

The Effect of Metacognitive Strategies on the Achievement of Fifth Grade Literary Students in the Principles of Philosophy and Psychology

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Abstract

The research aims to identify the effect of metacognitive strategies on the achievement of fifth grade literary students in the principles of philosophy and psychology, and in order to achieve the goal of the research, the null hypothesis was constructed. There's no statistically significant differences at the significance level (0.05) among the average grades of the students of the control group who study according to the usual method in the achievement of the fifth grade students in the subject of principles of philosophy and psychology, the sample of the study was chosen in a simple random way. The selection fell on the preparatory school of the Dujail Martyrs within the Dujail of the Salah Al Din Governorate Education Directorate. Division (A), consolidation of (19) students, was randomly selected to represent the experimental group, while the class represented (B) the number of (19) students of the control group and the two groups were rewarded in the variables (Raven's test of intelligence, academic achievement of the parents and chronological age calculated in months) and the results of the reward were there was no statistically significant difference between the previous variables. The experimental design with post-test was adopted for the control and experimental groups with Partial control, (11) teaching plans were prepared for the experimental group and the same for the control group. The plans were presented to a group of experts and arbitrators to explore their opinions and suggestions for the purpose of examining their validity and based on their opinions, some minor modifications were made. The plans become ready for implementation. An achievement test of a type was also prepared. (Multiple choice) if he formulates (30) paragraphs of the type of multiple choice after determining the objective of the test and the study content and preparation The test map, and after presenting it to the experts, a percentage was approved (80%) for the validity of the paragraphs, and the paragraphs took this percentage, as the difficulty of the paragraphs was extracted and distinguished, as well as the stability of the test. The researcher applied the experience on sample in the second course in 2020 – 2021. The researcher used the spss statistical package program to analyze the data statistically using the t-test for two independent samples, the chi-square, the difficulty distinction equation, the effectiveness of the wrong alternatives, the t-test for two independent samples, and the Keuder_Richardson_20 equation. In academic achievement between the students of the control group and the experimental group, and in favor of the experimental group, the null hypothesis was rejected and the alternative hypothesis was adopted. Based on the results, the researcher recommended a number of recommendations and the suggested.

Keywords: Metacognitive Strategies, Philosophy, Psychology.

INTRODUCTION

First: The research problem:

Societies nowadays face many challenges in various areas of life and it is not possible in any way to face these challenges without the presence of an effective educational system that prepares a learner with a number of qualities and characteristics that qualify him to face these challenges, and these characteristics do not stop at knowledge only, but must be accompanied by this learner having learning skills, and solving various problems, and this will not come in light of the existence of traditional education and a traditional teacher, but a new method of education must be adopted that depends on the activity of the learner and his vitality in this educational process (Ambu Saidi, 2016: 21).

The study of dreams (2018) indicated that there is a problem among teachers of philosophy and psychology principles determined by lack of interest in modern methods and strategies and the adoption of methods based on conservation and indoctrination (Ahlam, 2018: 100).

The students' problems and the difficulties we feel with regard to remembering and retrieving the subjects, especially the subject of principles of philosophy and psychology, are due to the usual teaching methods and the difficulty of the teaching material, as this subject includes methodological information that is first presented to students in the preparatory stage (Rasul et al., 2018: 3).

Hence, the researcher felt the importance of carrying out such a study, whose problem is the following main question:

"What is the effect of the Metacognitive strategy in the achievement of fifth grade literary students in the subject of principles of philosophy and psychology?"

Second: The importance of research :

And that the metacognition strategy is considered to be higher control processes whose function is planning, monitoring and evaluation, and that it represents the ability of the individual to think about the course of thinking or about it in order to follow up and review the solution of problems because they are mental skills that are considered one of the most important components of self-behavior in the processing of information and the task of controlling all

thinking activities working and directed and using the capabilities or knowledge resources of the individual in facing the requirements of the task of thinking (Groan, 1999: 43-44).

And that the metacognition strategy is of great importance to understand learning processes because learners must understand their learning about the topic or task they will learn and the resources they use as well as organize their cognitive strategies in order to build meaning from their reading or classes, in addition to that many fields and new information and learners must be more interactive, exploratory and self-organized during the process of understanding it (Soldier and Sadik, 365:2001) .

Academic achievement is one of the concepts commonly used in the fields of education, because of the importance it represents in evaluating the student's performance in the study, as it is seen as a basic test in the light of which the student's academic level can be determined and educational production judged in terms of quantity and quality, as many specialized scientists dealt with the concept of achievement in different ways (Zayer, 2020: 13).

The importance of the subject of the principles of philosophy and psychology is that it seeks to achieve many of the goals and objectives that cannot be achieved by another subject, such as understanding the behaviour of other individuals with whom it comes into contact and living among them. (Rasul et al., 2018: 79)

Third: The goal of the research and its hypothesis:

The research aims to identify the effect of the Metacognitive strategy in the achievement of fifth grade students in the subject of principles of philosophy and psychology, and to achieve this goal, the following hypothesis was developed:

There is no statistically significant difference at the level of significance (0.05) between the average scores of students of the experimental group who study according to the Metacognitive strategy and the average scores of students of the control group who study according to the normal method in the achievement test of the principles of philosophy and psychology.

Fourth: The limits of the research: The current research was limited to the following:

1. Human Limits: 5th Grade Literary Morning Study students are males only.

2. Scientific limits:

The Metacognitive strategy

B- Topics of the book Principles of Philosophy and Psychology to be taught in the fifth grade literary.

Educational Achievements

3. Spatial Limits: General Directorate of Saladin Education/Dujail District.

4. Temporal Limits : 2020-2021 school year.

Fifth: Definition of terms:

Metacognition: (Flavell , 1976), as: process control or an individual's cognitive and related knowledge, such as the characteristics of information or data associated with learning (Flavell, 1976 :232).

•The researcher adopted the definition (Flavell, 1976) Theoretical definition because it is the closest to the steps of his research because it is comprehensive and commensurate with the strategy).

Procedural definition: Standing outside the mind and directing the process of carrying out a thinking task to analyze a problem, classify data, or produce a hypothesis. This means that the individual has two types of thinking at the same time: ordinary thinking and thinking.

Metacognition strategy: Metacognition strategy: (Al-Tanawi, 2002) A set of actions carried out by the student with the aim of achieving the requirements of metacognition: Knowing the nature of learning, its processes and purposes, and being aware of the procedures and activities that should be carried out to achieve a certain result and self-control in the learning process and guidance (Al-Tanawi, 2002: 76) .

Procedural definition: It is to proceed according to the plan set by the researcher in guiding the learning process of students and their assistants to know the nature of learning, its processes and purposes, awareness of the procedures and activities that they should carry out to achieve a

certain result, and self-control in the learning process and guidance.

Achievement: (Samara et al., 1989) that: The amount of educational goals achieved by the student in a specific subject as a result of exposure to educational experiences and attitudes (Samara et al., 1989 : 23) .

• The researcher adopted the definition of (Samara et al., 1999) as a theoretical definition because it is a comprehensive definition that shows the degrees and educational goals achieved by the student in the subject.

Procedural definition: Degrees obtained by fifth grade literary students for the subject of principles of philosophy and psychology in the post-achievement test.

Background Theory and Previous Studies: -

First: Metacognitive Strategies

The emergence of the concept of metacognition: The concept of metacognition emerged in the early 1970s to add a new dimension in the field of cognitive psychology, and opens up broad horizons for empirical and descriptive studies and theoretical discussions in the topics of intelligence, memory, comprehension, and learning skills. This concept developed in the 1980s and continues to receive a lot of attention due to its connection to theories of intelligence and learning to solve the problem and make the decision (Hussein, 2016: 156).

Metacognition is one of the concepts that entered the field of educational psychology recently, so this concept is one of the most important concepts in the field of cognitive psychology and dates back to its scientific origins to (Flavell) in 1976, which is derived from the general context of research in the processes of human memory and the teacher plays an important role in the development of metacognitive strategies, by following several steps represented in planning the strategy to be learned, presenting the strategy, guiding practice, and obtaining feedback from students during the application of the strategy .

Second: The components of Metacognitive : (Attia, 2014) pointed out that there is more than one opinion in the classification of

Metacognitive components, there are those who classified it into three elements:

- A. Personal Knowledge
- B. Awareness
- C- Adjustment (Attia, 2014: 140)

Third: - Metacognitive strategies: Studies indicate that individuals who are less able to learn and do not have sophisticated metacognitive strategies, need assistance to change the strategies and methods they used in order to use methods and strategies more appropriate to their abilities(Qatami, 1990 :243).

First: Modeling Strategy: (1995, Wilen& Phillips)

This is one of the strongest learning strategies in terms of effect (Sahar : 94,2013).

Students learn a lot through imitation, so the teacher should be careful to make himself a good model in his thinking and to be a role model for his students, and guide them towards sound thinking skills and work to develop them (Hanaa :94,2013) .

Second : Strategy K.W.L. Rj-marazawa.1998)): In this strategy, the teacher is asked to identify three sets of things (Rj-marazawa.1998:39)

1. Identify what the individual already knows about the topic (What I Know) and this group stands for K.
- 2- Determining what he wants to know about a topic in the form of a list (What I want to know) and this group is represented by the letter W.
- 3- Determining what the individual has already learned (What I learned) .

Third : Problem Solving Strategy

The individual learns to solve problems to be able to make the right decisions in their lives , as the ability to solve problems is the requirement of the individual's life, as the problem facing the individual as a result of a specific situation requires a solution , and the existence of the problem requires the following (Magic, 2013 :96)

IV : Strategies (Efklides, 2009) : Efklides reviewed Metacognitive strategies as follows (Efklides, 2009 :76-82)

1- Orientation strategy: This strategy aims to highlight the clarity of the requirements related to the task to be accomplished by the individual by identifying the appropriate goals for achievement, as this strategy includes the skills of asking questions about those requirements as well as understanding the task and the lack of information, which in turn hinders the completion of the task .

2- Planning Strategy: This strategy aims to develop implementation mechanisms that relate to higher cognitive processes and involve the identification of sub-objectives and their sequencing and the sequencing of implementation steps.

3- The strategy of organizing cognitive processes: This strategy includes the mechanisms of starting and ending cognitive processes, increasing the effort exerted, and managing time .

4. Action plan control strategy: This strategy involves monitoring the realization of operations that have been completed as planned and detecting that the process has not been implemented on time.

5- Strategy for evaluating the outputs of the task completion process: This strategy involves evaluating the outputs of the knowledge processes based on the specified criteria to ensure their success .

6. Summarization and self-organization strategy: This strategy involves a strategy of rectifying all that is relevant to the task to be accomplished from the process to the end .

Fifth: - The strategy of thinking aloud :

This strategy is based on the student's description of their thinking out loud when they think about solving a problem or performing a mummy, as thinking out loud is a technique that increases the students' ability to self-governance resulting from the same individual in both the academic and social aspects 2004, (Park) When the student thinks out loud, he uses four questions through which he shows his thinking processes.

- What will I do (what is my problem)

- How I work (What is my plan)
- Did he use the plan (how did it work)

Thinking out loud encourages the student to reach the maximum encouragement for their abilities and motivates them to think and pay attention.

Sixth: - Concept maps strategy: This strategy is one of the most important Metacognitive strategies developed by a team from the University of Cornell, as it can be used in different learning and teaching situations or situations as a tool to reveal the student's knowledge structure (Zaytoun, 1997 :214 . (The strategy of concept maps is based on Osspel's learning theory, which bases his theory on the fact that the individual thinks through concepts and agrees with (Janneh's) theory of learning, which is based on the hierarchical organization of the learning tasks to be learned (Yusuf, 2001 : 71.)

Fourth: The role of the teacher in the development of Metacognitive strategies among students :

The teacher plays an important role in developing Metacognitive strategies, by following several steps represented in planning the strategy to be learned, presenting the strategy, guiding the practice, and obtaining feedback from students during the implementation of the strategy .

(Huitt, 1997) and (Kriewaldt, 2001) stated that there are a number of procedures that the teacher must follow to develop meta-cognitive strategies among students, which are :

1. Giving students the opportunity to observe their learning and thinking, such as giving the student a chance to learn and think with his/her colleague.
2. Making students work and suggesting predictions about the information they read.
3. Giving students the opportunity to link ideas to excite the structure of knowledge, it is important that the student has good knowledge about what he or she has learned .
4. Give students the opportunity to develop questions about what is going on around them, and ask them, such as asking themselves, did you ask a good question today?

The second axis: Previous studies: -

Al-Ghamdi (2015) The study aimed to identify the effect of a program based on the use of Metacognitive strategies on the development of critical thinking skills of a sample of students of the General Diploma of Education at King Abdulaziz University. The study sample consisted of (64) students of the General Diploma of Education. The researcher used the experimental method and appropriate statistical methods, including the application of the researcher Watson-Gleiser test for critical thinking (the abbreviated image) WGCTA FS The study result showed that there is a statistically significant difference for the benefit of the experimental group at the expense of the officer and the researcher benefited from previous studies in several fields: -

1. Make use of the results of previous studies as necessary evidence and indicators for the current study.
- 2- By reviewing the objectives and hypotheses of the previous studies, it becomes clear to him how to formulate the goal of his current research and his two hypotheses.

Research Methodology and Procedures: -

First: Research Methodology: The researcher followed the experimental research method to achieve the research objectives

Second: Research Procedures:

1- Experimental design: The researcher chose that the appropriate experimental design is the design of the experimental group and the randomized control of the post-test of the experimental group

Experimental group - Independent variable -
Post-test

Control Group _____ Posttest

Empirical Design of Research (Al Zubaie & Mohammed,1981 : 116)

2. The research community: The identification of the community is the main step in the experimental research, as the research requires the inventory of the community and define it clearly and accurately (Obaidat and Suhaila, 2005: 100). The current research community consists of fifth grade literary students in the government day preparatory schools for boys, which are affiliated to the Directorate General of Salah al-Din Education/Dujail District for the academic year (2020/2021) .

3- The research sample: The selection of the sample is one of the important steps in good scientific research, as it must represent the community honestly and should have the characteristics of that community, as its selection depends on several factors, including the size of the community, the nature of the study and its method. The use of the sample facilitates reaching quick and accurate results, as it saves the researcher effort, time and cost. Accordingly, the researcher must choose his study sample from a large community in order to be able to disseminate the results of the study to that community (Al-Jabri and Sabri, 2011: 209-210). The research sample was chosen in a simple random way, and a middle school was chosen for martyrs of Dujail located within the geographical area of Dujail district

group	Section	Number of students
Experimentalism	b	19
The officer.	A	19
Total		38

Number of students of the two research groups (control group) before and after exclusion

group	Number	Variance	Twisting!	Kurtosis	Freedom degree	Table Value - F.max	Calculated Value- F.max	Statistical significance at 0.05
Experimental group	19	13,263	.807	078	18	2.22	1,343	Not significant
Control group	19	9,877	78	451	18			

The value of (V) calculated for the two research groups according to the chronological age, calculated in months

Fourth: The equivalence of the two research groups: Before starting the experiment by controlling the variables that would affect the validity of the results of the research, the researcher reviewed some of the previous studies that dealt with the same dependent variable, including the study (Saleh, 2015). These studies agreed that the equivalence between the two research groups is in the following variables: - (the age of time, intelligence, and the academic achievement of the parents) and in the following parity procedures: -

Chronological age calculated in months: Rewarded between the two research groups in chronological age calculated in months if he calculated the ages of students in months from birth until their entry into the fifth grade literary. The researcher obtained the information from the student records and the school card of each student through the cooperation of the school management with the researcher. The researcher analyzed these data statistically to determine parity and to verify the requirement of moderate distribution and homogeneity of the sample for the variable of chronological age. The coefficients of torsion and flattening were used and the formula of the largest water value of Hartley, whose results showed that the calculated value of (1,343) is smaller than the tabular value of (2,22) at the level of significance (0.05) and with a degree of freedom (18). This indicates the achievement of the condition of homogeneity. The moderate distribution condition was achieved because the results of the coefficients of torsion and variability fall within the period (+3,3). Table (3) shows this.

Calculated monetary value and coefficients of torsion and scaling for the chronological age variable calculated in months

group	Number	Mean	standard deviation	Freedom degree	T.test Table Value	Calculated Value_T.test	Statistical significance at 0.05
Experimental group	19	202,473	3,641	36	2,028	.525	Not significant
Control group	19	201,894	3,142				

Intelligence: The test was corrected, grades were arranged, and then the test was used for two independent samples after verifying the conditions as it was previously verified and as shown in the table

Calculated Alkaline Value and Torsion and Scaling Coefficients of the Ravin Intelligence Variable

group	Number	Variance	Twisting !	Kurtosis	Freedom degree	Table Value - F.max	Calculated Value-F.max	Statistical significance at 0.05
Experimental group	19	81,561	176	922	18	2.22	1,558	Not significant
Control group	19	52,339	335	96	18			

Calculated value (s) of the two research groups in the Ravn Intelligence Test

group	Number	Mean	standard deviation	Freedom degree	T.test Table Value	Calculated Value_T.test	Statistical significance at 0.05
Experimental group	19	43,315	9,0311	36	2,028	615	Not significant
Control group	19	41,684	7,234				

Educational attainment of parents : The researcher obtained the data related to the academic achievement of the father and mother through an information form returned for this purpose, and then reviewed the researcher on the school card for students in order to verify the data to find the difference between the two groups in the academic achievement of the father and mother. The researcher used (K box) after merging the repetitions (primary) (intermediate and preparatory) and(bachelor and diploma) and used the Yates correction. The results showed that there is no statistically significant difference between the two groups at the level of significance (0.05) and the table shows the results of the K box for academic achievement.

Procedures for equal educational attainment of parents are as follows:

1- Equivalence in the academic achievement of parents: The information obtained on the educational achievement of parents shows that they are distributed as shown in the table

Frequencies of parents' academic achievement according to the stage of study

Aggregates	Frequencies of parental attainment				
	Elementary school	Average	Junior high	DIPLOMA	Bachelor
Experimental.	6	5	3	1	4
Officer down.	6	2	4	1	6

The value of K-square for the academic achievement of the parents of the students of the

two research groups and the value of (K2) calculated and scheduled

group	Parents' Achievement			Freedom degree	K-square tabular value	Calculated value of K-square	Statistical significance at 0.05
	Elementary school	Average Junior high	DIPLOMA Bachelor's Degree				
Experimental group	6	8	5	2	5,991	619	Not significant
Control group	6	6	7				

Cells with less than 5 repetitions have been merged into cell order (primary), (intermediate/preparatory), (diploma/ bachelor)

obtained on the educational achievement of mothers that they are distributed as shown in the table

2- Parity in the educational achievement of mothers : It emerged from the information

Frequencies of the academic achievement of mothers according to the school stage

Aggregates	Frequencies of mother's intake				
	Elementary school	Average	Junior high	DIPLOMA	Bachelor
Experimental.	6	4	2	6	1
Officer down.	5	7	2	2	3

The value of Ki square for the academic achievement of the mothers of the students of

the two groups and the value of (K2) calculated and scheduled

group	Maternal attainment					Freedom degree	K-square tabular value	Calculated value of K-square	Statistical significance at 0.05
	Elementary school	Average	Junior high	DIPLOMA	Bachelor's Degree				
Experimental group	6	6	7			2	5,991	1,024	Not significant
Control group	5	9	5						

Cells with less than 5 repetitions have been merged into cell order (primary), (intermediate/preparatory), (diploma/ bachelor)

Fifth: Adjusting the extraneous variables:- By extraneous variables, it means those factors that affect the dependent variable without the experimental factor, so it is necessary to adjust these factors and allow the experimental variable alone to affect the dependent variable", that is, excluding the effect of all factors except the experimental factor so that the researcher can link between the experimental factor and the dependent factor (Al-Dulaimi and Ali,2014 :308).

Of these variables: -

1. Maturity factors: Biological and psychological processes did not affect the responses of the research sample. Being of the same age.

2- Experimental extinction: There was no interruption of the two research groups (experimental and control) except for some individual absences and very few for both groups, and this did not affect the progress of the experiment.

3- Time: - The experiment began in the second semester of the academic year (2020/2021), so the time factor did not affect the

progress of the experiment because the experiment was applied in one semester and in the same subject for both groups .

Sixth: Requirements for conducting the research experiment: -

1-Determining the scientific material: - The researcher relied on the book Principles of Philosophy and Psychology to be taught in the fifth grade literary approved by the Ministry of Education for the second semester (2020-2021) in determining the scientific material and prepared the study plans on (4) subjects.

2-Formulation of behavioral goals: The researcher formulated (116) behavioral goals based on the content of the subject, the principles of philosophy and psychology for the fifth grade literary, according to Bloom's classification in the cognitive field of the six levels (knowledge, understanding, application, analysis, composition, evaluation), 3-Preparing teaching plans: - Based on the content of the scientific material and according to the previously prepared behavioral goals, the researcher prepared (11) teaching plans for the experimental group. The researcher adopted the seven Metacognitive strategies in preparing teaching plans, as the researcher was puzzled by them, which suited the nature of the topic and the objectives of the lesson.

Table of Specifications (Test Map)

No.	Terminations	Number of Pages	Relative Weight of Topic ONE	Number of questions per topic						Total Questions theme
				Remem bering 37	Underst anding 26%	Applicability 10%	Analysing 10%	Installation 10%	Calendar 7	
1	Chapter One	13	73	4	3	1	1	1	1	11
2	Chapter 2	23	64	7	5	2	2	2	1	19
Total		36	100,00	11	8	3	3	3	2	30

A-Drafting the paragraphs of the achievement test: After the completion of the preparation of the table of specifications, the researcher prepared (30) test items, objective of the type of multiple choice with four alternatives, because of the advantages of the test related to the comprehensiveness and adequacy of the evaluation and its measurement of most aspects of the topic it deals with and the ease of recording grades, and after it was presented to

the experts and some amendments were made to it, it was agreed on (116) behavioral objectives and after the completion of the table of specifications, the researcher prepared (30) test items, objective of the type of multiple selection with four alternatives

B- The validity of the achievement test: The validity was found as follows: -

C- Apparent validity: This type is represented in the general form of the test and its suitability for the purpose for which it was set and reached through a competent judgment on the degree of measurement of the test for the measured attribute, since this judgment is characterized by a degree of subjectivity, so the test is given to more than one arbitrator and it is possible to assess the degree of apparent validity of the test through the compatibility of the arbitrators' estimates (Abu Al-Diyar, 2012: 30), and to ensure the apparent validity of the test to the experts to benefit from their opinions and observations in modifying the test paragraphs, and some of them were reformulated without deleting any of the paragraphs where the percentage of agreement between the experts on the validity of the paragraphs was (80%), thus the test preserved (30) its poverty and thus achieved the apparent validity.

5- Statistical analysis of the paragraphs of the achievement test: - The purpose of this step is to verify the level of the upper and lower groups and the results of the factors and discrimination difficulty and ease. The test was applied to an exploratory sample within the research community consisting of (200) students who corrected the answers. The researcher arranged these scores from the top to the bottom, and then the upper and lower samples (27%) were chosen as the best group.

C- The effectiveness of the wrong alternatives: - The equation indicates the determination of the number of students who chose this alternative from the higher category, minus the number of students who chose this alternative from the lower category divided by the members of one of the two groups. The table shows the effectiveness of the dispersants for each paragraph of the achievement test applied in the experiment.

Eighth –Application: -

A-Application of the experiment: - The researcher began to apply the experiment (actual lessons) to the two research groups on (Sunday) corresponding to 23/5/2021, and the experiment continued until (Monday) corresponding to 5/7/2021

B-Application of the achievement test: - After the end of the trial period on Monday (5/7/2021), the researcher applied the achievement test to the two research groups on Wednesday (7/7/2021) at 10 am and the researcher applied the achievement test himself for the safety of the experiment

Ninth - Statistical means: - The researcher used the statistical packages program (Spss) to make the results of the research and the researcher will also work tests, including (the test that is for two independent samples/the largest monetary value/the Kai square (K2)/the difficulty and ease coefficients of the paragraphs/the discrimination coefficient/the effectiveness of the wrong alternatives/the Kyoder Richardson equation/the Klass equation)

Presentation of Findings

The results related to the zero hypothesis, which states: "There is no statistically significant difference at the level of significance (0.05) between the average scores of the experimental group students who study according to the strategy of Metacognitive and the average of the control group students who study according to the usual method of achieving fifth grade students in the literary in the subject of principles of philosophy and psychology."

In order to verify the requirement of moderate distribution and sample homogeneity for the variable of post-test scores, the coefficients of torsion and flattening were used and the formula of the largest C-value of Hartley, whose results showed that the calculated C-value was (1,777), which is smaller than the tabular C-value of (2,22) with a significance level (0.05) and a degree of freedom (18,18). This indicates that the condition of homogeneity has been achieved. As for the condition of moderate distribution, it has been achieved because the results of the coefficients of torsion and flattening fall within the period (+3,3), and the table shows that.

Calculated pH and torsional and scalar coefficients for post test variable

group	Number	Variance	Twisting!	Kurtosis	Freedom degree	Table Value - F.max	Calculated Value- F.max	Statistical significance at 0.05
Experimental group	19	18,023	082	-1,012	18	2.22	1,777	Not significant
Control group	19	10-14	541	1,017	18			

Second : Interpreting the results: - The results showed that the reason for the students of the experimental group is superior to the students of the control group to the following reasons:

1. Teaching according to the Metacognitive strategy puts students at the center of the educational process and increases their ability to build their knowledge while asking questions, which makes their learning based on understanding, and this leads to the consolidation of information in an organized way that is easy to summon and apply in similar situations at other times (Al-Asadi, 2013: 74) .

2. The strategy of beyond knowledge of the steps and procedures by which the students of the experimental group were taught, in which the subject is defined and some questions are asked that will guide the students' attention and thinking, in finding their answers in the subject. This introduction and questions may lead to an attempt to search for the answers to the questions posed. All these procedures include stimulation of mind , and arousal of attention rather than memorization and memorization (Zaytoun, 1999: 280) .

Conclusions: -

The researcher reached the following conclusions: -

1- According to previous studies that have been applied to different subjects, it is possible to apply the Metacognitive strategy to the rest of the various academic subjects.

2- It puts students at the center of the educational process and they have the biggest role and the teacher is guided in it, thus urging students to learn and participate and break the barrier of fear and shame.

3-The metacognition strategy adds an atmosphere of pleasure through the roles that

students play during the lesson, as it urges them to a spirit of cooperation and participation.

Recommendations: -

In light of the results of the current study, the researcher recommends the following: -

1. The Ministry of Education (Numbers and Training Department) recommends that training courses should be conducted in order to establish the importance and use of modern strategies in the educational process, especially teachers of the subject of principles of philosophy and psychology, in order to move away from traditional teaching, which increases boredom and distancing students from this subject due to the large number of information, schools, juveniles and personalities .

2 – Directing teachers from the directorates of education to adopt a Metacognitive strategy in teaching the subject of principles of philosophy and psychology for the fifth grade literary because it has proven its effectiveness and contributed to raising the level of achievement and this is what the results of the current study came up with.

3. Providing basic requirements for teachers in order to use active learning strategies based on knowledge by educational institutions and school management.

Proposals: -

In light of the above and in continuation of the current research, the researcher proposes the following:

1- Conducting similar studies to the current study on different study materials and knowing the effect of the Metacognitive strategy on achievement.

2. Conducting a similar study to the current research in detecting the Metacognitive strategy in other variables such as trends, motivation, acquisition of concepts and the ability to solve problems.
3. Comparison of teaching with Metacognitive strategy and other strategies.
- 4- Applying the Metacognitive strategy to non-acquisition such as trends, tendencies or development in the subject of principles of philosophy and psychology.

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