefficient between the first and second applications of the dimensions of the creative writing test has increased, as the values of the correlation coefficient ranged between (0.49, 0.76), all of which are statistically acceptable, indicating the possibility of confidence in the results reached using the creative writing test.

The test is graded according to the creative writing test correction key according to the following parameters:

- Read the entire subject of the pupil, then read the indicator, and then give the mark in front of each indicator for each question separately.
- Correcting the first question for all pupils, then the second question for all pupils, and then the third question for all pupils.
- If the trait referred to in the pupil's subject is found, it is given a grade of (1), and if the trait is not found, it is given a score of (zero).

Since the number of indicators is in the first dimension (7), and the second dimension is (8), so there are (15) indicators for each question, and since there are three questions, the maximum score for pupils on the test is (45).

The application of the test takes (60) minutes, each question (20) minutes, after

instructing the sample members.

2- The key to correct the creative writing skills test:

The researcher designed a key to correct the creative writing skills test for the pupils of the research sample according to two dimensions:
The first aspect: Intellectual: It has seven indicators to measure it (choosing a new title for the topic, putting forward new ideas, looking at the matter from different points of view, developing multiple solutions to the surrounding problems, developing various alternatives to solve the problem, giving new (original) solutions to the surrounding problems, using evidence to persuade the reader)

The second aspect: the imaginary: and put eight indicators to measure it (imagining the future, imagining events, making the familiar strange, making the strange familiar, anticipating the possible causes behind the surrounding problems, predicting the distant results of situations or problems, breaking into ambiguous matters, linking divergent elements with imaginary new relationships contemplative)

The test was corrected according to the correction key, and the researcher corrected the pre and post test, then another Arabic language teacher corrected the same test after making sure that he understood the creative writing and the dimensions used, and the researcher explained to him how to deal with the correction key and the distribution of grades. If the researcher or teacher finds the indicator in the pupil's writing, the pupil is given a mark of (1) in each question, and if the indicator is not found in his writing, he is given a score of (zero). Consequently, each pupil has a score on each of the dimensions of creative writing (the intellectual dimension, the imaginative dimension), and a total score for the test.

The researcher calculated the validity of the key to correct the creative writing test in the following ways

1- **Validity of the arbitrators:** The correction key in its initial form was presented to the arbitrators in order to benefit from their guidance on the appropriateness of its clauses for evaluating creative writing skills, the appropriateness of the correction key for the two dimensions of creative writing, the appropriateness of each indicator for the dimension to which it belongs, and the appropriateness of the indicators for the level of the study sample (preparatory second grade pupils), and their modification by addition, deletion or wording. The number of arbitrators reached (seven) arbitrators from psychology professors as well as from the curricula and methods of teaching the Arabic language.

The researcher monitored the opinions and proposals of the arbitrators, who are (7) professors of Arabic language curriculum and teaching methods. The following table shows the percentages of agreement between the arbitrators on the correction key:

Table (7) Percentages of approval of the items of the correction key of the creative writing skills test (n = 7)

NO.	Approval	Not approved
1	100%	
2	100%	
3	57.1%	42.9%
4	85.8%	14.3%
5	100%	
6	71.4%	28.6%

7	71.4%	28.6%
8	100%	
9	100%	
10	85.7%	14.3%
11	71.4%	28.6%
12	100%	
13	71.4%	28.6%
14	100%	
15	85.7%	85.7%

It is clear from the previous table that the percentages of agreement on the items of the Creative Writing Test Correction Key ranged between (71.4%, 100%) except for phrases (3), which were deleted. This calls for confidence in the terms of the correction key after making the required amendments.

2- **Experimental validity:** Presenting three literary paragraphs in which the features of creative writing are available, and three paragraphs written by the researcher on different topics in which the features of creative writing are not available, to thirty graduate students studying rhetoric and literature with the aim of classifying the six paragraphs, which represent creative writing, and which do not represent creative writing based on the researcher's concept of creative writing, and the percentages of students' agreement on creative and non-creative paragraphs and the Chi-Square calculation for each paragraph were calculated.

Table(8) Comparison of arbitrators' frequencies of creative paragraphs (n=30)

Paragraphs	1 creative	2 Non-Creative	3 Non-Creative	4 creative	5 creative	6 Non-Creative
Frequency	27	24	22	27	26	28
Percentage	90%	80%	73.3%	90%	86.7%	93.3%

From the previous table, it is clear that the percentages of the arbitrators' agreement on the creative paragraphs as creative according to the researcher's concept of creative writing range between (86.7%, 90%), which is high, and the percentages of the arbitrators' agreement on the non-creative paragraphs as non-creative according to the researcher's concept of creative writing range between (73.3%, 93.3%), which is also high, which indicates confidence in the correction key as a tool for evaluating creative writing. Chi-Square was calculated to find out the differences between the arbitrators' estimates of creative and non-creative paragraphs based on the researcher's concept of creative writing, and it was (17.06), which is significant at the level of (0.001), and this indicates the sincerity of the key to correcting the creative writing test in what was set to measure, which is creative writing skills.

Stability

The researcher calculated the stability of the correction key of the creative writing skills test by displaying the answers of the exploratory sample to three of the arbitrators; the first researcher, the second is an Arabic language teacher and a master's researcher in Arabic rhetoric at the Faculty of Arts, Damanhour University, and the third is an assistant teacher in Al-Azhar education and a doctoral researcher in creative writing by calculating the correlations between the scores given by the

researcher for the exploratory study sample n= 20 and between the scores given by the other two arbitrators who were used by the researcher to calculate the stability of the correction key. The Pearson correlation coefficient between the researcher's correction and the first arbitrator was (83,0) , and the correlation coefficient between the researcher and the second corrector was (77.0) , and the correlation coefficient between the first and second correctors was (81.0) , and this is evident through the following table:

Table (9) Correlation coefficient between the three arbitrators

Arbiters	Researcher	First arbitrator	Second arbitrator
Researcher	1	0.83	0.77
First arbitrator	----------	1	0.81
Second arbitrator	----------	----------	1

A - Calculating the correlations between the scores given by the researcher to the pilot study sample n = 20 and the scores given to them by the other two arbitrators that the researcher used to calculate the stability of the correction key, and the Pearson correlation coefficient between the researcher's correction and the first arbitrator was (83.0), and the correlation coefficient between The researcher and the second corrector (77.0), and the correlation coefficient between the first and second correctors was (81.0),

B - Calculating the multiple correlation coefficient for the three correlations, the value was (0.84), which is a function at the level (0.001)

C – Calculating (T test) between the three arbitrators (the researcher, the first arbitrator and the second arbitrator), and the value of "T" was not significant, which indicates that there are no significant differences between the average estimate of the scores of the researcher and the first arbitrator in the creative writing test, and this indicates the stability of the key patch.

2- The training program:

The current training program is based on the guidance of the author of the program, Edward de Bono:

1. Avoid complexity
2. Clarity of the idea to the trainer and the trainee before implementing the activities.
3. Focus on practical matters, not complex matters.
4. The examples are clear and simple.
5. The trainer should be serious about teaching thinking directly as a basic skill
6. Gradual provision of program content.
7. Divide the class into groups (4, 5 or 6) pupils, and choose a paragraph for training from the pupil's work cards.
8. Making feedback from groups of pupils.
9. Use the principles given in the pupil's work cards to make a discussion about the thinking tool.
10. Using one of the project items as homework (Edward de Bono, 2007: 5-6).

The general planning of the Cort program used in the current study according to the fusion approach in the Arabic language:

1. Determining the foundations on which the program is based, which was derived

from the directives of the author of the program, Edward de Bono (Edward de Bono, 2007: 5-6).

2. Determining the general objective of the training program, the objectives of each of its three parts, and the objectives of each session separately.
3. Determining the thinking tool used in each session according to the time plan of the study content
4. Determining the tools and means necessary to implement the procedures, such as cards, pictures, and laptop.
5. Determining three training paragraphs for each lesson of the course
6. Defining the role of the trainer and the trainee in implementing the activities of each session.

Components of the training program:

The training program consists of thirty sessions, the duration of each session is (35) minutes, in addition to the opening session. Therefore, the sessions of the training program become (31 sessions), three sessions per week.

After the researcher designed the training program sessions and presented them to the arbitrators (Appendix 9): In order to benefit from their guidance on the appropriateness of the training program for what was set for him, and the appropriateness of his vocabulary to the level of the study sample (students of the second preparatory grade), the number of arbitrators reached (five) arbitrators from among the professors who have effective participation in the CoRT program for teaching thinking in order to express an opinion on the following elements:

- The appropriateness of the linguistic wording of the program.
- The suitability of the program for the age group to which it is applied (students of the second preparatory grade)
- The possibility of deleting or adding to the paragraphs of the training session.
- The appropriateness of the training sessions to achieve their objectives.

The following table shows the percentages of the agreement of the arbitrators for the training program sessions

Table (10) Percentages of approval of the training program sessions by the judging committees (n = 5)

NO.	Approval	Not approved
1	100%	
2	100 %	
3	100 %	
4	100%	
5	80 %	20%

It is clear from the previous table that the rates of agreement on the content of the training sessions ranged between (80% and 100%), which are high. This calls for confidence in the sessions of the training program after making the required amendments, and some of the arbitrators indicated some linguistic amendments, and they were amended.

Each training session included one of the tools for teaching thinking about the content of a lesson scheduled for the classroom accordingto the distribution of the

curriculum lessons over the months of the academic year 2018/2019.

Each session goes through the following steps:

1. Introduction: It begins with a story or an exercise that explains the thinking tool the subject of the session, then a simplified explanation of the target thinking tool.
2. Exercises: Three exercises for hands-on thinking tool the topic of the lesson.
3. The process: in which pupils are discussed about the target thinking tool.
4. Principles: They are given to pupils written on cards and discussion is opened for comment.
5. Project: The teacher takes one or more items for homework from him.
6. Assigning the trainees to some additional activities to ensure the extent to which the pupils acquire the skills concerned with training.
7. Instructions for both the trainer and the trainee should be adhered to until the goal of the training is achieved.
8. Clarify the relationship between the practice of activities and the results and objectives set for them.
9. Use of visual and auditory stimuli. (Edward de Bono, 2007: 64-65) and (Edward de Bono, 2008(a): 10).

The effectiveness of the experimental treatment was verified using the scale of verification of the effectiveness of the experimental treatment (Appendix 11) at the end of the training program sessions, and the repetition rates on the items of the scale were as in the following table:

Table (11) Percentages of student responses to each of the statements of the verification scale of the effectiveness of the experimental treatment (n = 27)

Statement number	to a great extent		Moderate		Poorly agree	
	n	Percentage	N	Percentage	n	Percentage
1	23	85.2%	2	7.4%	2	7.4%
2	25	92.6%	1	4.7%	1	4.7%
3	23	85.2%	3	11.1%	1	3.7%
4	27	100%				
5	25	92.6%	2	4.5%		
6	22	81.5%	3	11.1%	2	7.4%
7	24	88.9	2	7.4%	1	3.7%
8	24	88.9	2	7.4%	1	3.7%
9	23	85.2%	3	11.1%	1	3.7%
10	25	92.6%	2	4.5%		
11	25	92.6%	1	3.7%	1	3.7%
12	25	92.6%	1	3.7%	1	3.7%
13	25	92.6%	1	3.7%	1	3.7%
14	24	88.9%	1	3.7%	2	7.4%
15	25	92.6%	1	3.7%	1	3.7%
16	23	85.2%	2	7.4%	2	7.4%
17	22	81.5%	4	14.8%	1	3.7%
18	25	92.6%			2	4.5%

19	26	96.3%	1	3.7%		
20	26	96.3%			1	3.7%
tal	487	%90.2	32	5.9%	21	3.9%

It is clear from the previous table that the percentage of students' agreement to choose a highly agreeable as a function of the effectiveness of the treatment ranged between (81.5% to 100%), which is a high and acceptable percentage, which indicates the achievement of the objectives of the training program sessions.

Results and their discussion:

The first hypothesis: "There are no statistically significant differences between the averages of the pupils of the experimental and control groups in the post-measurement of the intellectual dimension in creative writing, after isolating the effect of pre-measurement"

To investigate this hypothesis, the researcher used the quade's rank analysis of covariance in nonparametric statistics to find out the differences between the experimental and control groups in the post-measurement of the intellectual dimension in creative writing after isolating the effect of pre-measurement. The results were as follows:

Table (12) Results of covariance analysis using the (Quaid) test in non-parametric statistics for the differences between the averages of the ranks of the experimental and control groups in the post-measurement of the intellectual dimension in creative writing after isolating the effect of pre-measurement

Source of variance	Squares Total	df	Squares mean	F value	Significance level
Program impact	5355.89	1	5355.89	69,14	0.001
within groups	4028.51	52	77.46		

It is clear from the previous table that there are statistically significant differences at the level of (0.001) between the experimental and control groups in the intellectual aspect of creative writing in post-measurement after isolating the effect of pre-measurement, where the value of "F" (69.14).

The previous result was also confirmed using the analysis of covariance (ANCOVA) in the parametric statistic and the results were as follows:

Table (13) Contrast analysis of the differences between the arithmetic averages of the experimental and control samples in the post-measurement of the intellectual aspect in creative writing (n=27)

Source of variance	Squares Total	df	Squares mean	F value	Significance level	η^2
Program impact	560.61	1	560.61	74.28	0,001	0.25
Pre-measurement of the intellectual aspect	1.44	1	1.44	0.19	0.664	
within groups	377.30	51	7.55			

It is clear from the previous table that there are statistically significant differences at the level of (0.001) between the experimental and control groups in the intellectual

dimension of creative written expression in post-metering after isolating the effect of pre-metering, where the value of "F" reached (74.28), and the size of the effect reached (0.25), which is a high value.

To know the direction of the differences between the experimental and control groups, the following are the descriptive statistical indicators for both groups in the post-measurement of the intellectual aspect, as shown in the following table:

Table(14) Descriptive statistical indicators fortwo experimental and control groups in the post-measurement of the intellectual aspect of creative writing (n=27)

Groups	Mean	Standard deviation	Winding	CoRTosis
Experimental	14.85	4.40	0.49-	0.28-
Control	9.70	4.63	0.30-	0.77-

It is clear from the previous table that the arithmetic mean of the experimental group is (14.85), which is higher than the arithmetic mean of the control group (9.70), and it is also clear that the coefficient of torsion and the CoRTosis coefficient is limited between (-3,3), which indicates the moderation of distribution, and the differences between the two groups are in favor of the experimental group, which shows the effectiveness of the training program in developing the skills of the intellectual dimension in creative writing in the experimental group.

The researcher attributes the superiority of the students of the experimental group in the intellectual dimension of creative writing to the acquisition by the students of the experimental group of intellectual skills such as (considering all factors, predicting the results and what follows them, developing multiple and varied possibilities and alternatives, taking into account the views of others, generating new unfamiliar ideas and solutions, focusing on the goal, expanding ideas, shortening information, and developing an executive plan to achieve the goal) included in Parts I, IV, and VI of CoRT had a clear impact on the creative writing of students that was observed in (writing a new title for the topic, putting forward new ideas, looking at the matter from different perspectives, developing multiple, varied and unfamiliar solutions to surrounding problems, and using evidence to convince the reader).

The second hypothesis:

"There are no statistically significant differences between the averages of the pupils of the experimental and control groups in the post-measurement of the imaginary dimension in creative writing, after isolating the effect of pre-measurement"

To investigate this hypothesis, the researcher used the quade's rank analysis of covariance in nonparametric statistics to find out the differences between the experimental and control groups in the dimensional measurement of the imaginary dimension in creative writing after isolating the effect of pre-measurement. The results were as follows:

International Journal of advanced humanities Research" (IJAHR)
Online ISSN: - 2812-5940
https://ijahr.journals.ekb.eg/

Table (15) Results of covariance analysis using the (Quaid) test in non-parametric statistics for the differences between the averages of the ranks of the experimental and control groups in the post-measurement of the imaginary dimension in creative writing after isolating the effect of pre-measurement

Source of variance	Squares Total	df	Squares mean	F value	Significance level
Program impact	5326.40	1	5326.40	82.45	0.001
within groups	3382.08	52	65.04		

It is clear from the previous table that there are statistically significant differences at the level of (0.001) between the experimental and control groups in the imaginary dimension in creative writing in post-measurement after isolating the effect of pre-measurement, where the value of "F" was (82.45).

The previous result was also confirmed using the analysis of covariance (ANCOVA) in the parametric statistic and the results were as follows:

Table (16) Contrast analysis of the differences between the arithmetic averages of the experimental and control samples in the post-test of the imaginative aspect in creative writing

It is clear from the previous table that there are statistically significant differences at the level of (0.001) between the experimental and control groups in the imaginary aspect of creative written expression in post-measurement after isolating the effect of pre-measurement and internal motivation of writing, where the value of "F" reached (161.30), and the size of the effect reached (0.20), which is a high value.

To know the direction of the differences between the experimental and control groups, the following are the descriptive statistical indicators for both groups in the post-measurement of the imaginary aspect, as shown in the following table:

Table(17) Descriptive statistical indicators fortwo experimental and control groups in the post-measurement of the imaginary aspect in creative writing (n=27)

Source of variance	Squares Total	df	Squares mean	F value	Significance level	η^2
Program impact	854.45	1	854.45	161.30	0,001	0.20
Pre-measurement of the imaginary aspect	18.55	1	18.55	232.29	0.664	
within groups	264.87	51	5.30			

It is clear from the previous table that the arithmetic mean of the experimental group (19.19) is higher than the arithmetic mean of the control group (13.89). It is also clear that the torsion coefficient and the CoRTosis coefficient are limited between (-3,3), which indicates the moderation of the distribution. The differences between the two groups are in favor of the experimental group, which shows the effectiveness of the training program in developing the skills of the imaginary dimension in creative writing in the experimental group.

The researcher attributes the superiority of the students of the experimental group in the imaginative dimension of creative written expression to the acquisition by the students of the experimental group of imaginative skills such as: (rolling stone,

random inputs, opposing the idea, removing errors, linking) included in Part IV of CoRT had a clear impact on the creative writing of the students observed in (making the familiar strange, and the strange familiar, breaking into mysteries, linking the distant elements with new unfamiliar relationships).

From the above, it is clear that the students of the experimental group have an improvement in the skills of creative writing and its dimensions: (intellectual and imaginative). It is due to the students of the experimental group acquiring thinking skills that raised the efficiency and potential of the students' mind, expanded their perception, stimulated their creativity, and provided them with the opportunity to launch their imagination and create new ideas, so the students produced creative writing.

Interpretation of results:

The results of the covariance analysis show that there are statistically significant differences in the dimensional measurement of both sides of creative writing (intellectual and imaginative) between the experimental and control groups in favor of the experimental group after isolating the effect of the tribal measurement. ,45), all of which are function at the level (0.001), which indicates the effectiveness of the training program that integrated the thinking tools of three parts of the Cort program "Extension", "Creativity" and "Action" within the Arabic language curriculum for the second grade of preparatory, the second semester in developing Both sides of creative writing (intellectual and imaginative).

The researcher explains the improvement of the intellectual and imaginative sides of creative writing by the close relationship between the thinking tools of the CoRT program and the two sides of creative writing (intellectual and imaginative). The result of the researcher's findings is consistent with what the author of the CoRT program Edward de Bono indicated about the importance of the creative writing teacher's use of the three parts of Cort: (extension, creativity, and action). These parts contributed to the improvement of both sides of creative writing (intellectual and imaginative).

During the examination of the answer sheets of the experimental group pupils in the post-test, the researcher noticed an increase in the amount of writing, novelty in ideas, imagination, and emotional impact on the reader. The thinking tools of the first part of the CoRT "Extension" program contributed to the development of creative writing skills. Before the pupil begins to write, he thinks about the topic and plans it, so he calls the thinking tool (processing of ideas); To collect information on the subject and treat it, which is positive, which is negative, and which is interesting, and then searches for the benefits or harms of the subject for him, others and society as a whole, so he calls (considering all factors), Then it defines (goals); To (plan) the structure of the topic by identifying the main elements of the topic, and the sub-ideas that emerge from them, and expect (the results and what follows them) whether they are close, medium or long-term, then put (alternatives, possibilities and options) to solve the problem he is writing about, then choose from Among these alternatives (important priorities first), then at the end writes the appropriate (decisions) for the problem at hand, and he should take into account (the viewpoints of others).

Also, the thinking tools of the fourth part of the CoRT "Creativity" program

contributed to the development of creative writing skills, as the thinking tool (yes, no and creative) allows the pupil to bypass traditional channels of judging the idea with its right or wrong, and (the rolling stone) pushes the pupil to move away from channels Traditional thinking formed by experience, it proposes unfamiliar solutions to problems, and (random input) expands the pupil's imagination, making the familiar strange and the strange familiar and this is the core of creativity, then comes the thinking tool (opposition to the idea); To allow the pupil a critical view of reality, so he moves away from the ordinary and brings new ideas and meanings, then (the main idea); To direct the pupil's mind to focus attention on the main idea of the topic, then (problem definition); To increase the pupil's sense of the surrounding problems, then (removing errors) to direct the pupil's attention to improving reality, then (connecting); For the pupil to compose from the available contradictions a new idea that differs from the ideas of others, and then (requirements) to help the pupil in searching for the things required in solving problems.

Also, the thinking tools of the sixth part of the CoRT "Action" program contributed to the development of creative writing skills. This part had a clear role in creative writing skills because it is concerned with the executive stages of recording creative ideas. The first thinking tool in this part (aim) helped the pupil focus on the main ideas on the subject, which is one of the most important creative writing skills. The subject can only be planned after mastery of this skill, then (expanded) so that the pupil proceeds and increases the sub-elements under the main idea, and enriches the subject with details for each idea separately, then summarizes and summarizes the information ; To reach conclusions and solutions based on the inputs and introductions, and then evaluate its findings.

There is a relationship between the well-known creative thinking abilities (fluency, flexibility, originality, sensitivity to problems and enrichment with details) and the thinking tools of Edward de Bono. Thinking tools such as: consideration of all factors, treatment of ideas, results and what follows, expansion, and solutions ... in the first and sixth parts, they contribute to the ability of fluency. Also, thinking tools such as: the rolling stone, random inputs, and opposition to the idea.... in the fourth part, they focus on the ability of originality. Moreover, thinking tools such as: alternatives, possibilities, options, decisions, linkage, requirements, choice... in the first, fourth, and sixth parts, they contribute to the ability of flexibility. In addition, thinking tools such as: other people's points of view, defining the problem, removing errors ... in the first and fourth parts, they contribute to the ability of sensitivity to problems. Also, thinking tools such as: the goal, the entrance ... in the sixth part contribute to the ability to enrich with details These abilities represent the main engine of the creative process. If the pupil is trained in thinking tools, he has the ability to acquire thinking skills, and when an environment that encourages creativity is available, creative writing appears to express itself as a new creative product with value.

Based on the foregoing, training on the thinking tools of the three parts: (breadth, creativity, and action) from the CoRT program is effective in developing the skills of both sides of intellectual and imaginative writing among pupils of the second cycle of the basic education stage.

References:

- Abdul Wahed Hamid Al Kubaisi. (2013). Lateral thinking (exercises and practical applications). Jordan: Debono Center for Teaching Thinking, first edition.
- Akdal, D & Şahin, A.(2014). The effects of entertextual reading approach on the development of creative writing skills. Eurasian Journal of Educational Research, 54, 171-186.
- Edward de Bono (2018). Think before it's too late. (Translated by Magdy Abdel Karim Habib). Cairo: : Dar Al-Fikr ALEARABIU.
- Edward de Bono. (2007). The CoRT Program for Teaching Thinking Series: Part One, Breadth. (Translated by Nadia Hayel Al-Surour and Thaer Ghazi Hussein). Amman, Jordan: Debono Publishing House, first edition.
- Edward de Bono. (2008) (a). CoRT program to teach thinking, part one, Breadth. (Translated by Dina Omar Faydi). Amman: Dar Al-Fikr, first edition.
- Edward de Bono. (2008) (b). CoRT program to teach thinking, part four Creativity. (Translated by Dina Omar Faydi). Amman: Dar Al-Fikr, first edition.
- Edward de Bono. (2020). The reference in wisdom. (Translated by Magdy Abdel Karim Habib). Cairo: Dar Al-Fikr ALEARABIU.
- Hooshang, K.(2015). Creativity in Writing: A Study of EFL Learners' Locus of Control. Australian International Academic Centre, Australia, 2, 81-90.
- Hussein Abdel Aziz Al-Derini. (2019). Verification of the effectiveness of the experimental treatment is a necessary measure present absent. Journal of the College of Education, Al-Azhar University, p. 184, 747-763.
- Magdy Abdel Karim Habib. (2007 b). Can creativity be taught? Cairo: Dar Al-Fikr ALEARABIU, first edition.
- Magdy Abdel Karim Habib. (2007) (a). Teaching thinking in the information age Entries, Concepts, Keys, Theories, Programs. Cairo: Dar Al-Fikr ALEARABIU, second edition.
- Ministry of Education. (2016). The teacher's guide to developing thinking skills for the second year of middle school.
- Mohammad Bakr Nofal, Muhammad Qasim Saifan. (2011). Incorporating thinking skills into the curriculum. Amman: Dar Al Masirah for Publishing and Distribution, first edition.
- Tok, S& Kandemir , A.(2015). Effects of creative writing activities on pupils' achievement in writing, writing dispositions and attitude to English. Social and Behavioral Sciences ,147, 1635 – 1642.