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The effect the (Confer _ Compare _ Explain) strategy of the Achievement of Fifth Grade science schoolgirls in the since subject

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Abstract

The aim of the current research is to identify (the effect of the strategy (grants - compares – explains) in the achievement of the fifth grade students in science), by verifying the formulation of the following zero hypothesis: -

(There are no statistically significant differences at the significance level (0.05) between the average scores of the experimental group students who were taught according to the strategy sand the average scores of the control group students who were studied according to the normal method in the achievement test in science).

The experimental design was chosen with two experimental and control groups, one of which is partially controlled by those with post-achievement test. The current research community represents all the fifth grade primary schoolgirls in the government primary schools of the Baghdad Directorate of Education/Rusafa for the third academic year (2021-2022). The (primary trench school for girls) was chosen as a model to represent the research sample, as it contains three randomly distributed divisions (A-B-C). Two divisions were randomly appointed (simple random) (B and A) as a sample for research. After excluding the female students, the number of female students in the experimental and control group reached about (68) with the number of female students in the experimental group (A, B), two divisions were selected with simple randomization (B, A) for research , and after excluding the female students in the experimental and control group amounted to about (A, B, D, according to a strategy that shows (3) and (5) the control student according to the method.

The two groups were rewarded in the variables (intelligence, previous achievement, previous information), and the experiment was conducted in the first semester of the academic year(2021-2022).

After the completion of the experiment and the application, the researcher prepared an achievement test of a type of multiple selection with three alternatives consisting of (30paragraphs in the subject of science). The data were analyzed statistically using a test (t-test) for two independent samples. The following results showed :

(The students of the experimental group who were taught according to the strategy (grant – compare – explain) are superior to the students of the control group who were taught according to the usual method in the science achievement test), so the researcher recommends some recommendations and suggestions.

Keywords: Strategy (grant – compare – explain), Achievement.

INTRODUCTION

1. Research problem: Science is an important subject that includes scientific concepts that require modern methods and strategies when teaching to clarify scientific concepts and knowledge. Through the experience of the researcher in the field of teaching science for the fifth grade for more than five years and discussing and exchanging opinions with science teachers, it became clear that there was a decrease in the level of achievement and the researchers and educators paid great attention to the study of academic achievement and its level, especially the low achievement because it is an educational problem that works to waste effective manpower (Al-Jabouri , 2004 :6).

The problem of research is the low level of achievement for the fifth grade in science, and this is confirmed by the study (Ghanem , 2021 , 2). On this basis, the research problem can be formulated in the following question:

- What is the effect of the strategy (grant – compare – explain) in the achievement of the fifth grade students in science?

2. 1. The Importance of the Research:

The twenty-first century was characterized by development and discovery, and this is the age of science, and we all feel this. Yesterday is not like today , and when we want to achieve prosperity for a hundred years, we have to develop the human being because he is the means of development, its tools and goals. Education is the main pillar and the driving force of this human development and the passport for the future. On this basis, we must know the basic force, its applications, and how to reach it and achieve progress for society through science (Al-Saadi et al., 2021 : 62) .

The primary stage is one of the important basic stages, and it is the cornerstone of the subsequent stages, and attention must be paid to this stage so that the educational system is strong with strength and sobriety (Al-Azzawi , 2003 , 4).

And that teaching its effectiveness is measured in the level of achievement and raising it for learners of various aspects, whether it is cognitive, skillful or emotional (Qatami, 2004 : 7).

The researcher believes that modern methods and strategies in the teaching of science must address the senses of all female students and not be limited to the senses of sight and hearing , as they lead to meaningful learning capable of making students the focus of the educational process and thus achieving educational goals, that the strategies that have emerged recently and their effectiveness in educational achievement led to the emergence of theories and principles of learning from them cognitive and structural theory and others , and among these strategies is a strategy(grant – compare – explain) to continue effective positive education and increase the level of academic achievement and based on what has been mentioned, the importance of research can be summed up:

A– The importance of science for the fifth grade primary because it is the basis for the later stages of study and helps to understand facts and concepts.

B– It is hoped that this research will contribute to achieving the objectives of science and improving the learning of students through the results of research, study plans and achievement tests prepared that may benefit researchers, teachers and supervisors.

C– This study may contribute to enriching the library with rereferences for the field of science specialization in teaching methods, which benefits graduate students and researchers. As far as the researcher is aware, she did not find a previous study in the Arab world and Iraq aimed at identifying the effect of a strategy (grant – compare – explain) in the achievement of science .

3. The goal of the research and its hypothesis: The current research aims to identify the effect of a strategy (grants - compares - explains) in the achievement of fifth grade primary students in the subject of science. To achieve the goal, the following zero hypothesis must be verified e:

- [There is no statistically significant difference at the level of significance (0.05) between the average scores of the experimental group's female students who studied according to the strategy (grants - compares - explains) and the average scores of the control group's female students who studied according to the usual method in the achievement test with the subject of science].

4. Research Limits: The current research was limited to:

- The fifth grade primary schoolgirls of the Directorate of Education of Baghdad/Rusafa III, and the primary school of trench was intentionally designated as a sample within the geographical area and the morning study.

- The first semester of the year 2021/2022

- The subjects of study included in the second and third modules (the human body and its health, and the subject) of the Science Book for the fifth grade primary (5th grade, 2021), Ministry of Education, Republic of Iraq.

5. Term Definition :

- Strategy (grants – compares – clarifies) defined by: (Ambo Saidi 2019)

(A learning strategy in which students summarize the sentence of what the teacher explained about a particular topic, then compare what they wrote with what the teacher explained, then add notes about aspects that were not mentioned by their colleagues) (Ambo Saidi et al., 2019 : 120).

- Procedural definition (It is one of the strategies of active learning that includes three steps (grants – compares – explains) determined and planned by the teacher to teach science to the fifth grade primary students of the experimental group.

- Theachievement of his knowledge (Bed worth & Albert, 2010) : (Measurement of the degree achieved by thestudent for some scientific or educational knowledge that can be measured by the degree of testing obtained by the learner) (Bed worth & Albert , 2010 : 136).

- Procedural definition (the amount of acquisition of science sample pupils in the fifth grade primary for the units (second and third) of the book , and it is measured by their obtaining the final score of the achievement test prepared for the purposes of the current research).

Theoretical background and previous studies

The first axis: Active learning

- Active learning: Active learning is a teaching method that integrates a different set of activities to make the brain work where thelearners learn better about the way to work and the active learning involves learners in the learning process rather than seeing them as passive recipients (Bedouin and Ramadan Massad , 2010 : 162) .

In order for the learning environment to be effective and active, there must be, inter alia :

أ- Attention to the healthy growth of the learner: The learner is the most important link between the school and the environment, and on this basis the school devoted its efforts in dedicating its education and preparation to ensure a responsible generation that carries the trust of the future of its country and also its progress .

ب- Exchange of visits between parents : The home is involved with the school in the process of educating the learner and their behavior cannot be straightened without the participation and assistance of parents in this task with the school , and the school is a living cell that interacts positively with the local environment (Badir, 2008 : 71) .

- Active Learning Strategies:

Active learning strategies include a large range of activities participating in the basic elements that motivate learners to worry about expressing their ideas while writing and talking with their peers inside the classroom and reflecting on the learning processes and providing feedback continuously , and that active learning strategies are tools used by the teacher to help him achieve the best learning for learners (Al-Shammari , 2011 : 18).

- Strategy (grants – compares – clarifies): This strategy is based on the learners reading all the notes of their colleagues that they wrote about the subject of the lesson, then they compare what they wrote and then finally add notes that were not mentioned by them on it(Embu Saidi et al.,2019 : 119).

- Strategic benefits (grants – compares– clarifies) : 1- Give a strategy (gives - compares - clarifies) to learners an opportunity to read each other's notes, then make comparisons between them, and then add a clarification to their own notes.

2. Provide learners with the opportunity to take and accept advice by seeing how their colleagues take notes.

3. Allow sufficient time for reflection on the content .

4. Giving comparison of discussions and opinions with their colleagues(Himmele Himmele, 2011, p80).

- Achievement: Achievement is one of the main criteria for revealing the knowledge and information acquired by students , and it is of great importance to bring about social and behavioral change for learners known as learning , and it is a product of learning and its importance is determined by the extent of what has been achieved (behavioral, emotional and skill), and whenever the achievement is influential to them, its effectiveness is of positive educational importance in the behavior of students and helps them to interact with their environment (Al-Khawf, 2011 : 268) .

(Bedworth & Albert) sees achievement as the measurement of the degree of the learner achieved in some educational and scientific knowledge, where it can be measured and assessed to the degree that thelearner gets through tests (Bedworth & Albert , 2010 : 136).

The second axis: Previous studies

- Studies dealing with strategy (grant – compare – illustrate)

Researcher's name	Address book	Target	Sample	Tools	Statistical means	Results
1-Sarah Salman Abdul Thamer 2020 Iraq	The effect of a strategy grants a comparison that clarifies in the acquisition of concepts of philosophy principles among fifth grade literary students	Identifying the effect of a strategy gives a comparison that clarifies the acquisition of philosophy concepts among fifth grade literary students	60 Student	Concept Acquisition Test	T-test Kjord Richardson equation 21	There is a statistically significant difference between the students of the two research groups and in favor of the experimental group

- Study on academic achievement

Name of researcher, year and country	Address book	Target	Sample	Tools	Statistical means	Results
1.Juma Farhan Abdul Karim 2015 Iraq	The effect of the rational investigation strategy on the achievement of the second intermediate grade students of the subject of physics and the acquisition of basic science processes	Identify the effect of the Rational Investigation Strategy on the achievement of the second intermediate grade students of the subject of physics and the acquisition of basic science processes	69 Student	Achievement test Science Process Acquisition Test	t-test Pearson and Spearman equation Kueder-Richardsonequation -20	There is a statistically significant difference in favor of the experimental group in the achievement test and the basic science processes

Research Methodology and Procedures

First: Research Methodology: The researcher followed the experimental approach, to suit the nature of the research, in the implementation of the experiment, as it is considered one of the best curricula for educational and psychological studies, because of its ability to control the variables that may affect the studied phenomenon and also affect the results of the experimental phenomenon (Atwi , 2011 : 192).

Second: Research Procedures

1. Pilot design

The choice of design is a basic process for research and for all experimental research, which is a layout prepared by the researcher and is supposed to answer the questions asked in the research . The research design is tantamount to determining the method that the researcher will manage his research , and an accurate description of the procedures and methods that he will take to get an answer to the researcher's problem questions (Al-Zuhairi, 2017 : 343),table (1) shows that.

Table (1) *The experimental design of the experimental and control groups*

The two groups.	**Équivalence**	**The independent variable**	**Dependent variable**
Experimental group	- previous collection - Intelligence test - Chronological age in months - Testing previous information	Strategy (to be given – to compare – to illustrate)	- Collection
Control group		The usual way.	

2. The research community and its sample

- Research community: The research community refers to all individuals, people or things where they are the subject of the research problem (Al-Jabri, 2011 : 245). The current research community is represented by all female students in the fifth grade of primary school who study in the government primary schools for girls, which are affiliated with the General Directorate of Baghdad Education/Rusafa III for the academic year (2021-2022),as the number of female students * (1826) female students distributed over (17) primary schools for girls.

– The research sample: It is part of the community selected in some way (Rashid , 2017 : 44). The female students in the fifth grade primary school in Al-Khandaq Elementary School for Girls were intentionally selected as the research sample (68) female students, with (33) female students for the experimental group and(35) female students for the control group ,Table (2)shows this.

Table (2) *Distribution of the pupils of the research sample for the two groups (experimental and control)*

group	Section	Number of female students before exclusion	Number of Excluded Students	Number of female students after exclusion
Experimental group	A	36	3	33
Control group	B	39	4	35
Total		75	7	68

3- Equivalence of the two research groups: Equivalence between the two groups is the essence of the experimental method as without parity it is difficult to know the effects of the independent variable in an undoubted way (Al-Husseini , 2004 : 335), and to reach more clear and accurate results, the students of the two groups (experimental and control) were statistically rewarded before starting the experiment for a number of variables, including:

1- Previous achievement of science for the year (2020-2021)

The scores of the final research sample of the fourth grade science students were obtained on Monday 1/11/2021 from the school records with the help of the school administration,Table (3) shows this.

Table(3) *The arithmetic mean and standard deviation of the students of the experimental and control groups for the previous achievement variable of the subject of science*

Variable	group	Number of sample members	Arithmetic mean	standard deviation	Freedom degree	T value		Significance level (0.05)
						Calculated	**tabular**	
previous collection	Experimental group	33	8	150, 2	66	1.057	2	Statistically insignificant
	Control group	35	514, 7	615/1				

2- Pre-science test of information

For the purpose of knowing that the students of the two research groups have knowledge experiences in the subject of science, the researcher prepared a test of previous information and relied on the formulation of his paragraphs on the book of science for the two stages (the third and the fourth primary),where the test included (20) objective paragraphs of the type (multiple choice) with three alternatives,table (4) shows this .

Table (4) *The arithmetic mean, standard deviation and the automatic value of the scores of the students of the two research groups for the previous information variable*

Variable	group	Number of sample members	Arithmetic mean	standard deviation	Degree of freedom	T value		Significance level (0.05)
						Calculated	**tabular**	
Prior information	Experimental group	33	393	075 → 2	66	425	2	statistically nonfunctional
	Control group	35	171	229 (2)				

3- Chronological Age inMonths

Information on the ages of female students in the fifth grade of primary school was obtained for the two research groups from the civil status identities from the school records with the assistance of the school administration. The researcher recorded the year of birth for each female student and calculated the time age in months,Table (5) shows this.

Table (5) *The arithmetic mean, standard deviation and T-value of the students of the two research groups in the age variable Chronological*

Variable	group	Number of sample members	Arithmetic mean	standard deviation	Freedom degree	T value		Significance level (0.05)
						Calculated	**tabular**	
Chronological age	Experimental group	33	818, 123	489	66	539	2	statistically nonfunctional
	Control group	35	657, 121	856, 21				

4. IQ test

Intelligence means that it is a general factor and an innate ability that affects all types of mental activity, regardless of the form and subject of this activity (Ali , 2011 : 308), and the equivalence of the two research groups for the intelligence variable was verified using a test (Raven) This test consists of (60) paragraphs , and the researcher only took (36) paragraphs distributed to parts (A-B-C) at a rate of (12) paragraphs arranged according to the principle of graduation in difficulty,Table (6) shows this.

Table (6) *The arithmetic mean, standard deviation, and the T-value of the scores of the students of the two research groups in the intelligence variable*

Variable	group	Number of sample members	Arithmetic mean	standard deviation	Degree of freedom	T value		Significance level (0.05)
						Calculated	**tabular**	
IQ	Experimental group	33	424	205	66	170	2	statistically nonfunctional
	Control group	35	600 - 22	312				

4- Adjustment of extraneous variables

Experimental research is exposed to many variables that affect the experimental design and its internal and external safety, and for the purpose of reducing the error rate in the results resulting from the presence of these variables, they have to be adjusted(Abbas et al ., 2009 : 67) , and these variables include: -

أ- Subject

The two groups (experimental and control) were taught the same subject represented in the units (second and third) of the science book for fifth grade primary school students, 5th grade, for the year 2021.

ب- Experiment Confidentiality

The researcher was keen on the confidentiality of the experiment by agreeing with the school administration not to tell the students the nature of the research and its purpose. So that their treatment and activity do not change with the experience, which may affect the safety and results of the experiment. They were told that the researcher was a new teacher on the school staff and thus the effect of this factor was controlled.

ت- Subject Parameter

The researcher herself studied the pupils of the two research groups (experimental and control) , in order to avoid differences in the treatment of the pupils of the two groups as a result of the differences resulting from the personal characteristics of the teachers, methods and

methods of teaching them, the level of teaching, scientific experience, qualification and service. This gives the experiment a high degree of accuracy and objectivity.

ث- School building (place of experiment)

The experiment was applied in one school (Al Khandaq Elementary Girls' School), and in similar classes in terms of area, number of lighting, type and size of seats.

ج- Duration of the trial

The duration of the experiment was uniform and equal for the students of the two research groups, and it included the semester of the academic year (2021-2022), as it began on Monday (1/11/2021) and ended on Thursday (20/1/2022) , knowing that there were only two official holidays that compensated the researcher these other days in order to complete the study material in line with the daily teaching plans that she developed .

ح- Classroom Distribution

The number of science classes scheduled for the fifth grade of primary school is three per week, and the weekly schedule was organized in agreement with the school management of the group (experimental and control)

خ- Means: -

The teaching aid helps to enhance students' perception , develop their curiosity, desire to learn , and save time and effort in the learning process of the teacher and students, (Saeedi and Tamimi, 2014 : 150) , the researcher used a range of teaching aids that include models, posters, illustrations, colored pens, and charts for the experimental group, and used part of them for the control group.

Research Supplies

1- Determine the scientific material: The researcher identified the scientific material before starting the experiment that will be taught to the two research groups during the experiment , which included the second and third modules of the book to be taught for the science of the fifth grade primary, 6th grade for the year 2021 during the first semester of the academic year (2021-2022), as follows (as shown in the diagram, 8):

 Module One : (Deleted by the General Directorate of Education)

Formulation of behavioural objectives

The development of behavioral goals is one of the important steps in determining teaching methods and selecting educational activities to make the educational process that is given to learners successful (Zaytoun , 2005 : 50). It also helps the teacher in choosing the appropriate teaching method , teaching methods and evaluation methods suitable for the content of the educational material (Razouki and Mafia 2017:91).

Therefore, the researcher formulated (133) behavioral goals, in light of the classification of (Bloom) in the cognitive field, as the behavioral goals were distributed (recall, comprehension, application, and analysis), respectively, because it is one of the most preferred, used and common classifications (Bloom 1983:107), and the behavioral goals were formulated and distributed according to the content of the scientific material specified by the researcher from the textbook of science for the fifth grade primary.

2- Preparing teaching plans

The daily teaching plan, one of the most.. important duties of the teacher and his responsibilities in teaching and he must prepare psychologically and educationally to teach students and what these lessons contain of concepts and experiences of knowledge, concepts and scientific educational attitudes in meaningful and studied formats that achieve the desired educational goals (Zayer et al 2014:161), the researcher prepared on this basis a set of daily teaching plans for the experimental and control groups, and the number of plans for the experimental group reached (16) plans according to strategic steps (grants _compares _explains) and similar to the control group according to the usual method, and thus the group of plans became (32) plans .

Third: The research tool

The test is a set of questions set to be answered. As a result of these responses by the learner, we get a numerical value of the qualities or characteristics of this learner in the behavior we hope for after the completion of the educational process (Al-Saadi et al., 2021 : 301) . The test

is one of the current research tools and the researcher followed the following steps in preparing the achievement test:

1- Define the goal of the test

The purpose of the test is to build it in the correct way in order to ensure its results (Al-Nabhan , 2004 : 72). The researcher determined the goal of the test to measure the academic achievement in science for the fifth grade primary school students (the two research groups) after they acquired information during the experiment for the topics that were taught to determine the effect of the independent variable (grant – compare – explain) strategy in the events of the dependent variable.

2- Determination of scientific material

The scientific material is specified in the units (second and third) of the content of the science textbook during the first semester of the academic year (2022-2021 AD) for the fifth grade primary , 5, for the year 2021 AD. (Previously mentioned in the research requirements)

3- Define number and type of paragraphs

The researcher prepared the test paragraphs and selected an objective test consisting of (30) paragraphs in light of Bloom's levels, because objective tests are not affected in correcting the subjective characteristics of the corrector and are characterized by honesty, consistency and comprehensiveness , and are built on scientific foundations and help teachers to cover the parts of the scientific material (Khalaf Allah , 2002 : 23) .

4- Prepare a table of specifications (test map)

The table of specifications is the means through which the teacher can set the basics of the scientific material that was studied within a scheduled plan from which the questions are selected in quality and form (Al-Zuhairi , 2017: 208) . It consists of a two-dimensional list showing one of the two dimensions, the content and the specific ratios of its weights, and the second dimension shows the objectives and their weights, and also shows the number of paragraphs in each cell (Al-Dulaimi and Adnan, 2005: 28).

The researcher distributed the achievement test items according to the specific scientific material, and to find the relative weight of the topics and vocabulary, the student's achievement in the experimental material will be measured in relation to the other topics, by measuring the number of classes in each semester to the number of classes of the entire subject.

5- Drafting achievement test instructions including :

أ- Drafting test instructions

The researcher prepared an instruction sheet attached to the test paper that included information about the students (name, class, division, school) and did not leave any paragraph without an answer or choosing more than one answer to the one paragraph.

ب- Correction Instructions

The researcher developed the typical answer for each of the test items, and a score of (1) was given in the case of the correct answer, and a score of (0) was given in the case of the wrong and abandoned answer.

6- Test Validation

Test validity means the degree to which the test is able to measure something that it is designed to measure (Mikhail , 2015 : 90) . An honest achievement test is a test that can successfully achieve the cognitive goals for which it was set (Imam,130:2011). To verify the validity of the test, two types of validity were relied on as follows: -

أ-

The tool is honest if its appearance indicates this through the form and its paragraphs are related to the measured behavior, and when the contents of the tool and the paragraphs are identical to the attribute to be measured then they are more honest (Abbas et al., 2011 : 262) .

أ- Content Validation

The validity of the content is an important type in the construction of the achievement test because of its ability to measure specific areas of behavior , and the table of specifications (the test map) is a shining guide to the validity of the content (Abdul Rahman and Adnan,79:2007), and that the best way and way to verify the validity of the content of the test is for a number

of arbitrators and experts to decide the extent to which the paragraphs achieve the quality to be measured (Ebel, 1972 : 566).

 First Reconnaissance Sample for Achievement Test

The purpose of this test is to determine the time needed by the pupils (the research sample) to answer the test and its instructions and to know the clarity of the paragraphs . The researcher applied the test to a first exploratory sample consisting of (30) students from the fifth grade of primary school from the Martyr Muhammad al-Bayati Elementary School of the General Directorate of Rusafa Education III – Baghdad , after agreeing with the school administration and the subject teacher to conduct the test after the completion of the study of the second and third units of the Science Book for the fifth grade of primary school,Edition 5 , 2021 . The students were informed in advance so that they could study the subject and applied the test on Thursday (21/1/2022) and its paragraphs were mostly clear and understood by all students

Procedures for applying the experiment

The researcher began to apply the experiment to the students of the two research groups (experimental and control) starting on Monday (1/11/2021) until Wednesday (20/1/2022) in the first semester of the academic year (2021-2022) and by three classes per week for each group.

Statistical means.

1- T-test(T-test) 2

2- - Compensation of the difficulty factor for the objective paragraphs.

3- Substantive Paragraphs Distinguishing Strength Equation

4- Eq. effectiveness of incorrect alternatives to objective achievement test paragraphs

5- Keoder Richardson equation -20 6 Pearson correlation coefficient 7. Size of the trace .

Presentation and interpretation of results

First: Presentation of the results

1-To verify the first hypothesis, which states that:

(There is no statistically significant difference at the level of significance (05.0) between the average scores of the experimental group's students who studied according to the strategy (grants - compares - explains) and the average scores of the control group's students who studied according to the usual method in the achievement test with the subject of science). After the application of the achievement test and the correction of the papers for the students of the two marine groups (experimental and controlled), the arithmetic average and standard deviation of the students of Table (7)showed this.

Table 7 *The arithmetic mean, standard deviation and the T-value of the students of the experimental and control groups in the post-science test*

|||				**Calculated**	**tabular**	
Experimental group	33	363, 25	3,170	66	6,559	**2**	**A statistical function in favor of the experimental group**
Control group	**35**	18,200	5,465				

Table (7) shows that the calculated T-value of (559,6) is greater than the tabular value of (2) at the level of significance (0.05) and degree of freedom (66), and therefore rejects the first zero hypothesis and accepts the alternative , that is, the superiority of the students of the experimental group who studied according to the strategy (granted – compared – clarified) over the female students of the control group who studied according to the normal method of achievement. This result is consistent with the study of (Abdul Thamer 2020), which indicated

the effectiveness of the strategy in the excellence of the experimental group with the control group in the dependent variable.

Table(8) *The value of (t) and(□2) and the size of the effect on the achievement of the science subject*

Table T Value	Calculated T Value	Effect size value	effect size
2	6,559	394	large

By calculating the size of the effect using the strategy(grant – compare – explain) in collection using the square of (□2), it was found to be equivalent to (0,394). By comparing this value with the specified standard, it appears that the size of the effect was large, which reflects the effect of teaching using the strategy(grant – compare shows) in improving achievement in science.

Second: Interpretation of the results

The results related to the first zero hypothesis in Table (7) showed that the experimental group studied according to the strategy (grant – compare – explain) excelled in the achievement test over the control group studied according to the traditional method, which indicates that this strategy has a positive effect on the achievement of female students

Conclusions

In light of the results of the research after applying, interpreting and analyzing its results, the researcher reached the following conclusions:

Teaching is a strategy that (grants – compares – clarifies) has a great effect in raising the level of achievement of fifth grade primary students in science.

RECOMMENDATIONS

Based on the findings and conclusions of the current research, the researcher recommends the following:

1- The need for science teachers to use modern strategies in teaching science, especially the strategy of (grant – compare – explain), and this is done through conducting seminars and training courses for science teachers, and this raises the level of achievement of the fifth grade pupil.

2- Helping science teachers to benefit from daily teaching plans to teach fifth grade primary students in accordance with the strategy (grant – compare – explain) that has been prepared within the current research because of its effect in raising the level of achievement

Fifth: Proposals : To complement the research and in line with the objective of the current study, the researcher proposes to conduct a number of studies and scientific research, including :

1- Conducting similar studies for this study is a strategy (grants - compares - explains) in the subject of science at different stages of study.

2- Conducting a similar study to the current study on the effect of the strategy (grant – compare – explain) with other dependent variables such as (mental skills, scientific thinking, deductive thinking, systemic thinking).

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