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**THE EFFECT OF AN EDUCATIONAL PROGRAM BASED ON
THE 4MAT SYSTEM ON THE SKILLFUL PERFORMANCE OF
THE STUDENTS OF THE INSTITUTE OF FINE ARTS IN THE
SUBJECT OF GRAPHIC ART**

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ABSTRACT

The research revealed for the impact of an educational program based on a system 4mat In the skillful performance of the students of the Institute of Fine Arts in the subject of graphic art , the sample was intentionally chosen from the Institute of Fine Arts for Girls (Printing and Fabrics) sub-branch (printing and fabrics) of (14) students who represent the experimental group that will be exposed to the independent variable (an educational program based on the system4mat When teaching graphic art) , the results of the research resulted in the superiority of the female students of the experimental group who studied according to the educational program based on the system4mat , Where the size of its impact was very large in the achievement of students (knowledge and skills) in graphic art . The results of the current study indicated that the effect of the educational program is based on a system4mat the skill performance of the students of the Art Institute is very large, which indicates its effectiveness in teaching. This is attributed to the application of the students to experiment with printing skills on their own. This has increased their motivation to learn.

Introduction

Educational programs play an important role in the educational process if used properly " if it has a prominent role in the development of many of the skills and abilities of both the teacher and the learner both in terms of enriching education, economic education, and raising the attention of the learner and satisfy their needs and help programs Educational programs involve all the senses of the learner in education ... which increases the motivation of the student to learn, arranging the ideas that he creates, modifying behavior and forming new directions . (Nabhan , 2010) One of the advantages of educational programs is the direct obtaining of the response result and this leads to confirming the correct response and achieving learning, This is called immediate feedback that increases the motivation of the learner towards learning (Al Sulaiti, 2008) and the inclusion of system steps 4mat In education, the student makes the focus of the educational process, because he deals with the information himself directly, and he who searches, classifies, examines and processes the information, thus he achieves effective learning . McCarthy 's system Visser, in the quadrant cycles of sequential stages of learning a fixed sequence is (stage contemplative, crystallize the concept, active experimentation, physical experiences perceived). (Flippin,2009)Therefore, McCarthy divided the learning styles and learners on the brain functions that control the learning outcomes of behavior and perception, because the functions of the two hemispheres of the brain are difficult to separate, so it can be said that every learner has a preferred pattern and other less preferred patterns, that is, they can be developed through We offer a variety of experiences to the learner. And that evaluation is a continuous process with every step of teaching according to a system 4mat Where the first step raises the student's interest in the topic of the lesson , the second step is to grasp the facts and form concepts , and the third step helps the student to employ what he has learned , and the fourth step helps the student to explore, create and analyze information .(McCarthy, 2006) And that the use of the system4 mat In education, the student makes the focus of the educational process, because he deals with the information himself directly, and he who searches, classifies, examines and processes the information, thus he achieves effective learning . And graphic art , including addition of a variety of flexible printing methods it gives the artist a wide range to choose the style layout and the associated materials and raw materials that are working to create a variety of opportunities for artistic expression and works to enrich the experience of the artist to identify those materials and raw materials and knowledge of the effects that can be obtained On them through their use in the production of the artwork, and in expressing the content contained in the artwork . The process of printing on the conveying surfaces is carried out according to two basic principles: firstly, preparing the design to be printed on the printed surface to obtain the printed artwork, which depends on the artist's own vision, which contains a group of shapes, lines and colors that express the artist's ideas and his own emotions, and the second step is by implementing the artistic work, whether using the method of engraving and printing. (Saff, 2005) Can thus educational program designed according to the system4mat to achieve a new leap in the process of teaching graphic art to fourth-grade students

minor (printing, textiles) because it increases their cognitive achievement and skill performance.

Research problem

It has become necessary to search for teaching models and strategies that focus on involving the learner mentally during the teaching processes and reach the highest levels of thinking, taking into account the learning styles of the learners, as learning styles are considered among the individual differences that the educational and educational foundations call for the need to take them into account and deal with them. (Cengizhan, 2016) Where he became a reflection of the current age requirements that are able learners arises to learn to think and exploit the brain Bjanabih better and gained to address different life situations skills because they are important factors that affect the achievement of learners and their ability to understand and correct performance , it must increase the ability of learners to think longer The most prominent thing that a person possesses and a gift that the teacher provides to his community for the role and importance of thinking through educational curricula . (Al-Mousawi, 2018) Therefore, graphics are considered one of the important professional fields of originality and wealth, in which technology plays a fundamental role and can even contribute directly to the continuous interaction with society, where It is one of the most important areas of application through which it is possible to provide utilitarian products with a distinct aesthetic value. (Abdul- Karim , 2017) Through the researcher's knowledge of her capacity as a technical supervisor in the Department of Sports and School Activity, her professional practices, her field visits to fine arts institutes and her continuous meetings with most of the educational process parties of directors And teachers who specialize in the design department, especially since the study problem is chosen by the researcher himself in light of his experiences, which prompts research into it and She headed it with great interest and depth, as the researcher made an open-ended opinion poll questionnaire to define the study problem precisely, and presented it to a group of teachers in the design department, which is as follows:

What teaching systems do you adopt in teaching print material? And do you have prior knowledge of the system4mat Did you include your daily instructional plans or employ it while teaching typography?

The total answers of male and female teachers resulted in the traditional method being the only method used during the teaching of graphics (printing), and that the teachers 'ability to raise interest and questions and encourage thinking according to the learning styles of their different students is almost non-existent. The exploratory experiment carried out by the researcher to identify the difficulties and needs of a sample of the research community revealed that there is a weakness among the students, as this was evident in their skill performance, through the researcher's observation that the pilot sample was not able to print any form according to the correct steps required despite the simplicity Available tools and materials, and the results of the survey showed that there are difficulties in the field of printing due to the following reasons:

1. The absence of a specific real material and being limited to separate lessons.
2. The lack of the teaching method to various educational activities and aids and duties.

3. Not using the element of suspense and stimulating motivation among students in the classroom.

4. There is no logical sequence of scientific material from easy to difficult.

Therefore, the researcher believes that there is an urgent need to use modern teaching systems to teach graphics (printing) that emphasizes taking into account the diversity of students' learning styles and accelerating their thinking, which led to the selection of a type of modern teaching models as a system. 4mat. Therefore, the current research problem crystallized to answer the following question:

What 'the effect of a system-based educational program 4mat in performance skills for students of Institute of Fine Arts textured graphic art?'

Research importance

The researcher decided to implement a system 4mat in its educational program because it is one of the systems that emphasize different learning styles as well as employing the two sides of the brain to learn, especially since this system has four stages and each stage deals with the functions of the two sides of the brain with its left and right hemispheres. From the above, the importance of the current research is highlighted by the following :

1. If proven effect system-based tutorial 4mat It is possible that specialists in the field of curriculum development can benefit from the results of this study and their application in educational programs for preparing teachers before and after service.

2. It is hoped that this study will contribute to providing typing teachers with an unconventional teaching system that helps increase the students' skillful performance with the printing subject.

3. The current study may help print teachers to keep pace with the continuous development in the field of printing and its teaching methods.

4. The current research is an experimental attempt to set up and implement a system-based educational program 4mat It may enrich the field of scientific research.

5. Teaching students to print (using the thermal transfer method) with inexpensive materials, as well as reducing the time and effort devoted to graphic art (printing) in fine arts institutes by using modern teaching programs.

6. The current research may be a knowledge and skill addition to the technical library of printing (using the thermal transfer method) due to the lack of resources and studies in Iraq that enrich this aspect.

7. The research results that the researcher will reach may contribute to enriching the knowledge and skills aspects of the students and teachers of fine arts institutes by adding a new method to their printing methods, as well as an educational program that studies (the method of printing by thermal transfer).

8. The current research provides an achievement test (cognitive) and a note card to measure the skill performance, which may benefit researchers in the field of teaching graphic art (printing - thermal transfer printing method).

Aim of the research

The current research aims to: Detect:

The effect of a system-based educational program 4mat in the skills performance of the students of the Institute of Fine Arts, in the subject of graphic art, The research objective is achieved through the following sub-goals:

1. Building a system-based educational program 4mat to obtain graphic art for students of the Institute of Fine Arts
2. Knowing the impact size of the system-based educational program 4mat In the cognitive and skills tests for graphic art for fourth-grade students in the Design Department.

Research assumptions

In order to achieve the goal of the research, the researcher formulated the following hypotheses:

1. There are no statistically significant differences at the significant level (0.5) Between the average grades of the experimental group students in the pre- and post-cognitivetest.
2. There are no statistically significant differences at the level of significance (0.5) Between the average grades of the experimental group students in the pre- and post-skilltest.

Research procedures

Experimental Design: For the purpose of achieving the goal of the research and verification of statistical Frdite, the researcher used the experimental approach and chose the design of one group with two tests (pre and post), as shown in Table (1), either the terms of the application of this type of experimental designs it is as follows: "As this design is used when the experimental factor (the independent variable) has a relatively large effect on the dependent factor , and when the experiment is of short duration, because this reduces the work of the large fixed and cumulative inappropriate factors such as maturity . " (Kazem,2018)

The combined and experimental Ah	The pretest	Independent variable	Post test	Impact measurement	
	Cognitive achievement test		System-based educational program 4 mat	Cognitive achievement test	Cognitive achievement and skill performance
	Skill Performance Test		Skill Performance Test		

Research community and sample

And be the research community of students of Fine Arts Institute for Girls in the academic year 2020/2021, as the number of students (656) students, the researcher chose deliberate sample of the Fine Arts Institute for Girls Design Branch (graphic and fabrics) morning study to represent the research sample totaling (14) student.

Research tools: From the research requirements, the researcher prepared two tools, the first for the cognitive test and the second for the graphic art skill test.

Statistical means: The researcher used a set of statistical means to show the results of her study, and the researcher used a statistical analysis program (spss) For the humanities and social sciences , and the Coder Richardson equation 20 ,TestWilcoxon Pearson Correlation Coefficient, Paragraph Difficulty Coefficient,

Discrimination Coefficient, False Alternatives Effectiveness Coefficient, Impact Size Equation.

Results of the hypotheses

As a result of the first hypothesis: to validate this hypothesis the researcher used the T test and Cookson (Wilcoxon) To detect differences between the two measurements pre- and post-with respect to averages arranged grades achievement test experimental group and the table (2) shows the results relating to care of the hypothesis.

variable	Ranks	the number	Average Ranks	sum Ranks	Wilcoxon value		Indication level	Indication of the difference
					Calculated	Tabular		
Achievement test	Negative feedback	1	1,50	1,50	1,50	21	0,05	Statistically different
	Cation	13	7,96	103,50				

It is evident from the above table that the difference is statistically significant because the calculated Wilcoxon value of (1.50) is smaller than the table of Wilcoxon value of (21) at the level of significance (0.05). This means that the program has contributed to increasing the achievement scores of the students of the experimental group.

As a result of the second hypothesis: to validate this hypothesis, the researcher using the test " and Cookson (wilcoxon) To reveal the differences between the two measurements, before and after, with respect to the average scores of the skill performance test scores for the experimental group, and Table (3) shows the results related to this hypothesis.

variable	Ranks	the number	Average Ranks	sum Ranks	Wilcoxon value		Indication level	Indication of the difference
					Calculated	Tabular		
Skill Performance Test	Negative feedback	2	1,50	3	3	21	0,05	Non-Statistical
	Cation	12	8,50	102				

It is evident from the above table that the difference is not statistically significant because the calculated Wilcoxon value of (3) is smaller than the tabular value of Wilcoxon of (21) at the level of significance (0.05). This means that the program has contributed to increasing the grades of skill performance of the students of the experimental group. The size of the effect was extracted as follows:

1. Extract the arithmetic mean and standard deviation for the pre- and post-tests and the weighted standard deviation of the achievement test variable for the experimental group as shown in Table (4).

the test	SMA	standard deviation	Weighted deviation
Tribal	9,643	2,134	3,647
Dimensional	15,714	2,335	

After applying Cohen's equation, the size of the effect was (1.66). Therefore, the size of the program's effect on increasing achievement is considered to have a significant impact for the experimental group.

2. Extracting the arithmetic mean and standard deviation for the pre- and post-tests and the weighted standard deviation of the skill performance test variable for the experimental group as shown in Table(5).

the test	SMA	standard deviation	Weighted deviation
Tribal	7,429	1,453	2,288
Dimensional	12,428	2,065	

After applying Cohen's equation, the size of the effect was (1.73). Therefore, the size of the effect of the program in increasing skill performance has a significant effect for the experimental group.

Results

1. It's a system-based tutorial4mat It differs from the teaching method in the usual way, as it makes the students the center of the educational process, which contributes to increasing the students' ability to perform their skills.
2. The continuous evaluation that accompanied the course of the educational program provided the students with continuous feedback that enabled them to monitor their progress, discover and enhance their strengths, diagnose weaknesses and address them, thus achieving better learning for them.

Conclusions

1. The results of the current study indicated that the effect of the educational program is based on the system 4mat the skill performance of the students of the Art Institute is very large, which indicates its effectiveness in teaching. This is attributed to the application of the students to experiment with printing skills on their own. This has increased their motivation to learn.
2. The educational program helped the weak learners move from experiential learning to abstract thinking and theoretical applications of practice through the diversity of activities such as conducting experiments and imagining, all of which had an effect on the brain to assimilate and represent information.

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