

An Educational-Learning Program According to the Cognitive Memory Model in the Acquisition of Educational Psychology for Students in Colleges of Education

Sabar Mahdi Saleh¹, Dr. Adela Ali Naji²

Abstract

The aim of the current research is to:

1- Building an educational program in educational psychology according to the cognitive memory model for students in colleges of education.

2- An educational program for the acquisition of educational psychology among second-year students in colleges of education.

From the two objectives of the research, the following null hypothesis emerged:

There are no statistically significant differences at the level of (0.05) between the average scores of the experimental group that was taught the educational psychology subject according to the educational educational program and the average scores of the control group that was taught the same subject according to the normal method of achievement.

Keywords: *learning, educational psychology, cognitive memory, colleges of education.*

Introduction

Research Problem

Recently, there have been outcries complaining about the education system and its strategies. There has been much criticism directed at educational institutions, which are accused not only of failing to teach students how to use their minds. Achievement, in all its forms and forms, is one of the goals of education due to its educational importance. It is the only criterion by which students advance in studies and are transferred from one educational grade to another. Academic achievement refers to the examinations conducted by the school to determine the extent to which students have benefited from the subjects they are studying. (Al-Obaidi, 2016: 2).

This interest was accompanied by a knowledge explosion that resulted in the development of limitless communications and information. Knowledge emerged in its declarative forms, which means knowledge with natural, theoretical or academic meanings that is stored in long-term memory, and procedural, which means information about the processes related to knowledge itself, which turns into declarative and conditional knowledge, which means knowledge of cognitive strategies. (Sabri and Rasheed 2022: 756).

¹ Department of educational and psychological sciences, college of education for human sciences, Baghdad university ibn rushd, Iraq, Sabarzahra71@gmail.com

² Department of educational and psychological sciences, college of education for human sciences, Baghdad university ibn rushd, Iraq, adela.ali@ircoedu.uobaghdad.edu.iq

The Importance of Research and the Need for it

The teacher practicing his profession is not a transmitter of knowledge, but rather an educator of the student as a human personality in all aspects of his life as a successor of God on earth. Therefore, the teacher is the cornerstone of the educational process and the greatest burden for its success falls on him. Any criticism or attack directed at the educational process is usually directed at the teacher in the first place. It is also considered the basic foundation for the successful implementation of any curriculum. Therefore, the teacher is in dire need of studying the curricula, as he has many responsibilities related to the curriculum (Musa, 2007: 22).

The world is facing tremendous development in information and successive changes in the field of knowledge, science and technology, which have become a distinctive feature of the current era. The progress and development of any nation has become linked to the extent of scientific and technological development achieved by those nations (Al-Kubaisi, 2012: 17). This great development in information and technology requires the student to learn how to obtain information? How can he treat it? This method through which he obtains information and how he processes it is no less important than obtaining the information itself (Zaytoun, 1999: 17).

Research Objectives

- 1- An educational-learning program according to the cognitive memory model in the acquisition of educational psychology for second-year students in colleges of education.
- 2- An educational program for the acquisition of educational psychology among second-year students in the College of Education / Department of Educational and Psychological Sciences / University of Wasit.

Research Limits

- 1- Humanity: second year students of the Department of Educational and Psychological Sciences.
- 2- Location: Wasit University / College of Education.
- 3- Time: 2022 - 2023.
- 4- Cognitive: achievement.

Define terms

Educational Programs

It is one of the methods that gives students the skills necessary to deal with new problem situations that they have never encountered before. (Zaire et al., 2013: 129).

Operational Definition

An organized group of coherent lessons prepared by the researcher in the problem-solving process to increase the achievement of educational psychology among students in colleges of education.

Cognitive Memory Model

Qatami (2011) is a simple system that helps in remembering and controlling, as it enables students to become familiar with their mental activities and encourages them to realize and think critically through learning and remembering, which makes it an important part of intellectual development. (Qatami, 2011: 203), (Halous, 2015: 4).

Achievement

The outcome of what the student learns after a period of time has passed and can be measured in the grade he obtains in an achievement test in order to know the extent of the

success of the strategy that the teacher plans to achieve his goals and the knowledge the student attains that is translated into grades (Abu Jado, 2008: 425).

Operational Definition

The amount of information obtained by the students (research sample) in the subject of educational psychology, compared to the score they obtained in the achievement test prepared by the researcher.

Educational Psychology

The first field that followed and adopted the practical applied method and derived its material, facts and principles from what was presented by theoretical psychology studies as well as what was presented by applied field research in the field of education (Al-Azirjawi, 1991: 19).

Operational Definition

The educational psychology subject, which I tried teaching to second-year students in the Department of Educational and Psychological Sciences at the College of Education (Wasit University), consists of six educational chapters containing information and knowledge that the researcher taught to the students of the research sample for an entire semester.

Research Methodology and Procedures

First: Research Methodology

Research methodology means the method or approach followed by the researcher to reach results that achieve the objectives of his research. In order to reach accurate results that can be relied upon and generalized, the researcher must follow interconnected and sequential steps or procedures and take care to describe them accurately, and express them qualitatively and quantitatively, in that he describes to us the qualitative expression of the phenomenon and explains its characteristics. As for quantitative expression, it depicts it in numbers by collecting data and information and interpreting them in an accurate scientific manner. (2021, and Radhi, Sabri)

Experimental Design

One of the basic things that the researcher must do before conducting the research is to choose the appropriate experimental design to determine the validity of the results derived from the research hypotheses. Experimental design means ((planning the conditions and factors surrounding the phenomenon that we are studying in a specific way and observing what happens)). (Al-Bawi and Hassan, 2013: 105).

The researcher found that the appropriate experimental design at the present time is the experimental design with partial control (designing the experimental and control groups with the same test in everything), because this design provides accuracy in the results, and suits sample selection well, knowing that it controls all the factors that may shape a threat to internal safety. (Abdul Rahman and Zanganah, 2007: 497), and Table (1) explains this:

Table (1) Experimental research design

group	Independent variable	Posttest	Dependent variable
Experimental	Educational-learning programme	Achievement test	Achievement
Controller	-		

A- The Research Community

Determining the research community in which the phenomenon is to be studied is one of the important methodological steps in educational research. It requires extreme precision, as the conduct of the research, its design, and the efficiency of its results depend on it. (The research community knows that it is all the individuals who carry data on the phenomenon that is within reach of the study.) It can also be said that the community is the group of research units from which data is intended. In educational and psychological studies and research, society is a group of individuals, degrees, things, or phenomena such as behavioral traits and manifestations, etc. The population also means the total group with elements to which the researcher seeks to generalize the results (Dawoud and Abdel Rahman, 1990: 66). The current research community is determined by all second-year students in the Department of Educational and Psychological Sciences in the College of Education at Wasit University, College of Education.

B - Research Sample

Choosing a sample is one of the important steps and stages in good scientific research. The sample of the study population represents the society with all its characteristics, and it represents it faithfully, which should have the characteristics of that society. It gives the researcher the results at the lowest cost and in the quickest time and effort. The researcher chooses it using different methods according to the problem or phenomenon. Since societies are often large in size, the researcher cannot study the entire phenomenon, so he resorts to choosing a sample from that society (Al-Obaidi, 2016: 79). Therefore, the researcher chose the Department of Educational and Psychological Sciences at the College of Education - Wasit University, represented by second-year students, to be the field for conducting the current study experiment, and Table (2) shows this.

Table (2) Distribution of the research sample

Number of students after exclusion	Number of excluded students	Total number of students	الشعبة	Group
33	1	34	B	Experimental
34	2	36	A	Controller

Research Tool

First - The Achievement Test

An achievement test is defined as: an organized method for measuring a sample of educational behavior, or it is an organized method for determining a student's level of achievement in an academic subject that he has learned through answering questions representing that academic subject. Testing is considered one of the measurement tools, and since measurement is part of evaluation, we find that there is a strong relationship between testing, measurement, and evaluation (Al-Kaswani et al., 2007: 174). Achievement tests aim to give a comprehensive picture of individuals' capabilities and identify their levels of achievement, as well as identify and enhance strengths and weaknesses and treat them (Odeh, 1998: 53). Achievement tests are important in the evaluation process because they give an idea of the potential and ability of students, develop remedial plans, and work to modify teaching methods and techniques. (Atwi, 2011:133).

Second: Formulating the Achievement Test Items

(40) test items were prepared, including (30) objective items, which were multiple choice with four alternatives to measure the levels of (remembering, understanding, and application). This type of paragraphs is characterized by high stability and comprehensiveness of the educational content, as well as ease of correction and objectivity (Jiyad, 96: 2021), and (10) essay paragraphs to measure the levels of (analysis,

synthesis, and evaluation), because the essay test provides the opportunity for the student to think and express (Attia, 213:2008) and Appendix (14) shows the test in its initial form along with the answer sheet.

Third: Validity of the Test

The validity of the test is the most important condition for a good test. The validity of the test means that the test measures what it was designed for (Al-Qadoumi, 2008: 7). The test must be characterized by honesty, which means that the procedures and methods employed in it must be honest and correct in measuring what is required of it (Odeh, 1993: 204). There are several methods to estimate the validity of the tool. A quantitative estimate can be obtained, and in other cases a qualitative estimate can be obtained. That is, it measures the ability, trait, attitude, or aptitude that the test was designed to measure (Hassan, 2:2022). Therefore, the following types of test validity were extracted:

Fourth: Statistical Methods

The researcher used the appropriate statistical methods for the current study, which were calculated using the Statistical Portfolio Program (SPSS), as follows:

- 1- The t-test for two independent samples was used to calculate the discriminatory power of the items of the problem-solving strategy scale using the two extreme groups.
- 2- Cronbach's alpha formula was used to calculate the reliability coefficient of the problem-solving strategy scale.
- 3- Pearson correlation coefficient was used to calculate the validity coefficients of the items and collect the item score in the total score.

Presenting, Interpreting and Discussing the Results

Show the result related to the null hypothesis

To verify the validity of the null hypothesis which states (there are no statistically significant differences at the level of (0.05) between the average scores of the experimental group that was taught the subject of educational psychology according to the educational educational program and the average scores of the control group that was taught the same subject according to the vocabulary determined by a committee. Deans in the post-achievement test). The researcher applied the achievement test in the Department of Educational and Psychological Sciences / College of Education / University of Wasit, to the two research groups (experimental and control) (Appendix (17)), and obtained their grades (Appendix (18)). The arithmetic mean and standard deviation of the grades of the students of both the experimental group and the control group were calculated to determine the effect of the problem-solving strategy on the achievement of the students of the two research groups by comparing the two groups. The data was processed statistically using a t-test for two independent samples to determine the statistically significant differences between the two groups, and the results appeared as in Table (3).

Table (3) T-test results for two independent samples for the achievement test

Group	Number of sample members	Arithmetic average	standard deviation	Degree of freedom	T value		The significance level is at 0.05 Statistically significant
					Calculated	Tabulation	
Experimental	33	30.28	6.66	65	3.98	2.011	
Controller	34	36.93	6.05				

The tabular T-value of (2.011) has a degree of freedom (65) and a significance level of (0.05), which indicates that there are statistically significant differences between the average scores of the control group and the average scores of the experimental group in the post-achievement test and in favor of the experimental group. Therefore, it is clear from Table (16) that the calculated T-value of (3.98) is greater than the tabulated T-value of (2.011), and the following chart shows the statistical differences between the two research groups.

Conclusions

The educational-learning program has proven its impact on the achievement of students in the research sample. Therefore, this strategy stimulated students' abilities to transfer ideas, knowledge, and understanding, exchange opinions, consolidate information in their minds and bring it closer to their minds, and produce students capable of innovation and launching their ideas into broad fields.

Recommendations

- 1- Approval of the educational program for teaching educational psychology to second-year students in the Department of Educational and Psychological Sciences.
- 2- The use of various modern strategies by university professors in the teaching process, especially strategies emanating from cognitive theory.

Suggestions

- 1- Conduct a study similar to this study for other subjects such as: social psychology, developmental psychology, personality psychology, sports psychology, and others.
- 2- Conduct a comparative study between the cognitive memory program and other programs to identify the best ones in teaching educational psychology.

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