

**The Effectiveness of Designing Electronic Educational Units for The Teaching Methods Course
According to The Aesthetic Approach in Developing Classification Skills Among Students of
Colleges of Education**

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Abstract

The current research aims to reveal the effectiveness of designing electronic educational units for the teaching methods course according to the aesthetic approach in developing classification skills among students of faculties of education. For the purpose of achieving the goal of the research, electronic educational units were designed for the teaching methods course according to the aesthetic approach and teaching students of the experimental group for a duration of (15) weeks using these units. The researchers adopted the quasi-experimental approach with partial control in two groups (experimental and control groups), with pre and post tests to measure classification skills. After applying the experiment, the study concluded that there was a development in classification skills among the experimental group students.

Keywords: Educational Units, Aesthetic Approach, Classification Skills.

Introduction

Education aims to bring about continuous growth and adaptation for the learner from all physical, mental and emotional aspects, and to develop all components of their personalities through the knowledge, skills and attitudes they acquire. Education is one of the necessities of human life and the way to its development. It is concerned with building the human being and his cognitive, emotional and skill formation (Atiya, 2007: 19). The interest in the emotional field

is no less important than the cognitive field, in which the learner deals with his mental processes, and the learner's emotions, including the sense of beauty, are among the higher ranks in the personality of the learner, and that aesthetic experiences lead to an increase in the learner's sense of humor and increase his ability to understand and create new meanings (Flannary, 2003:581). And that the technological revolution came with means that contributed to increasing the learner's information and knowledge and raising his capabilities, so the interest in educational technology increased, so universities began to teach their students how to employ technology in educational situations (Marei and Al-Heila, 2014: 13). The curriculum is one of the most important topics of education and its basis, and because the life of nations is in constant development, the study curriculum must be flexible and subject to this change, and many ideas and theories have appeared in the modern era that call for conducting research and studies to search for areas of application and educational levels that can be It is applied in it, the most important of which are self-learning, distance learning, programmed education and others. All of these ideas aimed at developing educational materials, curricula, teaching methods, activities and assessment methods (White, 2006: 211). The curriculum helps learners to learn and achieve the desired goals through what it provides of knowledge, experiences and educational attitudes that satisfy their needs and develop their thinking skills (Rosemary, 2001:58). The aesthetic approach is one of the approaches used by educators in teaching and learning, and it is one of the trends that are concerned with building and designing curricula by focusing on the aesthetic and technical aspect in various study subjects. educated around the world. Specialists believe that the aesthetic approach combines science and art, as well as focusing on the use of imagination and this in turn leads to creativity (Girod et. al., 2003: 42). Any subject in any educational stage is not interested in stimulating a sense of beauty and a taste for it among the learners, as it may turn into a dry and disjointed subject and the learner does not feel the taste of its beauty during its study, and that aesthetic education can be achieved through all the academic subjects and falls on the shoulders of all members of the educational system (El-Sherbiny, 2005: 35). One of the goals of educational institutions is the development of thinking and skills of learners, as it can be developed through the use of effective teaching methods and methods and the design of educational content that encourages learners to think, explodes their energies, and provokes their abilities (Qutait, 2008: 18). Among the thinking skills are science processes, as they are important in practicing scientific activities and experiments, and the lack of possession of them

by learners leads to not facing many difficulties in studying and practicing activities. Brunner refers to these processes as learning habits, while Gagnier calls them learned abilities and mental skills (Zaytoon, 2005: 101). The skill of classification is one of the basic thinking skills and can be considered one of the most important basic learning and thinking skills. Learning it is about learning what are the common characteristics of all the vocabulary of a particular class or family that are not available in the vocabulary of another class or family of things or beings, and finding a system or way to separate the vocabulary and appending it to classes, each of which has characteristics that distinguish it from other classes (Jarwan, 2013: 179). Higher education is one of the axes of the educational process, and it is important in developing knowledge, spreading science, enriching scientific and literary studies, social change, and achieving the goals and needs of society.

Research Objectives

The present research aims at investigating the effectiveness of designing electronic educational units for the teaching methods course according to the aesthetic approach in developing classification skills among students of the College of Education.

Research Hypotheses

There is no statistically significant difference at the level of significance (05.0) between the average differences in the scores of the two tests (pre and post) for the students of the experimental group that will study the teaching methods course in the electronic educational units designed according to the aesthetic approach and the average differences in the scores of the two tests (pre and post-tests) for the group students The control officer who will study the same subject according to the usual method in developing classification skills.

Research Limits

- *Human limits*: third stage students/ Department of Biology/ College of Education/ University of Al-Qadisiyah.

Time limits: the academic year (2020-2021), (first semester).

- *Spatial Limits*: Al-Qadisiyah University - College of Education - Department of Life Sciences.

- *Scientific Limits*: the vocabulary of teaching methods for the first semester of scientific departments issued by the Ministry of Higher Education and Scientific Research and the vocabulary added to it.

Defining Terms

1. **Educational units**: Al-Qasim and Asiri (2016) defined them as: “Part of the content of a course that includes a set of daily lessons, or successive study topics that fall under the name of one concept, such as: the unit of energy, the unit of movement, the unit of living organisms, ... etc.”. (Al-Qasim and Asiri, 2016: 16).
2. **The aesthetic approach**: defined by Selim (2001) as: “a proposal for the construction, design and implementation of curricula to achieve the goals of scientific education, and to enjoy the technical and aesthetic aspects of the various paths and phenomena of science, without prejudice to the objective aspects and processes that characterize science, and in addition to achieving emotional aspects and other aspects of appreciation ”. (Slim, 2001: 4).
3. **Classification skills**: defined by Jarwan (2013) as: “a basic thinking skill for building an individual’s cognitive frame of reference, and necessary for scientific progress and development.” (Jarwan, 2013: 143).

Methodology

The researchers adopted the descriptive approach to building electronic educational units, as the process of building these units proceeded according to a number of steps, namely (planning, which included the stages of analysis, design, implementation, evaluation). As a course approved in the educational process. The researchers adopted the semi-experimental approach with partial control, with two tests, before and after, for the purpose of implementing and applying the educational units. The researchers chose two equal groups (experimental and control). The experimental group studies the electronic educational units designed according to the aesthetic approach, and the control group studies the same material according to the usual method. The research community consisted of all Students of the Faculties of Education for Pure Sciences in the Middle Euphrates region in the morning Iraqi public universities for the academic

year (2020-2021) AD. The sample was chosen intentionally and represented the third-year students at the University of Al-Qadisiyah/College of Education/Department of Life Sciences, due to the willingness of the Dean of the College of Education to offer facilities, assistance and cooperation, and to fulfill most of the conditions for the success of the experiment in terms of availability: good building, internet service, well-equipped computer laboratories with computer devices and smart boards And the display devices necessary to carry out the research experiment. The sample was (85) male and female students who were randomly selected, and the equivalences were made between the two research groups in a number of variables (chronological age calculated in months, intelligence, previous achievement, previous information, tribal classification skills test), and it was keen to control the non-experimental variables that may Affect the integrity of the experimental design of the research, and the research tool was represented by the classification skills test, which consisted of (36) test items distributed into (30) items of the multiple-choice type with four alternatives and (6) items of the essay type, and its apparent validity and stability were calculated, and applied The two researchers used the tool on the research sample and used the following statistical methods: (T-test equation for two independent samples, Pearson correlation coefficient, Chi-square).

Results

For the purpose of verifying the null hypothesis, the researcher calculated the arithmetic mean and standard deviation of the scores of the experimental and control groups in the classification skills test (pre and post) and used the T-test for two interrelated samples to find out the differences between the pre and post tests for each of the two research groups (experimental and control) to judge the development in classification skills. This is done through the data shown in Table (1).

Table (1)

The results of the t-test for two correlated samples to know the differences between the pre- and post-tests in the classification skills test for the experimental and control groups.

Group	Number	Test	Mean	Standard Deviation	T-Value		Statistical Significance
					Calculated Value	Tabulated Value	

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Experimental	42	Pre-test	10,905	2,139	976, 11	2,020	Significant
		Post-test	22,881	615,2			
Controlled	43	Pre-test	10,070	352,1	512,4	2,020	Significant
		Post-test	581,14	620,3			

The data of Table (1) shows that the arithmetic mean of the pre and post tests for the classification skills test for the experimental group amounted to (10,905 - 22,881), respectively, with a standard deviation of (139.2 - 615,2), respectively, and the calculated T-value for two related samples amounted to (11,976). By comparing it with the tabular T value of (2,020) at the level of significance (05,0) and the degree of freedom (41), we find that the calculated T value is greater than the tabular T value, and this indicates the high level of classification skills of the experimental group students in favor of the post test, i.e. There was a development in the classification skills of the experimental group students. The data of Table (1) shows that the arithmetic mean of the pre and post tests for the classification skills test for the control group amounted to (10,070 - 14,581) respectively, with a standard deviation of (1,352 - 3,620), respectively, and the t-value calculated for two related samples amounted to (4,512) and compared with the tabular t-value The amount of (2,020) at the significance level (05,0) and the degree of freedom (42), we find that the calculated t-value is greater than the tabular t-value. This indicates the high level of classification skills among the students of the control group and in favor of the post-test, that is, a development in the classification skills of the students of the control group. The two researchers used the T-test for two independent samples of the mean differences between the two pre and post-tests to test the classification skills of the experimental and control research groups, as shown in Table (2).

Table (2)

The results of the t-test for two independent samples for mean difference Between the pre and post-tests to test classification skills for the experimental and control research groups

Group	Number	Difference Average	Differences Standard Deviation	T-Value		Statistical Significance
				<i>Calculated Value</i>	<i>Tabulated Value</i>	
<i>Experimental</i>	42	11,738	2,803	10,179	1,989	<i>Significant</i>
<i>Controlled</i>	43	4,512	3,573			

The data of Table (2) shows that the arithmetic mean value of the differences between the test scores of the tribal and post classification skills of the experimental group amounted to (11,738) and with a standard deviation of the differences amounted to (2,803), and the value of the arithmetic mean of the differences between the scores of the pre and post classification skills test for the control group amounted to (4,512) With a standard deviation of the differences of (3,573), and the calculated t-value was (10,179). And when compared with the tabular t-value of (1,989) at the significance level (05.0) and the degree of freedom (83), it was found that it is greater than the tabular t-value, that is, there are statistically significant differences between the mean differences and in favor of the average differences of the experimental group. This means rejecting the null hypothesis and accepting the alternative hypothesis, which states: “There is a statistically significant difference at the level of significance (05,0) between the mean differences in the scores of the two tests (pre and post) for students of the experimental group that will study the course of teaching methods in the electronic educational units designed according to For the aesthetic approach and the average differences in the scores of the two tests (pre and post) for the students of the control group who will study the same subject according to the usual method in developing classification skills. The researchers calculated the effect size, as Table (3) shows the effect size value (d), which reflects the effect size of the experimental and control groups in the classification skills variable.

Table (3)

The Effect Size of The Independent Variable on The Dependent Variable

Independent Variable	Dependent Variable	D-Value	Effect Size
Electronic educational	Classification skills	0,796	Average

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units designed according to the aesthetic approach and taught according to the strategies of the aesthetic approach			
Regular lectures are taught in the usual way	Classification skills	0,444	Weak

By extracting the amount of the effect size of (0.796), which is a good value to explain the effect size and an average amount for the variable of electronic educational units designed according to the aesthetic approach and which are taught according to the strategies of the aesthetic approach in developing classification skills *, while the effect size was for the regular lectures that are taught in the usual way (lecture and interrogation) (0,444), which is a small effect of traditional lectures taught in the usual way on the variable of classification skills (Kieess, 1996: 164).

Results Discussion

The results of the research showed that there were statistically significant differences between the experimental and control groups in the development of classification skills and in favor of the experimental group that studied the electronic educational units for the subject of teaching methods designed according to the aesthetic approach. This means that there is a clear improvement in the development of classification skills among the students of the experimental group compared to the students of the control group. The researchers attribute this to:

1. . Teaching using electronic educational units for teaching methods is designed according to the aesthetic approach and to the use of aesthetic approach strategies in teaching and education.
2. Enriching the educational content with pictures, drawings, shapes and diagrams, providing learners with knowledge content they were not familiar with before, which aroused their enthusiasm, attention and motivation and prompted them to participate in

the dialogue and discussion processes in the classroom, and this encouraged them to develop classification skills.

3. Providing the necessary and sufficient time for the students of the experimental group in reaching a solution to the training activities that develop the classification skills, and reaching the appropriate solutions and explanations by the learners themselves encouraged the development of classification skills among the students of the experimental group.

Conclusions

1. The use of an unfamiliar pattern in organizing the educational content of learners through electronic educational units designed according to the aesthetic approach and rich in training activities contributed to the development of classification skills.
2. Teaching third-year students using the blended learning aesthetic approach strategies and ensuring that the experimental group's plans include the procedures for implementing the training activities included in the educational units contributed to the development of their classification skills.

Recommendations

1. Training the teaching staff in the Teaching Methods Center on the methods of organizing the study subject according to the aesthetic approach in organizing the study lectures for learners.
2. The Ministry of Higher Education and Scientific Research provides an aesthetic learning environment that supports and encourages teaching staff to use the aesthetic approach and blended learning strategies.
3. Adopting the method of educational units in organizing the educational content of the academic lectures because it includes all the elements of the curriculum (objectives, content, activities, and evaluation).

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