THE EFFECTIVENESS OF ELECTRONIC CLASSES IN THE ACHIEVEMENT OF FIFTH GRADE STUDENTS IN ART EDUCATION

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Abstract

The current research aims to identify:

The effectiveness of the electronic grades in the achievement of students in the fifth grade of art education

Search Hypothesis:

There is no statistically significant difference between the mean scores of the experimental group which is taught using the electronic classes and the control group which is taught in the traditional method in art education at the level of (0,05) in the post-cognitive test.

The sample of the study was a student of Zulfiqar Primary School of Baghdad Baghdad Education Karkh/ 2 academic year 2016 - 2017

The researcher reached the following results:

- These classes offer the presentation of the material in an interesting and enjoyable way.
- Presentation of scientific material sequentially and sequentially and simply.
- Save time, effort and energy to the teacher.

The researcher suggested conducting similar studies in some subjects and using the electronic classes in a broader manner.

Research problem

There is no doubt that e Nana is in the era of rapid scientific and technological development, which led to a knowledge revolution in various fields and fields, which in turn led to a great change in the lives of societies and the nature of their problems

and goals. From this standpoint, it was natural for change and development to affect educational institutions, their goals, hopes and aspirations, as they are among the most important social institutions and the most influential on individuals and society in the present and the future. The field of education, with the exception of other fields, is the most important and influential field that is affected by the change and development resulting from the technology revolution, because the field of education is the main field of life, as John Dewey said: life, not preparation for life. (Ashqul, 2006: 3) Therefore, the researcher believes that it is necessary to keep pace with technological development, to walk with it and coexist with it, and to use it in the teaching and learning processes to reach the desired goal, and perhaps one of its goals. One of the most important contemporary teaching methods is the use of electronic classrooms and their employment for the benefit of academic subjects in general, and art education in particular, where innovation, change and exit from the monotonous routine and ambition to modernity in teaching methods, because the Baghdad Education Directorate Al-Karkh 2 began to use it in a number of schools in the region, The researcher found the necessity to develop the art education lesson through these classes. In short, the research problem can be summarized as follows:

1. Some teachers use traditional teaching methods in art education.
2. The simple capabilities that characterize the regular whiteboard compared to the interactive whiteboard used in the electronic classroom, which may contribute to raising the level of performance.
3. The reluctance of many teachers and educators to use technology in education due to their lack of conviction or lack of training in it.
4. Lack of attraction and suspense in a regular blackboard.

The importance of research research

It has become necessary to find educational strategies that differ from what they were previously, due to the use of traditional methods of education, which are still practiced to this day, and are no longer able to meet the needs of the learner and his development. And progress to face the increasing educational and technological development, and due to the lack of specialized research and studies in the field of art education in electronic classes. (Al-Gharibi, 2008: 7) The subject of art education, like other academic subjects, is subject to continuous development and renewal in an attempt to keep pace with rapid technological and knowledge developments. Therefore, the use of electronic classrooms as a technical innovation that helps its users develop their technical skills, and their use in technical education is an important part of the future. In view of the contemporary progress in the possibilities of its use in many fields, as these classes are considered an educational tool in teaching, drawing and design, and thus can be described as an effective tool in these materials. And that their use allows the student to practice thinking, experimentation, discovery and stimulation of artistic expression, as it provides an infinite range of shapes and colors, as well as satisfying the desire for creativity.

Research goal

The current research aims to identify (the effectiveness of electronic classes in the achievement of fifth-grade students in art education).

Research hypothesis

There are no statistically significant differences between the average scores of the experimental group that are taught using electronic classes and the control group that is taught in the usual way in the art education subject at a significance level (0.05) in the post-cognitive stage. Test.

Research limits

The current research is determined by the following:

1. Spatial limit: General Directorate of Education in Baghdad Al-Karkh 2 / Zulfiqar Primary School.
2. Duration: Academic year 2016-2017.
3. Human Limit: Fifth graders.
4. The objective limit: Art Education subject.

Elements of "bullet line" artwork and colors).

Terminology defining terms

First: Effectiveness

1. (Defined by Badawi, 1977) "It is an intended developmental process that is actually linked to limited standards whose degree increases and decreases according to the amount achieved from the educational goal" (Badawi, 1977: 150).
2. (Defined by Al-Munif, 1988): "It is a process that achieves goals in the best and best way possible." (Al-Munif, 1988: 116)
3. Procedural definition: It is the ability of electronic classes to develop students' skills towards art education.

Second: Electronic Classes:

1. Arafa (Norman 1997): Classrooms are equipped with computers and multimedia projectors, and this electronic environment is used in the learning process. (Norman: 33.1997)
2. Arifa (Al-Gharibi 2009): It is the usual classroom in which learning takes place, where students meet with the teacher face to face, and these classes are equipped with the necessary technologies according to the type of electronic class.(Gribi, 2009: 12)

Procedural definition: It is a regular classroom consisting of an electronic blackboard (interactive) + data display device + computer, and students learn by explaining the teacher on the interactive whiteboard by importing various programs, drawings and pictures, commenting on that, and participating in the lesson. And Figure (1) shows the form of the electronic row:

Figure (1) an electronic class
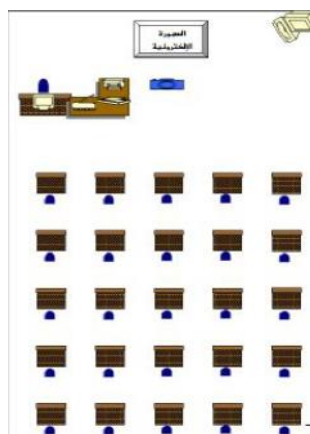
Third: cognitive achievement

1. Al-Aqeel (2004) defined it as (the knowledge and skill that students acquire as a result of studying a specific subject or educational unit (Al-Aqeel, 2004: 99)
2. Defined by Zaghloul (2007): It is (what the student learns after passing an educational experience, to know the extent of the success of the strategy set by the teacher in achieving his goals and the knowledge he acquires (Zaghloul and Aqla 2007: 87)

Procedural definition: the knowledge acquisition achieved by the student in the subject of art education and measured by the degree obtained by the students in the achievement test prepared and applied at the end of the experiment.

Theoretical framework and previous studies

The first topic: E-learning

The concept of e-learning

E-learning is one of the modern educational methods, as it uses modern educational technology means of computers and multiple electronic media, which means the use of information and communication technology of all kinds to receive and exchange information easily. The emergence of the concept of e-learning began in the mid-nineties of the last century as a result of the widespread spread of information and communication technology, and its use to serve the educational process, and e-learning has several names (computer) education, multimedia education, education through information and communication technology, education through educational technology) and there Definitions of e-learning as a result of the multiplicity of those interested in this field, and among these definitions":That type of education that depends on the use of electronic media in communication, receiving information, acquiring skills and interaction between the student and the teacher and between the student and the school." (Lal&Gendi, 2005: 439)Zaitoun (2005) agreed with him to define that it is "a form of distance education that depends on the capabilities and tools of the international information network, the Internet and computers in studying educational content through continuous interaction with the facilitator, the content and the learner. (Al-Zaytoun, 2005: 32)

E-learning goals

The most important goals that must be achieved from e-learning are

1. The possibility of increasing communication between students, and between them and the educational institution, through the ease of communication between these parties in several directions.
2. Ease of access to the teacher: e-learning allowed great ease in reaching the teacher as quickly as outside working hours through e-mail or other means of communication on the Internet
3. The availability of electronic curricula at any time.
4. Multiple ways to evaluate the student: E-learning provides tools for immediate evaluation for the teacher and various methods for building and classifying information in a quick and easy way.
5. Reducing the administrative burden on the teacher: allows the teacher to shorten the time in receiving assignments, recording attendance and correcting tests. (SalamaAldail, 123: 2008).

Benefits of e-learning

A- Benefits for the learner or trainee:

1. He learns what he wants at the time he chooses and at the speed that suits him.
2. They learn and make mistakes in privacy.
3. He is able to skip the stages that he deems easy or not easy.
4. He returns and increases as much as he needs.
5. He has an enormous amount of information in his hands.

B- Benefits for the teacher or trainer:

1. Not to repeat the explanation several times.
2. There is sufficient time to prepare more programs.
3. Focus on the skills that the learner or trainee really needs.
4. Focusing on the feedback to the learner or trainee.
5. It gives the learner a greater opportunity to develop his various abilities. (Raven, 2003: 29)

Elements of e-learning

First: the online learner E-Learner

The student is the one who learns through the method of teaching and e-learning without changing its type according to the change in technology or the performance that it uses for learning. Rather, it is the one who changed the method or method of learning and for this reason it was more appropriate not to change the learner and add a word referring to the learning method, which is an electronic word.

Second: The teacher is connected to the electronic teacher

It is the teacher who interacts with the learner electronically, and bears the burden of supervising the progress of education, and this teacher may be inside an educational institution or in his home, and often this teacher is not linked to a specific time for work, but rather that his interaction with the educational institution is the number of courses he supervises, which is Responsible for it and the number of students registered with it.

Third: the E-Classroom

They are classrooms equipped with means and devices compatible with the philosophy of e-learning, or are those regular classes that can be converted into electronic classes, and the process of using these classes in e-learning is one of the main methods of interactive learning. E-learning system.

Fourth: The electronic book of the electronic book

It is a book published electronically, and its pages have the characteristics of web pages, and they can be obtained by downloading it from the publisher's website or by purchasing it in CD-ROM form from the market (El-Toudary, 2005: 114).

The second topic: Electronic classes: Electronic degrees

The concept of electronic classrooms

The names of electronic classes varied according to the opinion of educators, some call them virtual classes, and others call them virtual classes or classes available on the network, and because of the novelty of this term, opinions differed about their definitions according to their names, and the researcher discussed in the first chapter the definition of electronic categories.

Types of electronic classes:

1-Asynchronous electronic layers

They are called self-education systems, and they allow students to review educational materials and interact with online educational content through a self-learning environment, which is known as asynchronous teaching and interaction, and these classes are not bound by time or place, as they use asynchronous programs and tools that allow the teacher and the student to interact with them. Without the limits of time and space, such as spaces for dialogue and participation in informal discussions, either with the teacher or students among themselves.

2-Synchronous electronic layers

They are classrooms that are similar to classrooms in which the teacher and the student use tools and programs related to a specific time (for example, the teacher and students are required to attend at the same time without space limits), and similar capabilities are often from electronic classroom programs, and among these capabilities:Voice speaking to students with the ability to urge students to raise their hands, and the ability to participate in programs so that the teacher can run a presentation on his device and make his vision available to his students.

- The presence of a discussion text box with the ability to send questions of the type (multiple choice) or (true and false) and show results directly to students, and form discussion groups, and the teacher can control the student's applications and distribute the polls to students.
- Record the audio and video lecture that takes place in the electronic classes. (Caliph 2003: 69)

Properties of electronic classes

1. The interactive whiteboard.
2. Direct speech feature (audio only or audio and video)
3. Written communication.
4. Direct participation of systems, programs and applications (between teacher and students)
5. Sending files and exchanging them directly between the teacher and the student.
6. Following up and communicating with the teacher for each student separately or for all students at the same time.
7. The advantage of using electronic display programs.
8. The advantage of using educational films display programs.
9. To direct and vote on written questions.
10. Directing follow-up orders for what the teacher provides to students (Al-Hussein, 2009: 7).

Advantages of electronic classes

1. Screen exchange between the teacher and the learner, where the teacher can enable the learner to view his screen or vice versa.
2. Control the learner screen by stopping it and controlling the programs on the learner's device.
3. Control the keyboard and mouse and prevent the learner from working with them.
4. The teacher can design educational programs and teach them through the system.
5. The English language teacher or scientific subjects can benefit from this technology as an alternative to language and science laboratories with their full capabilities (Olive, 2005: 34)

Elements for the success of electronic classes

1. Communication with technology: In order for immediate education to succeed, participants must have the ability to communicate through these means easily and easily, and be familiar with them, so that no problems arise with these developments.
2. Procedures and directions: Procedures and directives should be unrestricted, as very strict directives create obstacles during discussion, leading to reservations of the participants.
3. Joint education: joint efforts between students help them achieve a higher level of knowledge, so there must be interaction between students and their teachers as well as between students, which is the best.
4. Evaluation: Participants must conduct business evaluation among them, and send their comments on their colleagues during the educational process. (Al-Moosa and Al-Mubarak 2005: 269).

Previous studies previous studies

The previous studies are an important and rich source of information that the researcher must review before starting the topic of his research, and because there is no similar study in Iraq to the best of the researcher's knowledge, and because of the novelty of the topic, the researcher faced great difficulties in obtaining previous studies on the subject of electronic classes, so some studies will be reviewed. Arab and foreign countries are closely related to the subject of study, with the aim of some efforts made in the field of e-learning. And the extent of the similarities and differences between these studies and the current one.

First: Arab Studies: Arab Studies

1-Study of the Blessed (2004)

The study aimed to measure the effect of teaching using virtual classes via the global network on the Internet on the achievement of students of the College of Education in the subject of teaching and communication techniques compared to the traditional method, and the study reached the following results: There are no statistically significant differences at the level of (0.05) in the average Student achievement at the first and second cognitive levels of the Bloom classification (level of recall and level of comprehension), while there are statistically significant differences at the level of (0.05) in the average student achievement in the third cognitive level of the Bloom classification (level of application), as well as in the level of achievement Students on a beta test.

2-The Gharibi study (2009)

The study aimed to know the effect of teaching using electronic classrooms in its three forms (interactive, collaborative, and integrative electronic classroom) on cognitive achievement of the levels of remembering, understanding, application and the three levels combined on fifth grade students. Mathematics in division unit.

- Study methodology: The researcher used the semi-experimental approach.
- Study sample: The sample reached (72) students from three different primary schools in Taif.

Results of the study: There are no statistically significant differences between the integrative electronic classroom and the collaborative electronic classroom in cognitive achievement at the college level, and there are no statistically significant differences between the collaborative electronic classroom and the cooperative and interactive electronic classroom. Electronic semester in cognitive achievement at the college level.

Second: Foreign Studies: Foreign Studies

1-John's Study (June 2002)

John evaluated the knowledge gained between two types of learning styles:

E-learning and learning within the classroom, three hypotheses were developed to explore the feasibility of what the participants benefited from in the classes or the electronic environment, and the pre and post test were applied to a representative sample from different parts of the United States, and the results of the study showed that there are differences between the two groups of learning in tribal knowledge, Dimensional tests also showed that learners through the computer benefited more than these learners in the classroom.

2-Atwell study (2003)

I aim to study the answer to the following question: Do you learn that mail is positive and effective, and in what field it is, and for which group of students? To answer this question, this section teaches me two sections, in which the first has a special calendar structure for learning mail. As is the case in the second lost section in which

a review of more than (200) evaluation studies on mail learning shows results about there are many reports that I wrote in many regions and remote languages except that their addresses can be limited to the following:

- Case studies for one mail training program
- Comparative studies between postal education and traditional education
- Studies of related machines and tools, mailed learning evaluation
- ROI reports on field learning mail

3-A study of rose plants (2006)

The study aimed to determine whether there is a difference in the level of students 'performance and achievement when they are taught using the e-learning system (cap (on traditional methods, the results indicated that there is a significant difference between teaching in traditional education). The method and e-learning in the system (cap)). The value of (q> 0.0001 (in favor of the e-learning system) cap statistics showed an increase in achievement scores in e-learning instead of teaching in the usual way.

Research methodology and procedures

First: Research Methodology:

The researcher adopted the experimental approach because it is suitable for the research that studies the effect of an independent variable on a dependent variable. Experimental research goes beyond the limits of quantitative description of the phenomenon, and it is not a mere presentation of past incidents as is the case in the historical method) Abd al-Rahman and Zankana, 2007: 474)

Second: Experimental Design:

The researcher has adopted the design of random groups (experimental and control) and equivalents in some variables and a post-test, as the current research aims to know (the effectiveness of electronic classes in the achievement of the fifth grade students in the art education subject), which requires preparing two groups, the experimental group is exposed to the independent variable (electronic classes) The control group is studying in the traditional way, and chart (1) illustrates that.

Table (1)Experimental design

Measuring the dependent variable	Dependent variable	Independent variable	Statistical parity	the group
Achievement test	Attainment	Electronic classes	-1 Chronological age	Experimental
		traditional way	-2Previous experience	Control

Third: Research Society

The community represents all the vocabulary of the phenomenon that the researcher studies, that is, all the individuals and things that make up the research community, and the current research community has been represented by the fifth grade primary students in the Baghdad Education Directorate Al-Karkh/ 2 schools for the academic year (2016-2017)

Fourth: Research Sample:

The sample is part of the original community that is the subject of the study and is chosen according to certain rules and methods in order to accurately represent the community in view of the difficulty of selecting the current research sample directly from members of the community, as these researches are governed by the prevailing educational system, so the researcher resorted to choosing one school, which is the (Zulfiqar Primary School), from which people from the fifth grade of primary school are chosen, and this is what the researcher did. This school is a field for research because it has the independent variable (electronic classes.(After the researcher identified this school, he randomly chose Division (B) to be the (experimental) group and Division (A) to be the (Control) group.The number of students from these two divisions was (44, 43) male and female, and after excluding students who had failed in the same class so that their previous experiences did not affect the results of the research, the number of students of the experimental and control group became (42,43) respectively, and in order to facilitate the statistical procedures of the research, the researcher was excluded One of the control group students, so the number in each division is (42) male and female students, and Table (2) shows that

Table (2)The size of the research sample is distributed according to the experimental and control groups

Number of students	Division	the group
42	B	Experimental
42	A	Control

Fifth: statistical parity between the experimental and control groups: Statistical equivalence

Confirming the accuracy of controlling the extraneous variables, especially since the individuals 'choice of the two groups was not random at the level of individuals from the research community, but at the level of the people, so the researcher made equivalencies in some variables that may have an effect on the dependent variable without the independent variable and these variables are:

1-Chronological age (in months): The chronological age

After the researcher obtained the ages of the members of the experimental and control groups from the school administration, Appendix (5), it was found that the average age of the experimental group students is (130,530) months, the variance (32,38) and the standard deviation (5,691.(The average age of the control group was (130,402)

months, the variance (43,27) and the standard deviation (6,578.(To find out the significance of the difference between the two averages using the T-test) t-testIt turned out that the difference was not statistically significant at the level of (0.05), since the calculated T value (0,092) was smaller than the tabular value of (2,000) and with a degree of freedom (82), and this result confirms that the two groups are equivalent to the variable of chronological age, and Table 3) Explains that.

Table (3)Equivalence of the research sample in the variable of chronological age

Significance level at (0.05)	T-value		Degree of freedom	variance	standard deviation	Arithmetic mean	Sample volume	the group
Not statistically significant	Tabular	Calculated	82	32,38	5,691	130,530	42	Experimental
	2,000	0,093		43,27	6,578	130,402	42	Control

2-Previous experience variable:

In order to know what the students of the experimental and control groups have from previous experiences about the scientific subject, the researcher prepared a cognitive achievement test for some of the concepts included in the material consisting of (10) paragraphs for the students of the two groups, Appendix No. (2), and after preparing instructions for answering it, a group of experts specialized in Art Education and Teaching Methods Appendix (1) In light of their observations and opinions, some paragraphs have been amended.After applying the previous experience test to the two research groups, the researcher used the T-test) t-test to find out the significance of the difference between them, it appeared that there was no statistically significant difference at the level (0,05), since the calculated T value (0,401) was smaller than the tabular value of (2,000) and with a degree of freedom (82), and thus the two research groups are statistically equivalent in a variable Previous experience in cognitive testing , and Table (4) illustrates this.

Table (4)Equivalence of the research sample in the variable of previous experience

Significance level at (0.05)	T-value		Degree of freedom	standard deviation	Arithmetic mean	Sample volume	Groups
Not statistically significant	Tabular	Calculated	82	1,092	2,309	42	Experimental
	2,000	0,401		1,083	2,404	42	Control

Sixth: Research Requirements

1-Defining the scientific topic: The scientific material for the experiment included two main topics from the art education subject for the fifth grade of primary school, namely (lines, their connotations, and colors)

2-Formulating behavioral goals: Behavioral is a phrase or sentence that describes the end result of teaching. It is formulated in the form of performance that can be observed and measured. Therefore, the clarity and accuracy of the behavioral goals are the main factors that lead to the student's acquisition of the intended behavior (Atallah, 2009: 74). Therefore, the researcher concluded the behavioral objectives of the material studied in the experiment according to the first three. Bloom's classification levels (Bloom (remember, understand, apply) for each subject matter, and its final version has reached (10) behavioral goals, Appendix (4)

3- Preparing teaching plans: The fact that the current research aims to identify the effectiveness of electronic classes compared to the traditional method of teaching art education. Therefore, two types of educational plans must be prepared, the teaching pattern using electronic classes, and the teaching style. In the usual way, the researcher prepared two teaching plans for the experimental group and two plans for the control group. The plans were distributed among the lessons and samples of the plans were presented to a group of experts and specialists in art education and teaching methods. Appendix (1) In light of their exploration, some paragraphs of the plans have been modified. Appendix No. (3) Shows the teaching plan using electronic classes and a plan in the traditional way.

Seventh: Research tool:

The researcher prepared a test consistent with the nature of the research and its objectives, because the achievement test is one of the most common assessment tools used to measure student achievement, as it is a systematic procedure to determine what the student has learned. I decided that the test should be of the choice type and multiple choice styles because it is objective and has less guesswork compared to the right and wrong questions. It measures multiple levels of cognitive development and covers a large percentage of the subject. The preparation process for the test went through the following steps and procedures:

1-Determine the purpose of the test

To design any test, its designer must, before that, determine the goal that he intends to achieve from it in proportion to his procedures with this goal, so it is the first step that the test designer must define first. (Al-Nabhan, 2004: 72) Therefore, the aim of the test is to measure the achievement of students of the experimental and control groups after the end of the experiment to find out the effectiveness of electronic classes in achieving the fifth grade students of art education

2-Determine the levels of knowledge domain for Bloom's classification

After listening to the opinions of experts and specialists in teaching methods, measurement and evaluation, the researcher decided that the achievement test should include the measurement of the first three levels of Bloom's classification for the cognitive domain (remembering, comprehension, application, and application)

3-Statistical analysis of test items

It is the ability of the paragraph content to measure what was prepared for measurement by examining the psychometric properties of the paragraph, and among the most important of these characteristics are the paragraph difficulty factor, the discrimination parameter and the effectiveness of false alternatives. To calculate these characteristics, the test was applied to a sample of (100) male and female students chosen randomly from (Dar Al-Amara Primary School), and after applying the test to this sample and correcting the answers, the sample members were arranged from the highest grade to the lowest overall score, then the researcher calculated Characteristics of the psychological scale for the following paragraphs:

A- Paragraph difficulty factor: Paragraph difficulty factor

It is the level of complexity that the student faces in answering the correct answer to the paragraph if it is high or medium, and the degree of difficulty is in light of the percentage of those who answered the wrong answer to that paragraph or question. The difficulty factor for this test ranged between (0.30 - 0.55) Table No. (5). Therefore, the difficulty coefficients are acceptable because the paragraph difficulty factor is acceptable if it ranges from (0.20-0.80). (Blume, 1983: 104)

B - Paragraph discrimination coefficient: Paragraph discrimination coefficient

The researcher arranged the scores of the individuals of the paragraph analysis sample from the highest degree to the lowest score, and the upper and lower groups were determined by 50% in each group and used the formula for distinguishing between paragraphs with a double answer (true, false), and all paragraphs discrimination coefficients were acceptable, and all coefficients were Discrimination of paragraphs is acceptable, and the discriminatory power of each element of the test was calculated, and the results ranged between (0.42 - 0.52), where it is preferred that the paragraph discrimination coefficient be (0.30) or more than Table (5)

C- Effectiveness of wrong alternatives: Effectiveness of wrong alternatives

In the multiple test questions, the wrong alternatives must be attractive to the respondents, especially the members of the lowest group in the answer, as well as the result of the discrimination equation in each wrong alternative must be negative, and when using the discrimination equation with the wrong alternatives for each paragraph, it became clear that all of them are attractive to the respondent from The low level was chosen by more than the high level, and Table (5) illustrates this.

Table (5) Paragraph discrimination coefficient, difficulty, and efficacy of defective alternatives

The effectiveness of false substitutes			Discrimination	The difficulty	No.
C	B	a			
0,12 -	*	0,16 -	0,50	0,55	1
*	0,10 -	0,13 -	0,50	0,45	2

0,13 -	0,15 -	*	0,52	0,44	3
*	0,12 -	0,17 -	0,42	0,39	4
			0,44	0,38	5
0,15 -	0,10 -	*	0,40	0,36	6
*	0,10 -	0,12 -	0,42	0,35	7
0,15 -	0,13 -	*	0,42	0,33	8
0,16 -	0,14 -	*	0,44	0,30	9
			0,50	0,30	10

Eighth: The psychometric properties of the test: Psychometric properties

Validity and reliability are among the most important psychometric properties that are confirmed by the measurement theory, which must be available with a good degree (Abd al-Rahman, 1998: 159). The following is an explanation to verify these two characteristics of the achievement test in this paper: .

1-Reliability and reliability of test tests

The researcher verified the reliability of the test by using the "Alpha Cronbach" equation, which is a commonly used equation in the calculation of stability because it indicates the internal homogeneity. Furan "so that the coefficient of stability is considered good if the coefficient of common interpretation is greater than 50% (Foran, 1961: 389)

2-Test validation: validity of tests

Validity is one of the most important psychometric properties of the test because it indicates its ability to measure what was prepared for measurement, and there are three basic indicators of validity, which are the validity of the content, the validity of the test and the validity of the structure, and the researcher verified the validity of the test with two indicators:

A. Content Validation: Content ValidityWhere the researcher presented, after preparing the paragraphs on it, the content components represented by behavioral goals and topics to the arbitrators who assessed the validity of each paragraph in measuring the content to be measured, so the test is considered correct in its content.

B. Validity of construction: validity of construction it is called concept validity or hypothetical formation validity because it indicates the extent to which the test is measured to form a specific hypothesis or concept, and it represents all the

procedures that the researcher adopts in building the test as indicators of construct validity, including other types of validity and consistency. To build validity.

Ninth: Procedures for applying the experiment

1-Before applying the experiment:

A. Applying equivalence operations between the two research groups in the aforementioned variables.
B. Preparing the teaching plans for the two groups and presenting them to a group of experts and referees (appendix)

2-The actual application of the experiment: The researcher carried out the following procedures:

A. The researcher personally studied the two research groups to avoid the difference that might result from the difference of the teacher and his ability, and the extent of familiarity with the experimental group variables.
B. Exposing students of the two groups to the same amount of material and information.
C. Students were not allowed to move between the two groups during the implementation of the experiment.
D. The duration of the experiment in the second semester was for a month, spread over four semesters for the academic year (2016-2017), as the experiment began on Monday 3/6/2017 and ended on Wednesday 4/5/2017.

Research findings and recommendations

First: Presentation of results: View results

In this chapter, the researcher presents the research results that have been reached using appropriate statistical means, between the experimental and control group, according to the scores they obtained in the cognitive test, and discussing the results, conclusions, recommendations and suggestions.

Research hypothesis

There are no statistically significant differences between the average scores of the experimental group that are taught using electronic classes and the control group that is taught in the usual way in the art education subject at a significance level (0.05) in the post-cognitive stage. For the purpose of testing the null hypothesis, the cognitive test was applied to the two research groups, so that the experimental group was the arithmetic mean (6,4048) and the standard deviation (1,3262), the control group, the arithmetic mean (4,0714) and the standard deviation (1,4380). To find out the significance of the difference between the two groups, the researcher used the T-test (for two independent samples, and showed that the value of t) The calculated value is equal to (7,730), which is greater than the tabular value (2,000) with a level of significance (0.05) and with a degree of freedom (82). There is a statistical difference. Importance for the benefit of the experimental group p students, and Table No. (6) Shows that.

Table (6): The T-value is calculated for the differences between the cognitive post-test scores of the students of the two research groups

Significance level at (0.05)	T-value		Degree of freedom	standard deviation	Arithmetic mean	Sample volume	the group
	Tabular	Calculated					
Statistical function	2,000	7,730	82	1,3262	6,4048	42	Experimental
				1,4380	4,0714	42	Control

Second: Conclusions

The researcher's findings showed the superiority of the experimental group over the control group, and through the researcher's perusal, it was found that this superiority was due to the following reasons:

1. These classes provide a fun and entertaining presentation of the material.
2. The interaction process provided by the electronic classroom, which increases students' ability to retain information and understand it scientifically and practically.
3. Presenting the scientific material in a simple and sequential manner.
4. Breaking the routine of the traditional educational process that depends mainly on the teacher and this leads to more motivation and interest.
5. Saving the teacher's time, effort and energy. Instead of being immersed in explaining the lesson and using simple educational methods, teaching is done using the interactive whiteboard.
6. Focusing students 'attention by using colors and tools to illuminate spaces, which facilitates students' understanding better.

Third: Recommendations

1. Supporting electronic classes by the Ministry of Education and starting to implement the e-learning system.
2. Setting a specific time plan for the gradual transformation of the traditional categories into electronic ones.
3. Holding training courses for educational supervisors, teachers and students on using the interactive whiteboard and applying the e-learning system.
4. Attempting to apply electronic classes to most of the study materials to use them correctly.

Fourth: Proposals

1. Conducting a survey study of schools that use the electronic classroom system to determine the extent of application of this system in the teaching process.
2. Conducting a similar study using electronic classrooms in secondary schools and in various study subjects.
3. Employing modern technologies in this system to develop the performance of middle school students in the subject of art education.

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22.   Teaching the learning style about medical / legal issues of health care to allied health students while providing traditional verses about exploring models and partnerships for e-learning - e-learning evaluation. Paper presented to a seminar

Appendices

Accessory (1)Names of the experts and arbitrators whom the researcher has hired

Type of counseling			Jurisdiction	Workplace	Name of the expert	No
C	B	A				
	*	*	Design	Al-Mustansiriya University / College of Basic Education	Prof. Maha Ismail Al-Sheikhly	1
*	*	*	Measure and straighten	Ministry of Education / Office of the Inspector General	Prof. Dr. KamelThamer Al-Kubaisi	2
*	*	*	T. Art Education	Al-Mustansiriya University / College of Basic Education	Prof. Dr. Amara Khalil Ibrahim	3
*		*	Art Education	Al-Mustansiriya University / College of Basic Education	Prof. Dr. Hussain Ali Saqi	4
*	*	*	T. Art Education.	Al-Mustansiriya University / College of Basic Education.	Prof. Dr. Firas Ali Al-Kinani	5
*	*		T. Art Education	University of Baghdad / College of Education for Women.	Prof. MahaMazenKamel	6
	*	*	Measure and straighten	Ministry of Education / Preparation and Training Department	Dr. Salwa Mahmoud Gamal	7

A. Study plans.
B. The cognitive test.
C. Behavioral goals.

Accessory (2)Cognitive testChoose the correct answer from the parentheses

1. A line is _____ (a- repeating lines and distances, b- a group of successive points, c- a group of shapes and sizes)
2. The beginning of each line, regardless of its type, _____ (a- shape b- texture c- point)

3. ——————It is the simplest design elements that can be included in any configuration (1- Point B- Line C- Color)
4. Vertical and vertical lines are one of the types of lines. Put a checkmark (correct) in the image that indicates vertical lines.
5. Draw an art form showing one of the lines.
6. Light is one of the basic components of (A - color, B - line, C – direction)
7. Red is one of the colors _____ (A- secondary, B- neutral, C- primary)
8. ——————————————————————————They are colors that give us a feeling of warmth (A- hot colors B- cold colors C- secondary colors)
9. Using colors from one color group and using neutral colors with them is _____ (A- chromatic compatibility b- chromatic contrast C- chromatic gradation)
10. Draw an art form showing the colors or one of their types.
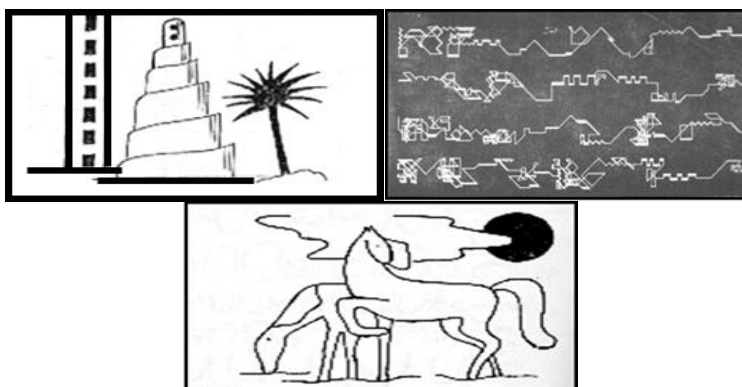
Accessory (3)An example of a daily instructional plan for the experimental group that studies the materialUsing electronic classrooms

Grade: Fifth Elementary Day and Date:

Subject: Art Education

Subject: Elements of Art (Point, Line)

The theory: 45 minutes.

Special objective :for students to be able to identify the elements of art (point, line)

Behavioral goals :After completing the lesson, the student will be able to:

1. Knows the point.
2. Explain the uses of point with elements of art.
3. Knows the line.
4. Distinguish between types of fonts.
5. Employ one of the types of lines in a work of art.

Teaching aids :smart board, computer, display device (data show), electronic pens for the whiteboard, tablets

Teaching method :using modern technology in teaching (smart board)

Lesson progression steps

Dear students: In this lesson we will deal with two elements of artwork (point and line) and how to use them and design art forms by using them through the notebook program on the smart board.

Introduction: (5 minutes)

Preparing students' minds for the topic of the lesson, by linking the current lesson with the previous lesson with a brief explanation.

Show: (35) minutes

Dear students: Point:It is the simplest design element that can be included in any configuration. It is known from the engineering point of view as a geometric shape without dimensions and it is also known as the center of a circle or the center of intersection of lines and angles.As for the relationship of the point to other elements of art, it is:

1-The relation of the point to the space: The relation of the point to space is represented by the following points

Space has dimensions and distances whose dimensions can be determined by measures, and that the type and centers of the point inside the space affect the composition of the shapes, lines and borders in terms of its movement and area. If we put a small point in a large square, this point will be lost in the space that surrounds it. Its area is 10 x 7 cm, so we find that the area is proportional to the point drawnThe point is a positive shape, while the space represents a negative shape with respect to the point, whether the point is white or black, as in Figure (1, A-B)

Dear students: I will show you an illustration through the blackboard notebook program and using the pen list .Figure (1-a, b)
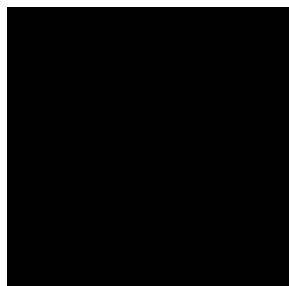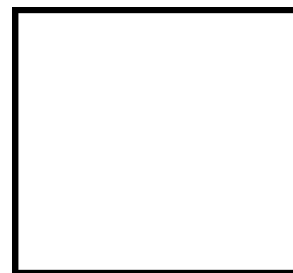
(1)   (a) (b)

When we place the point in a rectangle or square, it evokes life and activity that did not exist before, as interests are concentrated in it, so it becomes a target to attract attention and arouse a sense of its tendency to the center, not on the place identified by the point, but extends to the surrounding space   .

2-Point Surface and Volume

If the characteristic of length and width prevails over the area of the point, then it gives it the characteristic of the surface, but if the point has thickness then it takes the characteristic of size as in Figure (2)

Figure (2)Length and width prevail over point area :if the point has thickness, it takes the characteristic of volume.

3-The starting point of the line: The point is the beginning of every line of any type, as it gives us movement, weight, and color as it is a means of our visual and expressive perception.Teacher :one of the students is asked to draw the figure according to his understanding, Figure (3)

Figure (3)
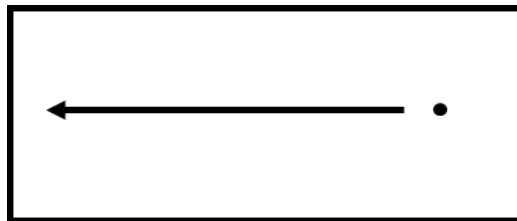
4-If the point moves spontaneously

It leaves shapes and surfaces closer to nature when it is formed by shadows, as in Figure (4), which can be traced back to geometry and its structural and architectural structures, but if it moved in different directions and angles and upright, it represented sizes, bodies and geometric surfaces as in Figure (5)Dear student: To draw a geometric shape, we use the Tools menu button to draw shapes, and we can also add a tool to draw shapes in the mobile toolbar.

Fig (4)   Figure (5)

Dear student: The line is

The effect resulting from the movement of the point, or a group of contiguous points so that they form an unbroken and continuous line, and it is the oldest means used in artistic expression, and the line has many functions, it divides spaces, defines shapes, creates movements, and divides spaces, and when the artist uses lines to divide the space, he is interested Find fun breaks between them . As in Figure (6)

Figure (6)

Types of lines

1-Straight line

It is the shortest distance between two points and raises in the artwork a sense of strictness and frankness, but it is monotonous and boring. When the straight line continues in length, the eye (follow it by degrees and divide it into parts)As for its characteristic and location, it is horizontal, inclined at an angle or perpendicular to the surface of the earth .And it types as shown in Figure (7)
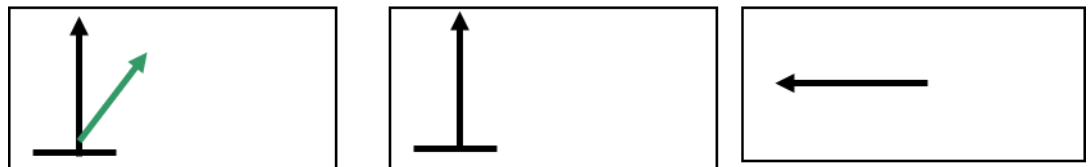

Fig. 7

A-Horizontal Line

It is the straight line that parallels the horizon line and the ground line that determines the location of the starting point of the figure and its vertical foundations, and has another symbolic function for visual expression: it suggests stability, calm and stability, and suggests comfort as wellAnd the horizontal lines symbolize the breadth, while the vertical ones symbolize the increase in height as well as the dignity, greatness and dignity as in Figure (8)
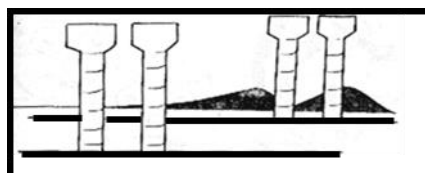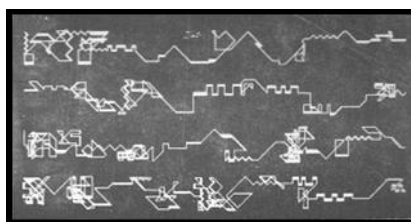

Fig (8)

 -The broken line: - It is a group of straight lines that are connected and give the viewer a sense of changing tensions, so they are an intermittent and fragmented

effect, or it may end in movements with sudden and interconnected transformations to start again. .

Figure (9)

 - The curved line - :To be a closed curve, it represents a full circle .Or it may be part of the circuit sector .Most people may naturally tend to feel comfortable and accept these lines and shapes in which there are many rounds (curved lines suggest gentleness, grace, tenderness, tolerance and tenderness). The curvature of roads and many other things, and shapes with sharp corners symbolize dignity and sobriety, as in Figure (10)

Fig (10)
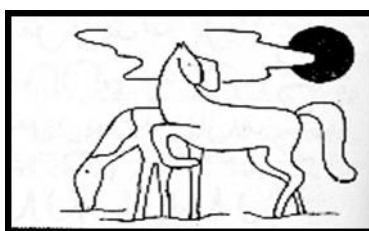
B- The vertical line : The image of buildings and engineering buildings, lighthouses, and pillars form vertical vertical lines symbolizing the glory, greatness and dignity, as the plants, palms and upright trees represent a developing force whose source is the vertical growth of plants. Horizontal ground. Therefore, it is desirable to support vertical lines with horizontal lines that are lighter degrees to maintain the rule of vertical lines. These lines are known as (connecting lines). If they are colored, it is preferable to have different colors .As in Figure (11)

C-The oblique line : It is the lines that form types of angles with the surface of the earth according to the degrees of inclination of each straight line. And it is unbalanced as it raises tension within the soul that makes the beholder tend to straighten the inclination horizontally or vertically .As shown in Figure (12)

Figure (12)
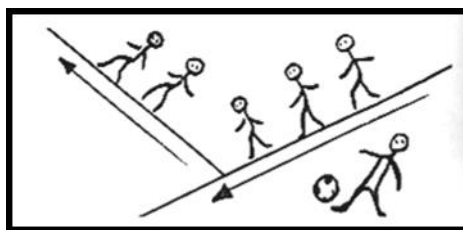
Calendar: (10 minutes)

Dear student: Through our study of the topic of point and line, you must answer the following questions

1. Define the point.
2. Explain the relationship of the point with the elements of art.
3. Define the line.
4. Distinguish between the types of lines and their connotations.
5. Employ one of the types of lines in a work of art (through the practical side on the blackboard)

Accessory (4)

Behavioral goals

Levels	Behavioral goals (the student can(	Topic
remember	Knows the point	1. Elements of the artwork
Understanding	Explains uses of point with elements of art	
remember	Knows the line	
Understanding	Distinguish between types of fonts	
Implementation	Employs one type of fonts in artwork	
remember	List the types of colors	2. Colors
Understanding	Distinguish between hot and cold colors	
remember	Defines chromatic compatibility	
Understanding	House compares primary, secondary and neutral colors	
Implementation	Color is used in a work of art	