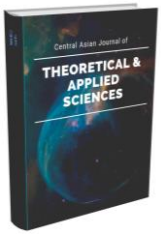

CENTRAL ASIAN JOURNAL OF THEORETICAL AND APPLIED SCIENCE

https://cajotas.centralasianstudies.org/index.php/CAJOTAS

Volume: 05 Issue: 04 | July 2024 ISSN: 2660-5317

Article

The Impact of the Four-pillar Strategy on the Creative Thinking of Fine Arts Students

Nawfal Shamkhi Naji [1]

1 A-Qasim Green University, Babylon 51013, Iraq.
* Correspondence: naufal@uoqasim.edu.iq

Received: April 11, 2024
Revised: April 29, 2024
Accepted: July 22, 2024
Published: August 10, 2024

Abstract: The research aimed to find out the impact of the strategy of the four pillars, in creative thinking, for students of fine arts, in addition to adjusting the creative thinking skills of fine arts students, according to the strategy of the four pillars, to achieve this, the researcher used the experimental method, with his experimental and control groups, and a test (before and after), for the two samples of the research, this was done by choosing the researcher his research community, in the intentional way, as it was students of fine arts, University of Babylon, for the academic year / 2023 2024 / morning study, the third stage of the Department of Art Education, and in the way The researcher chose his research sample, as it was (40) male and female students, (20) for experimental, and the same for the control, the researcher adopted the scale of creative thinking for Yusra Hassan 2004, after verifying its suitability for the sample studied, and then built (10) units for teaching graphics, according to the strategy of the four pillars. The researcher carried out a pre-test for the two samples of the research, then proceeded to apply the curriculum prepared by him to the experimental sample, without the control, which was taught in the curriculum prescribed for graphics, when the researcher finished implementing his educational program, he conducted a test for the two samples.

Keywords: Impact, strategy, four pillars, thought, creative thinking.

1. Introduction

The industrial revolution that occurred in the world in various fields, followed by a revolution in the field of information and science, as science diversified and differed to meet the needs of modern man, this diversity and difference created a huge amount of information, which necessitated the emergence of an actual need for the process of organizing that information and refining ways to deliver it to students, so specialists in the field of education have found new non-traditional ways and strategies to teach those sciences and knowledge and ensure their delivery to the learner in effective and organized ways, so the strategies varied accordingly, and in this research touches on The researcher pointed to one of the strategies that deal with the cognitive aspect, which is the strategy of the four pillars to know its impact on the creative thinking of fine arts students.

As the researcher noticed a kind of lack of organization in the artistic productions of fine arts students, especially with regard to graphics, which indicates a weakness in their creative thinking skills, and to develop this type of thinking, the researcher used this strategy with the aim of organizing creative thinking among fine arts students at the University of Babylon, as the four-pillar strategy can transfer the learner from the state of inactivity Creative thinking among students of fine arts is unique in its high empowerment in helping students to produce their artworks, which must be organized

according to social and environmental frameworks that contribute to strengthening their general thought and enhance their cultures, (Ibrahim, 1978, pp. 48-49), so the importance of this research is reflected in being one of the rare studies that dealt with the application of the strategy of the four pillars in the field of arts, according to the researcher, in addition to being the first study that is concerned with applying this strategy to creative thinking and measuring its impact on it.
For students of fine arts / University of Babylon in the subject of graphics, and this importance is divided into two parts:

Theoretical significance:

It can monitor indicators related to the creative thinking of fine arts students, and adjust these indicators according to the strategy of the four pillars of graphics.
Scientific importance:

It can make it easier for students of fine arts to organize their creative thinking, which reflects positively on the production of works of art in the subject (graphic), and can be used in the development of the educational system specialized in aspects of artistic production, in addition to the possibility of university professors benefiting from it by applying it in

Search problem

Artistic productions are subject to a set of factors and determinants, including the way of organizing thinking for students, and from the researcher's access to many of the students' artworks and their aesthetic products, it was found that there is a weakness in the way of organizing, harmonizing and balancing many of them, which led to the lack of aesthetic feasibility in them, and to address these cases, the researcher sees the need to organize students' creative thinking skills and adjust them by applying the four-pillar strategy and measuring its impact on graphics, as it is known that human thought is variable and can grow and decay, It can be developed through practice and training, to enable it to find appropriate solutions to the educational problems it faces during the learning process, and to enable it to follow the optimal and even typical methods to solve it. (Cross, 2011, p74).

This is consistent with the graphic material in the faculties of fine arts and the need to solve the problems faced by students during the completion of their artwork in line with the orientations of their society, taking into account the general taste in organizing them, and for the researcher to note the large number of errors in the production of graphic artworks among students, and the lack of organization of their content to serve the individual and society, the researcher sees the possibility of

What is the impact of the Four Pillars strategy on the creative thinking of fine arts students in graphics?

Research Objectives

1-Knowing the impact of the strategy of the four pillars in the creative thinking of fine arts students.
2-Adjusting the creative thinking skills of fine arts students according to the strategy of the four pillars.
Research hypotheses
1-There are no significant differences in the level of significance (0.05) in the creative thinking of fine arts students in graphics, in pre- and post-tests, for the two research samples (experimental and control).
2-There are no significant differences in the level of significance (0.05) in the creative thinking of fine arts students in graphics, in pre- and post-tests, for the two research samples (experimental and control), attributed to the gender variable.

Research Frameworks

The research frameworks are divided into the following:

1-Objectivity: It was represented by measuring the creative thinking of fine arts students according to the strategy of the four pillars.

2-Spaticial: Republic of Iraq / Babylon Governorate / Hilla City / University of Babylon / College of Fine Arts / Department of Art Education.

3-Temporality: the first semester of the academic year (2023-2024).

4-Humanity: Students of the Faculty of Fine Arts / Department of Art Education / morning study, numbering (88) male and female students.

Search terms:

Impact:

Arafa (Al-Essawy, 1974, p. 71), what results from the positive behavior of the student, be with satisfactory and distinct results that the human being tends to follow and acquire the optimal ways to learn it.

Abu Maqli, 2011, pp. 341-342, see the change that occurs in behavior or results in both desirable and undesirable parts depending on the learning process.

Procedurally: The researcher defines it as the impression that is based on the human self, positively or negatively, as a result of the behavior of others, leading students to simulate it, and produce images synonymous with it.

Strategy:

Mohammed (2010, p. 45) defined it as the shortcut to achieve the goal, or the guide to his followers to achieve the desired goals.

As for (Attia, 2009, p. 341), he sees the set of means and procedures provided by the professor to provide students with information, skills and experiences, in order to achieve general and educational goals.

Proceural: The researcher defines it as the set of laws and instructions followed by the university professor in order to provide students with the technical and scientific skills and information necessary to create a conscious generation that connoisseurizes the arts and contributes to its society.

The Four Pillars:

Badawi (2010, p. 465) defined it as one of the cognitive strategies concerned with active learning, giving students the opportunity to participate actively, from decision-making in an educational problem posed to them, and clarifying its answers within the four pillars of the grade.

While Al-Shammari, 2011, p. 92 sees it as a strategy that provides feedback to students, encouraging them to ask questions within the scope of learning, and opening the way for discussion among them, to find the best answers to them.

Procedurally: The researcher defines it as a set of methods disciplined by the pre-set laws, which would awaken the learning motivation of fine arts students and push them towards new, diverse, and unfamiliar educational practices, that contribute to focusing information in their minds more than the usual method of education, as it develops competition between them and pushes them to delve into the learning experience in it.

Think:

Defined by (Ibn Manzur, 1955, p. 319) as a compound word, derived from three letters are a sufficient fulfillment ra, means finding the means, by moving the self calendar, it is said thought any preach.

He sees it (Jameel, 2021, p. 714) as the mental connections that students make, to produce mental images, help them interpret the educational situation, and find solutions to their educational problems.

Procedurally: The researcher defines it as a mental activity, derived from mental energy, practiced by the student of fine arts, with the aim of directing it to solve scientific problems, which are practically embodied in the resulting works of an aesthetic nature.

Creative thinking:

Torrance (1996, p63) defined it as a process carried out by the learner, which makes him more sensitive to knowing the shortcomings, and enables him to face problems and

know the gaps in the information presented, and thus find appropriate solutions to them, after innovating hypotheses and testing their validity.

While (Hassan, 2004, p. 11) sees it as the ability of the learner to produce works with a distinct degree of automatic flexibility, intellectual fluency, and originality, enabling him to find coherence and connection between familiar things, and the researcher has adopted this definition for his suitability in the course of research.

Procedurally: The researcher defines it as the mental ability resulting from a set of mental processes and connections, carried out by the fine arts student, enabling him to create new artistic models, and unfamiliar works, characterized by aesthetic, general and specific fluency, flexibility and originality.

Chapter Two

Research Methodology and Field Procedures

1- Research Methodology

The researcher must follow the shortest and most effective ways, in order to reach the accurate results, and the appropriate answers to the problem, and the hypotheses included in the research, this is done by choosing the appropriate scientific method (Al-Zobaie, 1981, p. 102), so the researcher has chosen the experimental method, with two tests (before and after), for the two research samples.

2- The research community

It is the individual units deducted from the general human society, represented by students (Obeidat, 1998, p. 113), as the researcher determined his research community in the intentional (non-probability) way represented by the students of the Department of Art Education at the Faculty of Fine Arts / University of Babylon for the first semester of the academic year (2023-2024) morning study, numbering (88) male and female students.

3- The research sample

is what the researcher targets in his research, as it is selected from the general community of the research, the researcher conducts the experiment on it (Daoud, 1991, p. 67), and divided by the researcher into exploratory, which was chosen by the researcher in a random way from the general research community, it was by (48) male and female students, by (28) students, and (20) female students, the researcher conducted his experiment on them

4- (A) Research tool

The researcher adopted the scale of creative thinking prepared by Dr. (Yousra Hassan, 2004), as it consisted of five paragraphs, measuring in total the three skills of creative thinking (fluency, flexibility, originality), after presenting it to a group of professors specialized in the field of fine arts, measurement, evaluation and psychology, in addition to a professor in the Arabic language to know the validity of paragraphs in terms of language, the results showed the arbitrators the validity of the paragraphs for the research sample and their suitability by (100%), and the total scores for these The three skills represent the overall score of the Creative Thinking Scale.

B: Correction of the scale: To correct the scale of creative thinking, the researcher adopted four answers for each student from the survey sample, represented by (fluency), measured by the researcher from the students' mention of the largest number of answers that suit the skill, which was directed in more than one comprehensive meaning to the tests conducted by the researcher in the first section, it suits her that the examiner mentions the largest number of correct words that suit the second section of the tests, while (flexibility) was measured by the researcher by the ability of students to mention their answers as many as possible, As it increases in the

5- Calculating the total score of the scale

The total score of the scale, represented by collecting the total values of the scores of the three skills test for creative thinking (fluency, flexibility, originality), which were included in the test units submitted to the sample, as the amount of their arithmetic mean for those skills (86.911), the value of their standard deviation (5.143), their standard error (0.687), their variance (26.446), their twisting (0.183), and their flattening (0.497).

6-Main Experiment Procedures

A: Pre-test: Students were tested in a pre-test for both samples (experimental, control), as it was (20 male and female students each) within the divisions (B / experimental, E / control), on Wednesday (1/11/2023), at (12) noon, in the hall of the Faculty of Fine Arts.

B: The equivalence of the two research groups: The researcher verified the equivalence of the experimental and control group, in order to know the differences that belong to the experimental process, as he used (T-test) as a statistical means to find out, the result was that (value 0.05), less than (sig), the level of significance of the test, so the two groups showed equivalence, Table (1) below shows that.

Table (1): Equivalence of the two research samples

Standard deviation	Arithmetic mean	Standard deviation	Significance	Calculated T	Experimental Control Sig	Creative Thinking Test
74.35	1.66	75.60	2.52	Random	1.85	0.08

7-Study Units (Construction and Implementation)

The researcher built his study units following (the strategy of the four pillars), to implement them on a sample (experimental research), and it was (10) study units, according to the prescribed graphic material, which included three sections and (four steps) for each unit, the researcher, with the help of the professor of the subject, applied it to the experimental sample, starting from Wednesday 01/11/2023), after consulting professors with specialization, and conducting many interviews with them, and using the prescribed curriculum for graphics, and the total time of the units reached (600) minutes, (60) minutes per unit, either Its three sections are as follows:

1- Preparatory

The total time for this section is 100 minutes, including 10 minutes per unit of study, and included (introduction and introduction) as shown below:

A / Introduction: The total time is 50 minutes, five minutes for each unit of study, this part included the teacher's performance of the greeting and recording the attendance of students.

B / Introduction: The total time is 50 minutes, five minutes for each unit of study, in which the professor of the subject provides the appropriate introduction to the topic, in which he reviews the most important points of the lecture topic.

2-Main: Total time (450) minutes, 45 minutes for each unit, divided by the researcher (10 minutes for planning) with a total of (100 minutes) for the total units, and 15 minutes for the creativity stage, with a total of 150 minutes for the total units, and 10 minutes for the stage (research and exploration), with a total of 100 minutes for the total units, and 10 minutes for the artistic production stage, with a total of 100 minutes for the total units.

In this section, the professor plans the topic of the lecture, arranges and divides the classroom, empties the four corners of the class, and prepares the students for the topic of the lecture, then he displays a short explanatory video about the topic and how the

students deal with that topic, then determines the answers and asks questions before them, and provides the teaching aids.
3-Conclusion: Total time (50 minutes), five minutes for each unit, in which the professor clarifies the important information addressed in the lecture, confirms it, and draws the attention of students to it, in order to focus it in their minds, and then assign students to subsequent topics as homework.

8-Post-test

After the professor finished delivering the scientific material to the students, and fully implementing the curriculum prepared by the researcher, the researcher, with the help of the professor, conducted a post-test for the experimental and control research samples, on Thursday (1/2/2024) at twelve o'clock in the afternoon, after which the researcher conducted the appropriate statistical analysis to extract the results.
Ninth: Statistical Methods:

Axel program, T-test (sample test), spss (statistical bag).

Chapter Three

Presentation and interpretation of research results
1-The first hypothesis: its results and interpretation: The first research hypothesis stipulated that "there are no significant differences in the level of significance (0.05) in the creative thinking of fine arts students in graphics, in the pre- and post-tests, for the two research samples (experimental and control)", to verify (accuracy, validity and error) of this hypothesis, the researcher applied the appropriate test, which is (T-test) for the samples, and then performed the appropriate calculations on the data of both groups (experimental, control), in the post-test of creative thinking, the results showed as shown in the Table (2) below.

Table 2: Hypothesis results (1)

audition	Before me after me for the sample	Experimental and control	Significance	Calculated T	Experimental Control Sig	Test / Post
Moral	8.91	0.00	91.65	2.76	80.65	4.78

According to the results included in Table (2) above, the value of the arithmetic mean of the two samples in the pre-test (80.65), which is less than its value in the post-test, as it reached (91.65), while the standard deviation of the two samples _ experimental and control, in the pre-test (4.78), which is higher than its value in the post-test for both samples, as it reached (2.76), and the value of T-test calculated, is (8.91), at the level of significance (0.00), which is less than the value of (0.05), this confirms the existence of significant differences In the two tests (before and after), in favor of the post-test.

The results showed an impact of the strategy of the four pillars in the creative thinking of fine arts students, in the pre- and post-tests of the two research samples, in favor of the post-test, so the researcher refers to the impact of that strategy in enhancing the creative thinking skills of fine arts students, in graphics, for the students of the experimental sample, the results showed progress in the post-test for them, and outperformed the students of the control sample, as for the students of the control sample, the researcher noted from the results of the first hypothesis, that their levels of creative thinking Below their levels among the students of the sample.

Another impact attributed by the researcher to that result, as the study units built by the researcher according to the strategy of the four pillars, had an important impact on the progress of the experimental sample, which was taught according to those units, it

contributed to organizing the lecture, and facilitating the delivery of information to students, and focusing it in their minds, and this did not happen as required in the usual teaching process, which was received by the students of the control sample, who were taught according to the prescribed curriculum, in the usual way of the professor, in addition to the validity of the graphic material in the possibility of containing it For the different teaching strategies, including the strategy of the four pillars, and the possibility of codifying the steps of this strategy according to the vocabulary of the curriculum prescribed for the graphic material

This contributed to the ease of applying this strategy to it, and this reflected positively on the level of students' comprehension, understanding of the topics of the lectures and increasing the organization of their artistic productions.

Therefore, the researcher rejects the first research hypothesis, in its current form, and replaces it with the following formula: ""There are significant differences in the level of significance (0.05) in the creative thinking of fine arts students in graphics,

2-The second hypothesis: its results and interpretation: The hypothesis stated: "There are no significant differences in the level of significance (0.05), in the creative thinking of fine arts students, in the graphic material, in the post-tests of the two research samples (experimental and control), attributed to the gender variable", and to verify the (correctness, accuracy and error) of the above hypothesis, the researcher used the sample test (T-test), then conducted the appropriate calculations on the results shown by the post-test (for the experimental and control sample), for the creative thinking variable, according to the variable mentioned (gender), and extracted The values for the test (post, post) for the two samples examined, 0 after me for the student sample), (and after me for the female sample), after making a balance between the two groups, the results were as in Table (3) below:

Table (3): Results (Male and Female Students)

After, after / Students	Creative thinking test for the two samples	Experimental and control	Significance	Calculated T	Experimental Control Sig	Test / Post
Moral	4.85	5.56	81.22	2.71	91.75	7.55

According to the results shown by the above table, it was found that the standard deviation of the control research sample (5.56), in the post-test, after (students), and this value is higher than in the post-test, after (students), for the experimental sample, which amounted to (2.71), while the arithmetic mean of the control has reached (81.22), in the post-test, after (students), which is less than in the same test for the experimental sample, as it reached (91.75), at the level of significance (0.00), which is less than (0.05), either the value of (T-test) calculated, reached (4.85), this means superiority of the experimental sample on the control, and with regard to tests (after me, after students), the standard deviation of the control sample reached (4.26), which is higher than its value in the experimental sample, as it reached (2.91), while the arithmetic mean of the control, it reached (80.18), at a rate lower than its value for the experimental sample, as it reached (91.58), and the value of (T-test) calculated, amounted to (7.55), with a level of significance (0.00), which is higher than (0.05), meaning superiority A sample (experimental sample students) on (control sample students) in the post-post-test, for the creative thinking variable.

From the above values of Table (3), the researcher also shows that there are significant differences between the eye

Therefore, the researcher rejects the second hypothesis of this research in its current form, and replaces it with the following formula: "There are significant differences in the

level of significance (0.05), in creative thinking, for fine arts students, in graphics, in pre- and post-tests, for the two research samples (experimental and control), attributed to the gender variable".

Conclusion

1- The existence of a positive impact of the strategy of the four pillars, in creative thinking, for students of fine arts, in the subject of graphics.
2-The existence of a positive impact of the application of the study units, which included the steps of the strategy of the four pillars and the curriculum prescribed for the graphic subject, on creative thinking, for students of fine arts.
Recommendations
1-The interest of university professors in developing creative thinking among students in their various stages of study.
2-Conducting similar studies to measure the creative thinking of fine arts students in other subjects, such as planning, colors, calligraphy and decoration.
3-Conducting studies, with the aim of revealing the impact of other cognitive strategies, in the creative thinking of fine arts students.

REFERENCES

1. Ibrahim, Abdul Alim,"Technical Mentor for Arabic Language Teachers", Egypt Dar Al Maaref, vol 13, pp. 48-49,1979.
2. Harp, Albert-Abdallah Rossette. "Perceptions of Arab-American parents concerning multicultural education." PhD diss., Wayne State University, 1998.
3. Abu Maqli, Samir,"Introduction to Educational Psychology". Jordan. Amman: Dar Al-Bazouri. pp. 341-342,2011.
4. Marzouk, Maher Abdel Sattar Amin, Naeem, Arafa Ahmed Hassan, Al-Muqaddim, & Mohamed Mohamed Ahmed, "The effectiveness of the aesthetic approach and the scientific applications approach in developing science concepts among students in the second cycle of basic education". Education (Al-Azhar): A peer-reviewed scientific journal for educational, psychological and social research,vol. 41, pp. 275-315,2022.
5. Jameel, Taiba Mohammed Shukri, "Design Thinking for Typographic Design Works in Animation Films." Journal of Development Brightens: Vol. (18).p(26): 714, 2022.
6. Good, left, "Creative thinking and its relationship to the social status of middle school students." Master's thesis. University of Baghdad. College of Education for Girls. pp. 11, 2004.
7. Al-Haila, Muhammad Mahmoud, "Teaching Methods and Strategies". Jordan: World Book House. pp. 201, 2003.
8. Daoud, Aziz Hanna, "Research Methods in the Behavioral Sciences." Cairo: Anglo-Egyptian Library, pp. 67, 1991.
9. E. Hidalgo and C. Domınguez, "Study of cytotoxicity mechanisms of silver nitrate in human dermal fibroblasts," Toxicology letters, vol. 98, pp. 169-179, 1998.
10. Al-Zobaie, Abdul Jalil Ibrahim, "Research Methods in Education." Baghdad University of Baghdad. pp. 102, 1981.
11. Cross, N "Design Thinking: Understanding how Designess Thinking and work", Oxford. UK Berg, pp. 74, 2011.
12. Torrance, E. , "Gifted children in the classroom(2 and end)": NEW YORK : The Macmillan. CO. pp. 63, 1996.