

# Contemplative Thinking Skills and their Effects on Preparatory Students' Drawing Performances

Fareeq Abdulazeez Naser<sup>a</sup>, <sup>a</sup>Faculty of Fine Arts, University of Babylon, Performing arts, Email: [Fine.fareeq.na@uobabylon.edu.iq](mailto:Fine.fareeq.na@uobabylon.edu.iq)

This study aims to identify the skills of contemplative thinking and its effects upon preparatory students' drawing performances. A research sample of 150 randomly selected students from the Al-Hillah Preparatory School for Boys was split into 75 participants for the experimental group and 75 for the control group. The split-half method is followed in Classes A and B which were treated statistically in terms of the following variables: student's age in months, marks of mid-year art education exams and parents' academic achievements. A random selection method was employed to acquire participants for the Fifth Class A experimental group, which studies art expression (drawing) according to the skills of contemplative thinking, and for the Fifth Class B control group, which studies applied science and art expression according to the skills of normal thinking. After identifying the nominated subjects, two plans to be taught in the experiment were presented. The researcher prepared such teaching plans and had them verified and amended as needed through a committee of experts. During the experiment's 12-week period, the test was applied starting from 20/01/2019 to 30/04/2019 after excluding the mid-year vacation. Statistical analysis was performed through the T-test for two independent samples, the Chi-Squared test and the Pearson Correlation Coefficient. Results reveal a significant difference at a level of 0.05 in the preparatory students' drawing performances, in which the experimental group students who studied art expression (drawing) according to the skills of contemplative thinking surpassed the control group students who studied the same subject according to the normal thinking.

**Key words:** Skills of contemplative thinking, preparatory students' drawing performance, parents' academic achievements

## Chapter One

### The research problem and its significance

Contemplative thinking is an educational method based on independence and freedom of thought, with the objective of collecting large amounts of new and creative ideas to solve problems. Participants of contemplative thinking should stimulate their minds through quick thinking and problem-solving methods, and by exploring creative and positive solutions to specific issues. Contemplative thinking in drawing performances of preparatory school students can develop active thinking devoid of obstacles or barriers within a safe environment. Sessions conducted in spaces free from frustrations, criticism and prejudices encourages creative thinking among participants in order to stimulate their best ideas and solutions. Intellectual contemplative thinking has been proven in many matters that require innovative solutions, confirming this method as one of high interest to today's thinkers. While arguably all individuals possess creativity, however, this creativity needs to be activated, trained and awakened for effective use (AL-Housry, 2000, p. 76).

In order to gauge and develop its success, this method must be applied and used in schools through expressive education, such as drawing, and according to a set of rules that must be adhered to achieve the desired objective. These rules include avoiding criticism and frustration, allowing each participant the freedom to express his or her ideas and motivating and encouraging all students. Problems can be seen in the drawing performances of preparatory students by their reluctance to participate in lessons and their fear surrounding their own artistic merits. Few students are demonstrating any desire or enthusiasm for this educational aspect, as evidenced by their lack of contribution in, or postponement of, various activities or required actions (Ibrahim, 1968, p. 168).

The researcher (being a specialist in the teaching of technical education) noted that many students in different levels of study suffered from an apparent weakness in drawing performance in two parts, planning and colours. Students were seen to fatigue in performances and would stop suddenly before true expression was achieved, leading them to resorts to direct transfer or imitation. Those students who completed a subject expression were found to have made grammatical or spelling mistakes (Ashour, 2007, p. 209). This study therefore aims to explore skills of contemplative thinking and their impact on the drawing performances of preparatory stage students.

### Importance of the current study

The subject of art education is an ancient practice that can be traced back to the first-recorded civilizations on Earth. Art education is also an important components in the delivery of

science between human beings. The importance of the contemplative thinking lies in the performance of the art of drawing in the preparatory school students as a way to stimulate ideas and unleash creativity. The research is considered a “modest” contribution at the level of general education, in the general directorate of education of Babylon in the use of the method of contemplative thinking and its use in the performance of the art of drawing among students in the preparatory stage. There is additional need for the current research as it contributes to encouraging the teachers of art education to use modern ways and methods of teaching, and to increase their awareness of the importance of their use. This study can also benefit employees of educational institutions, art education supervisors and those who seek to develop it. This study therefore aims to determine contemplative thinking skills and their impact on the performance of the art of drawing among the preparatory stage students.

### **Research hypotheses**

For the purpose of verifying the main objective of the current research, the researcher derived the following null hypotheses. First, there are no statistical differences at the level of function (between .05 and 0) between the average scores of students of the experimental group in the pre and post-tests by using the T-test. Second, there are no statistical differences between the average scores of the experimental and control groups through using the T-test.

### **Research limitations**

Limitations of the research involve objective, spatial and time limits. Objective restrictions refer to performing the art of painting, spatial restrictions refer to the Directorate General of Education for the province of Babylon, and time limitations are seen in the short study period of the 2018-19 academic year.

### **Thinking and expression**

Thinking and expression are two manifestations of one mental process. Expression is a tool for communication and facilitation of thinking processes. It provides an opportunity for the learner to enrich his or her ideas and to summon learned linguistic and artistic knowledge to convey arranged, coordinated and well-formulated ideas (Khawaldeh, 2012, p 148). Thinking is a great grace that God (Almighty) has blessed upon man, and with it he was distinguished from other beings. The Holy Koran called for a direct and explicit call for thinking and contemplation of the universe, and Islam did not interdict to the mind, but called for its activation, and made it the doors of inference to the existence, greatness, and unification of the Creator. He praised those who think about creating heaven and earth, and think about themselves and what are around them from the verses (Allah Almighty), and praise them, and

named them those of understanding, i.e. those with minds who think about everything, and in various ways (Imran, 2003, p. 18).

Contemplative thinking represents the pinnacle of mental processes which cannot be ignored by educational institutions as this is a crucial element of planning and decision-making. Contemplation is defined as taking time and being careful about a particular idea or object, contemplating and reconsidering the options surrounding it again and again (Mustafa, 1960, p. 27). Contemplative thinking allows individuals to confront and analyse problems and changing phenomena and events. Individuals who think contemplatively have the ability to perceive relationships, form summaries, use information to strengthen opinions and analyse the introductions, and review and search for alternatives. (Abdul Wahab, 2005, p. 160). Saada (2011) confirms contemplative thinking as a “type of thinking associated with self-awareness, self-contemplation, which depends on reflection, self-control and deep consideration of things” (Saada, 2011, p. 43). Similarly, Ryan (2012) defines this concept as “contemplation of the individual in front of the situation and analysis of its elements to draw the necessary plans to understand it, and then evaluate the results in light of these plans” (Ryan, 2012, p. 121). The research has thus created the relative procedural definition of contemplative thinking as the students’ contemplation (research sample) of the situation that they have given them and analyse it to its basic elements, then find the right relationships between these elements, (drawing or planning) of these relationships, and then develop proposed solutions to solve the existing problem.

Expressive performance is defined by Hashemi as the “achievement of students when expressing the chosen topic (in the lesson of the art of drawing) to disclose their thoughts and feelings in a sound manner. This achievement is measured according to the standard which is prepared for research purposes” (Al-Hashemi, 2005, p. 205). Similarly, Ashour and Mohammed define this concept as “disclosing the thoughts and feelings of the soul in linguistic methods, especially through conversation, writing or drawing. Through expression, the personality and talents of the speaker and writer can be revealed” (Ashour, 2007, p. 215). From these explanations, the research dictates the procedural definition of expressive performance as the technical achievement (drawing) of the student of the research sample when he expresses his thoughts, feelings and emotions in a sound way in the subject which is presented to him. This is measured according to the correction tests adopted in the research is and expressed by the grades obtained by the student.

## Chapter Two

### Theoretical framework

#### *First subject: Contemplative thinking skills in artistic expressive performance in the preparatory stage*

Contemplative thinking is a method of collective creativity to solve problems by compiling a list of ideas and solutions that individuals can contribute to spontaneously. In other words, a group of people, or students in terms of the current study, collaborate to problem solve in new and innovate ways. This method is based on the principles of spontaneity and freedom, and aims to allow all group members to put forward ideas and solutions without fear of criticism or rejection. These ideas are then recorded and evaluated in an attempt to find the best solution to a particular problem. Contemplative thinking has become a popular collective method and has aroused the attention of educators. Several studies have tested Osborne's hypothesis that meditative thinking is more efficient than other methods of producing ideas. Some studies support this hypothesis while others reveal errors in the research and determined that the results were not conclusive. In addition, research which is carried out in this regard has added modifications and changes to contemplative thinking in an attempt to improve productivity.

Empirical evidence indicates an effective change or development from the usual method. Contemplative thinking can be highly effective, however, particularly when used in the expressive performance of preparatory stage students in areas of problem solving, team building, expressive performance, practical planning and project management. This method can encourage creative thinking and unleash learners' potential within atmospheres of freedom and security (Mohammed, 2004, p. 4). The Arabic language has had an active societal role in terms of contemplative thinking. Arabic is more representative in the life of the Arab society as a tool for the descent of the last messages of the eternal miracle of God (Almighty) which were deposited in the Arabian Peninsula. These messages are considered the language of communication and understanding among its inhabitants, and act as a prelude (heaven) to the seal of the messengers and prophets Muhammad (peace be upon him) (Roy, 2008, p. 15).

#### *Second subject: The concept of thinking*

The current era is characterised by rapid changes surrounded by many challenges, and those changes include scientific progress, technological development and rapid communication and transportation. In order to keep up with these rapid advances, attention must be paid to the development of creative minds capable of solving existing problems. Shaping and growing

the mental capacities of students has thus become paramount in educational processes worldwide, the achievements of which act as strong indicators of a country's progress. Many countries have therefore made strenuous efforts in spending large amounts of money and conducting extensive research in accordance with the principles of targeted education. These efforts seek to organise and expand students' thinking, invest in their abilities and ultimately benefit from their creative energies (Al-Tabati, 2001, p. 49). In this regard, it is necessary to provide environments in which students are personally involved in the construction process and in which they can effectively learn and develop.

The most important indicators of the research include contemplative thinking as dependent on how to face problems and change phenomena and events, and the historical roots of contemplative thinking which date back to ancient beginnings. Further, meditation is a call adopted by all religions of heaven, but most strongly maintained by the Islam faith. Thinking is considered an Islamic obligation as the actions of reason, reflection and thinking on creatures (Allah Almighty) and examining the realities of existence are concepts that the Holy Qur'an has imposed on all beings. Contemplative thinking should also be considered as a blessing that has distinguished man from other beings. A country's progress can also be measured by its ability to develop the minds of children and students as its future leaders, and thus contemplative thinking works to strengthen these students' abilities in expressive subjects and to study them in systematic ways. Contemplative thinking is a method of collaborative creativity and expressive performance rooted in the depths of Arab history, marking its importance in past, present and future use. Finally, contemplative thinking in expressive performance is a method to stimulate ideas and unleash creativity.

## **Chapter Three**

### **Research methodology procedures**

A community is defined as all individuals or elements who share similar characteristics that can be observed, reached and sampled. The research community for this study was the Secondary School of Hilla for Boys, which belongs to the General Directorate of Education of the Province of Babylon. To achieve the research goal, this research community was randomly chosen by the researcher. The study sample was then selected from the Fifth Class applied sciences division (A, B) to represent the experimental group that studies the subject of expression according to meditative thinking skills. The Fifth Class scientific biologist division (C, D) was selected to represent the control group that studies the expression in the usual way. This research sample consisted of 150 students in total, broken down using a half-split method into 75 students for the experimental group and 75 students for the control group. This was dealt with statistically between the students of the two research groups by

control of the following variables: student age (equal in months), grades of art education in the mid-year test and parents' levels of educational attainment of parents.

After identifying the candidate topics, two plans were presented according to the contemplative and usual thinking skills as the experiment subjects of this study. The first comprises of 75 students of the Fifth Scientific Applied division (A, B) Day Study at the Centre of Babil Governorate (Hilla) for the 2018-19 academic year. The second comprises of 75 students of the Fifth Scientific/Biological Division (C, D) Day Study at the Centre of Babil Governorate (Hilla) for the 2018-19 academic year. After excluding students who incur absences or do not maintain regular hours, 150 students were recorded for the study across both specialisations. Upon visiting this school, the researcher found that it contained two specialties for the Fifth grade sciences (applied and biological), and so the applied speciality of (A, B) was chosen. Through random withdrawal taught according to the skills of contemplative thinking, an experimental group division (C, D) taught according to traditional, or usual, thinking skills was formed as a control group. The study participants are further depicted in Table 1 below.

**Table 1:** Research community in terms of student numbers of the General Directorate of Education of the Babil Province

School name	Students of the Fifth Scientific Applied Division (A, B)	Students of the Fifth Scientific/Biological Division (C, D)	Total number of students
Hilla Preparatory School for Boys	75 (experimental group)	75 (control group)	150

The art expression subjects comprised of the following projects:

- 1) The expression of a project drawing measuring  $80 \times 120$  entitled "Cooperation."
- 2) The expression of a draft drawing measuring  $80 \times 120$  entitled "Intimacy and Compassion Among Muslims."
- 3) The expression of a project drawing measuring  $80 \times 120$  entitled "Workers Square."
- 4) The expression of a project drawing measuring  $80 \times 120$  entitled "Market."
- 5) The expression of a project drawing measuring  $80 \times 120$  entitled "Places of Worship."

### ***Sample of the pilot study***

The pilot study was conducted on a sample of 15 students of the Fifth preparatory to determine students' characteristics and abilities to express, understand and discuss the supplied scientific material. These materials consisted of three expressive titles, including the expression of a project drawing measuring  $80 \times 120$  entitled "Places of Worship," and the

expression of a project drawing measuring 80 x 120. Other meanings were also derived but which cannot be mentioned, in which the emphasis was on the various implications of these titles in a manner commensurate with students' skill levels, ages, classes and physical growth, as according to experts.

The sample of the basic study comprised of 150 students of the Fifth applied and biological sciences. The capacity of this community and the subject of art education (expression) as a theoretical subject in which drawing constituted the largest component of practical application where other aspects were excluded led the researcher to rely on this application as it formed the most accurate representation of public education. In making this decision, an operation compatibility was also conducted according to the variables of gender, educational environment and educational level.

### ***Methods of data collection***

Experimental methodology was employed to verify the objectives of this research and to ensure the effectiveness of teaching in presenting expressive titles within the field of painting. Data collection tools comprised of open oral interviews, pre-testing and post-testing. The researcher relied on the tribal test in the practice of drawing art, in the teaching of students and in the post- test.

Following the experiment and collection of the results, which included outcomes of the post-test, the researcher made a number of evaluations and corrections. First, after collecting students' results of expression in the field of painting, the researcher randomly selected 5 works from that group for the purpose of correction according to the evaluation form. These were then re-corrected by the researcher after a two-week period to calculate stability over time. Together with two arbitrators and correctors, the researcher then adjusted the results of that group (10 results of the research sample), after explaining to them the objectives of the study, the paragraphs of the form and how to assign grades of weak, medium or good. Next, the 10 results were individually corrected using the same evaluation form and for the same works. Finally, the Pearson Correlation Coefficient equation was employed to determine the reliability coefficient. In order to confirm the validity of the use of the form, the Spearman Brown equation was applied to extract the correlation coefficient as a total. Correlation coefficient ranges were between 86-92 and produced acceptable rates of 89%, thus forming high ratios amongst arbitrators and between the researcher and the arbitrators, and were therefore concluded as reliable.

Experimental designs varied according to the nature of the research, including designs of single groups, two groups (experimental and control), or more than two groups. The researcher chose the experimental design of one group with both pre- and post-tests to

achieve the study objectives. The independent variable in this study was contemplative thinking while the dependent variable was expressionist performance. The study was conducted in assistance with Professor Aref Waheed Ibrahim of Babylon University in the Faculty of Fine Arts and Department of Plastic Arts, as well as Professor Hamid Abbas Mukheif of Wasit University in the Faculty of Fine Arts and Department of Plastic Arts (experienced professor).

Confounding variables were controlled as strictly as possible, and included students and school year; the subject of art education in expanding and developing students' imaginations; the teacher of the subject, who was the researcher of this study; both male and female students' ages which ranged from 17-18, and lastly, the time period of the experiment, which was applied from 20/2/2018 – 20/4/2019 in secondary schools through 15 student meetings and two weekly lectures.

The success of the program was dependent on a set of principles designed to best develop students' thinking and imaginations. These characteristics included psychological and educational aspects. The psychological elements considered students' personalities in terms of individual differences, maturity levels, attention to homework and interaction in the classroom. The educational aspect involved choosing the program according to the philosophy of education for the level of preparatory study and its educational and scientific values, and considering the role of the leading teacher in classroom management.

Statistical methods comprised of the following:

Pearson Correlation Coefficient equation:

$$r_{xy} = \frac{\sum x_i y_i - n \bar{x} \bar{y}}{\sqrt{(\sum x_i^2 - n \bar{x}^2)} \sqrt{(\sum y_i^2 - n \bar{y}^2)}}.$$

Pearson Correlation Coefficient:

$$r = \frac{n \sum xy}{\sqrt{n \sum x^2 \times n \sum y^2}}$$

**cooper equation=**

Number of times of agreement  $\times 100$

**T- test for single sample** = Number of times of agreement + Number of times of disagreement

## Chapter 4

### Results and discussion

This chapter presents the results and an interpretation of their conclusions, recommendations and proposals. In order to verify the research hypothesis and determine the skills involved in contemplative thinking and their effects on preparatory students' drawing performances, the researcher conducted two tests on the experimental group before and after the application. Differences in the results of these t-tests, both pre and post, were then measured to produce the following findings. From the conducted experiment, a statistically significant difference appeared at a level of significance (0.05) between the average score of students in the experimental group in the pre and post T-tests and in favour of the post-test, as seen in Table 3 below. These findings reject the first hypothesis that there is no statistically significant difference at the level of significance (0.05) between the average score of the experimental group students in the pre and post-tests. This means that the experiment had an impact on the development of imagination in the artistic expression of secondary students.

**Table 3:** Significance of differences between the pre and post-tests of the experimental group

Test	Number	Average	Standard Deviation	Calculated T df 149	T-tabular df 149	statistical significance
Pre	75	9.1	1.61	20.375	2.68	Function
Post	75	25.2	1.8			

The second hypothesis is therefore accepted in that there are no statistical differences between the average scores of the experimental and control groups through using the T-test, as seen in Table 4 below.

**Table 4:** Significance of differences between students in the experimental group in the post-test

Group	Number	Average	Standard Deviation	Calculated T df 47	T-tabular df 47	Statistical significance
Experimental	75	26.5	1.90	10.73	2.72	Non function
Control	75	23.9	1.75			

The results of the current research show a difference of moral statistical significance in the post-test by developing the imagination of secondary school students of the Fifth applied scientific division. These results are seen in the students' artistic expressions with the effect of contemplation thinking, and in favour of the experimental group at the significant level of 0.05 in the T-test. The statistical results of the first hypothesis showed a difference between the average achievement of students in the experimental group between the pre and post-tests. Students' average achievements in the tribal test was equal to 9.1 while the average achievement of the same group in the post-test was equal to 25.2, thus producing a difference equal to 16.1. This data can be explained by the effective lesson presentation and engaging several senses of the student. This approach is based on the scientific rule that the best learning is done by involving as many senses as possible through incorporating sensory, motor and visual stimuli through diagrams and fixed or animated drawings. These materials contributed to more effective thinking and problem solving among students and expanded their understandings of presented topics than usual methods of abstracting techniques might accomplish. Results also showed no moral statistical function for the effect of gender, as shown in the statistical results of the post-test for the second hypothesis at the level of significance (0.05) in the t-test as students were of the same sex. Finally, observation of the differences between the average educational levels of students' parents produced little significance.

The verbal interaction of meditative thinking in the narrative of the lessons was found to have a significant and clear effect on successful responses. This effect was manifested by opening the minds and imaginations of preparatory students in their drawing performances. Additionally, the series of movements in students' drawing performances from the transmission of nerve alerts to muscles generated artistic performance in the act of drawing and painting as imagined by the students. Classroom learning was seen to impact on students' performances in terms of the fostered atmosphere of participation, which allowed students to freely interact and discuss the images and sounds shown by the teacher. Further, it is necessary to consider the analytical aspects of the content of each title, or subject. The analysis of the subject to the primary units and the preparation of each subject to finalise the movement, performance, voice and colour successfully aroused focus and interest among the students, especially those aged between 16-17 years. The diversity of literary expression displayed among students resulted from the development of their imagination and its projection in written expressions. Finally, follow-up and promotion of good responses and error corrections to literary expressions were found to positively impact students' mental states and increased students' desires to repeat the writing again. Some of the students discussed the researcher by analysing and interpreting their writings in front of students, and others discussed their mistakes.

The results of this research indicate a clear positive impact of the conducted experiment on the development of imagination in the literary and artistic expressions of secondary school students. From these findings, a number of recommendations are proposed. First, Arabic language and expression lessons should include titles similar to the current research experience. Second, the relevant authorities in the Ministry of Education should open training courses for Arabic secondary school teachers on how to use complete thinking in teaching, in line with the current research experience. Students of middle and secondary schools should also be educated on how to write, prepare and produce programs similar to the current research experience. The researcher suggests conducting further studies on the effects of complete thinking on students' development in other subjects outside of those focused on in the current research. A comparative study of the effects of complete thinking between the rural and urban environments of students would also generate important results for future of enhancements in education.

### **Annex No. (1)**

#### **Experiment requirements**

The search required the preparation of a number of key materials, topics and plans. The identification of scientific material involved designing a questionnaire that included twelve expressive subjects, which was presented them to a group of experts and specialists in the department of technical education and teaching methods and from which certain topics were selected. A table for the researcher was set up to date its application during the experiment period. The experiment also included the subjects of drawing and pictorial construction to be taught in the subject of expression (drawing). Some topics taught during the term included expression (the oral expression class was excluded) and the researcher relied on the applied or practical expression class to be able to correct it. Lastly, teaching plans were prepared and were of particular importance within the complex educational process. These plans organise teaching and learning efforts, activity times, and can ensure the progress of work in the classroom is structured towards achieving the desired goals. Model titles, or topics, were presented to a group of experts and specialists and were amended as necessary.

### **Conclusion**

This study suggests adopting skills of contemplative thinking in teaching art education (drawing) for the students of preparatory schools which have achieved good results. Further, results show that teachers of these students must be also appropriately trained in contemplative thinking skills. Art education and drawing must be sufficiently considered by schools and not neglected or replaced with other subjects. Finally, the researcher suggests conducting similar studies for other age groups and academic stages or branches, such as vocational, artistic and scientific branches.

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