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Revista de Antropología, Ciencias de la Comunicación y de la Información, Filosofía,  
Linguística y Semiótica, Problemas del Desarrollo, la Ciencia y la Tecnología

Año 35, 2019, Especial N°

# 21

Revista de Ciencias Humanas y Sociales

ISSN 1012-1587/ ISSNe: 2477-9385

Depósito Legal pp 198402ZU45



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# **The Effect Of Employing The Strategy Of The Talkative Groups On The Achievement And Attitudes Of Chemistry For Fifth Grade Students Applied Science**

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## **Abstract**

The study aimed to reveal the impact of employing the strategy of the talkative groups on the achievement and academic tendencies of chemistry for students of the fifth grade of applied science for the academic year (2018 - 2019), and to achieve this goal the researcher used the experimental method on the sample of the study consisting of (50) students, prepared achievement test falls Under (60) paragraphs, and the scale of tendencies for chemistry falls under (30) paragraphs, and after the researcher completed the research experiment according to what was planned:

The superiority of the experimental group studied according to the strategy of the talkative groups was found in the post-application of the test of achievement and attitudes of chemistry.

# **El Efecto De Emplear La Estrategia De Los Grupos Habladores En El Rendimiento Y Las Actitudes De La Química Para Los Estudiantes De Quinto Grado De Ciencias Aplicadas.**

## Resumen

El estudio tuvo como objetivo revelar el impacto de emplear la estrategia de los grupos habladores en el logro y las tendencias académicas de la química para los estudiantes de quinto grado de ciencias aplicadas para el año académico (2018-2019), y para lograr este objetivo, el investigador utilizó el método experimental en la muestra del estudio que consiste en (50) estudiantes, la prueba de rendimiento preparada cae bajo (60) párrafos, y la escala de tendencias para la química cae bajo (30) párrafos, y después de que el investigador completó el experimento de investigación de acuerdo con lo planeado: La superioridad del grupo experimental estudiado de acuerdo con la estrategia de los grupos habladores se encontró en la aplicación posterior de la prueba de rendimiento y las actitudes de la química.

## Chapter One

### Research problem:

The problem of the study was the weakness of students in the attainment and tendencies of the chemistry course. This may be due to the methods and strategies used in teaching. In their teaching is limited to the use of regular non-exciting methods of teaching, and through the work of the researcher as a teacher of the methods of teaching chemistry, note that the strategies of teaching chemistry has always been limited to the usual methods between direct teaching, and the teachings of the teacher, and negative reception Of the learner with limited impact.

Several educational studies have indicated that during the lecture in a session of up to fifty minutes, students remember (70%) of what is said in the first ten minutes, and about (20%) in the last ten minutes, which necessitates the need to change from the regular lecture to learning Active.

This led the researcher to put forward a strategy of active learning strategies, which is the strategy of the talkative groups, and to investigate the knowledge of their impact on the achievement and study trends of chemistry.

research importance:

Chemistry is an important science that has an impact in our daily lives and helps to simplify the components of the complex world we live in. The study of chemistry makes students feel and understand what is in their environment and they satisfy their tendencies and desires for knowledge, experience and exploration. Complex and multifaceted, influenced by a range of variables, and researchers continued in their studies at various stages of education in order to identify the most important factors and key elements affecting it, each according to the educational stage, and many studies and research in this area to The existence of a set of reasons that will affect this performance positively or negatively, some studies attributed the reasons for success or failure to the student himself, and talked about the seriousness of the student, his tendencies to learn, and proper organization of reading time, and how to invest time, enthusiasm, and many questions related to the subject Some studies have built that failure or low level of academic attainment is due to traditional teaching methods. (Al-Jalali, 2011: 115), and that the tendencies and desires are one of the most important motivators and determinants associated with the process of academic achievement and effectiveness in the study, and is a strong incentive to make the utmost effort to success and excellence, and the teaching strategy adopted by teachers have an impact on achievement Among the strategies that emerge from the constructivist theory is an active learning strategy based on the principles of cooperative learning, including the strategy of talkative groups which is useful for controlling the learning process, as the presence of ten pairs of interactive talkative groups Among them in class is actually a kind of active learning, especially when compared to having one student speak in a large group. Discussions within the talkative groups enable students to focus their attention on understanding the subject matter well, deepen their ideas, and ensure each student's contribution to the work (Sa'ada, 2018: 202). They are organized to achieve active learning among students, where students are able to express difficulties and problems they wish not to expose to each class and reveal them only to their classmates. Give immediate feedback after Each achievement by the teacher, as the questions asked for discussion do not have a specific time, and raise noise in the classroom environment, but it is useful in eliminating the misunderstanding during the lesson, and therefore called the talkative groups, which can be used in any short-term learning situation or Long or as desired (Afana et al. 2008: 114)

The researcher believes that the talkative groups are small groups that appear when conducting discussions provided by the teacher to his students

during the lecture. Here, the use of such groups is not only to increase the interest of students in the lecture, but also to encourage students to participate in the processes of thinking and discussion together.

This method, which encourages students to learn actively, begins by suggesting a specific activity for the students, and then splitting them into the classroom into a number of small groups that are easy to form or organize around a number of round tables, even in a large lecture hall. (Gangel, 2008: 36)

However, the form of the group is closely related to the type of activity required, so that students' mental abilities and knowledge can be taken into account, making it inappropriate to put forward statements, problems, issues or topics that are much higher than their level of understanding. Specific activity in which they are dealing with things they are expected to perceive easily, especially if students appreciate the use of the talkative group method, and receive clear instructions on what to do, and this period is not only oral, but written in writing on the data projector (Milaningrum), 2011: 11)

Purpose of the study:

The present study sought to achieve the following objective:

Disclosure of the impact of employing the strategy of the talkative groups on the achievement and attitudes of chemistry for fifth grade students applied science

Research hypotheses:

To answer the questions of the present study, the following zero hypotheses were tested:

1- There are no statistically significant differences at the level of significance (0.05) between the average grades of students in the achievement test due to the teaching method.

2 - There are no statistically significant differences at the level of significance (0.05) between the average grades of students in the scale of the tendency of the subject of chemistry due to the teaching method.

Research Areas:

1- The human field: students of the fifth grade of applied science for the academic year 2018 - 2019.

2 - time domain: the first semester of the academic year 2018 - 2019 m.

3 - Spatial field: The study was applied to the schools of the Third Directorate of Education Karkh in Baghdad.

Define terms:

BUZZ GROUPS:

Todd, 1989) is a small group with temporary factors and additional structure for specific questions (usually five or six individuals). The question is asked in this group so that the work involved in this question is explained step by step (Todd, 1989: 85).

(Malawi Institute of Education, 2004) A pattern of teaching that requires the formation of small groups within the classroom, by dividing students in that room into groups to discuss a question, two questions, or two issues, and the classroom quickly becomes full of chatter from discussion. Malawi Institute of Education, 2004: 44

(Sa'ada, 2006) are small groups that appear when the teacher provides discussions to his / her students during their lecture. The use of such groups is not only to increase student interest in the lesson, but also to encourage students to participate in both thinking and discussion processes. This is a 13-step approach, with time for each of these steps and the activity or activities to be performed. (HE, 2006: 204)

Through the above, the researcher defines the strategy of the talkative groups as: one of the active learning strategies, which includes thirteen steps, where the class is divided into groups to discuss a question or issue with the identification of a leader for each group, the classroom becomes full of chatter resulting from the discussion of these groups, which Begin by stimulating the students 'attention and motivation by displaying the data of the previous lesson on the projector, and then a verbal review from the teacher to the lesson in order to strengthen the previous information acquired by students and to increase the retention of this information, and to stimulate students' thinking and to activate the discussion the teacher and some students ask questions The degree of difficulty, and groups are required to work summaries of ideas and write it down and discussed with all grade students.

Academic achievement:

(Omar et al., 2010) as "an attempt to reveal the impact of what the student has learned, or what he has been trained while studying a particular subject or unit of instruction." (Omar et al., 2010: 379)

Procedural definition: The amount of chemical information acquired by the student measured in the total score obtained in the achievement test prepared according to the first five levels of knowledge of the classification of Bloom (remember, comprehension, application, analysis, and synthesis), which was developed for the purposes of the current research.

The coursework of chemistry: Arafa

(Allam, 2009) as a "pattern of selective attention to alternatives of ac-

tivities, and to choose between them without being subjected to external pressure, and is usually expressed by the student in favoring participation in certain activities.” (Allam, 2009: 176)

The procedural definition of inclination:

The degree obtained by the students of the fifth grade of applied science on the scale of the tendency of chemistry prepared by the researcher

## Chapter II

Theoretical and previous studies:

### 1. Theoretical studies:

#### The Chatter Group Strategy

Talkative groups are organized to achieve active and meaningful education among students. They are a way to promote a rapid exchange of ideas, usually in large training sessions or classes with large numbers of students, in which small groups are given short periods of time to consider a simple or problem or subject to provide ideas or proposals and a solution, and then give immediate feedback after each achievement by the teacher, as the questions have no specific time, and raise noise in the classroom environment, but it is useful in eliminating the misunderstanding During the lecture or class; Buzz / chatter. (Gangel, 2008: 33)

#### Principles for chattering

The application of the strategy of talkative groups in teaching needs to take into account a set of principles. Boudreau (2009: 33) (Saadeh, 2018: 210) refers to a set of these principles, including:

1. The teacher should plan the time of the class so as to allow for the removal of chairs, explain the technique and listen to the reports as things take longer than expected.
2. The teacher should explain to the students the roles of the group leader and the registrar. This is done in front of the whole group so that each group member can know how to interact with both the leader and the registrar in his group at the same time.
3. The teacher should devote a specific time to the discussion. Originally, the teacher should think that the group will be able to offer more than expected at a given time and with effect. If the group of five has fifteen minutes to deal with the questions asked, this means That everyone has only three minutes to speak.
4. The teacher must move between groups smoothly in order to motivate students to participate better, help them overcome obstacles and spread the atmosphere of enthusiasm throughout the place.
5. The teacher will then collect notes from the reports and prepare a paper



copying the overall findings of the students. Registrars may speak very quickly so that others cannot take notes. In addition, this paper will be a symbol of the students' effectiveness. In the debate. The teacher can also add his own comments at the end of this report so that he can use it as the reference after the class.

Advantages of the strategy of talkative groups in the educational process:

- Students in the talkative groups are able to express the difficulties and problems they wish not to disclose to each class. They are exposed only to their classmates. After each achievement by the teacher, the questions asked for discussion have no time limit. (Afane et al., 2007: 114)

- Talkative groups contribute to greater integration of students in the learning process, and help build team spirit and strengthen the principles of cooperation among students rather than compete to reach the desired learning.

- Groups allow for a secure environment that fosters independent cognitive thinking among group members, and reduces reliance on memorization, memorization, and preservation (76, 1997).

- Encourage students to have a quiet discussion with group members.

- Generate lists of questions during the discussion.

- Order ideas in an orderly manner.

- Ensure participation for all regardless of class size and time constraints.

- Helps to exchange views and ideas, and to connect concepts and ideas together. (20: 2017 Riera, M. & Tenesaca)

Steps of the Gossip Strategy:

Gibbs and Jenkins (1992) put forward thirteen steps for the practice of the chat group strategy, specifying the time of each of these steps and the activity or activities to be undertaken, as shown in the following panel:

Activities required	Time	Step
A general review using the Data Show for the previous work after the students entered the classroom and sitting on the seats with the active participation of the students	five minutes	First
Oral review by the teacher of the previous lesson or work	Nine minutes	the second
Ask students a question about the method that can be used and discuss it in small groups	five minutes	Third
The teacher asks questions on his part related to the students' questions	Seven minutes	Fourth
Students do an assignment related to the data and information provided (By electronic data display technology. (Data Show	Four minutes	Fifth
The teacher makes summaries of the findings of students in different small groups	Six minutes	Sixth
Students develop and expand on ideas discussed and interpreted	Six minutes	Seventh
The teacher answers a question, which leads to a more difficult issue	Minutes	Eighth
Students continue to work in different working groups on the issue .The most difficult	Two minutes	Ninth
The teacher answers the rest of the questions and analyzes in a short lecture	Three minutes	tenth
Students ask an open question with insufficient time to answer	Minutes	eleventh
The teacher reviews the material in the preparation book	Six minutes	Twelfth
The teacher asks students to write a summary of what happened in the lecture on at most one page	Two minutes	Thirteenth

Previous studies:

Studies of the chatter groups:

1- Study (Tinnina, 2017)

This study aimed to investigate the impact of using the strategy of the talk-

ative groups in the achievement and mathematical communication among the eighth grade students in Palestine. The study sample was divided into two groups in each school, (68) male and female students in the control group that was taught in the normal way, (67) male and female students. The experimental group was taught using the strategy of talkative groups, the results showed that there are statistically significant differences between the average scores of female students in the experimental group and the control group, attributed to the method of teaching and for the benefit of the experimental group (Tinnina, 2017: 1-3).

### **2.Riera & Tenesaca (2017)**

This study aimed to improve the skill of speaking using the strategy of talkative groups in the third level students in the English language at the University of Cuenca. To achieve the objective of this study, the researchers used the experimental method. The students were divided into two experimental groups: (26) students in the first experimental group taught in the morning, and (21) students in the second experimental group that was taught in the evening. The two experimental groups were taught

There is no statistically significant difference between the students' average performance in the two experimental groups: Riera & Tenesaca, 84 (2017).

### **3.Pangaribuan & Manki (2018)**

This study aimed to reveal the impact of using the group talkative strategy and grouping method in teaching writing skills to students of the first stage at Sama High Secondary School. To achieve the study objective, the researchers followed the experimental method. The sample consisted of (42) students from the first secondary grade, (20) Students in the experimental group were taught by the strategy of the talkative group and (22) students in the control group, were taught in the traditional way and the researchers prepared the study tool was a dimensional test, the results showed an improvement in the grades of students after using the strategies of the talkative group and Compilation, where the average score of students who studied using the group talkative strategy had a significant impact on students' ability to write and express everyone's ideas. (164-178: 2018, Pangaribuan & Manki)

The usefulness of the previous studies:

In light of the previous studies reviewed, it is possible to summarize what was reported in the following:

1. Identify the procedures followed in those studies and devise the approach of this study in terms of parity between the two groups.

2. Identify the tests and measures adopted in these studies and use them to design the tools of this research.
- 3 - Choose the appropriate statistical methods and adopted in the search results (analysis of results).
- 4 - The researcher reported from those studies to see a number of sources that can be consulted and more.
5. Previous studies have helped determine the theoretical background and discuss and interpret the results.

### Chapter III

#### Research Methodology and Field Procedures:

Research Methodology: The researcher used the experimental method in the two equal groups method (control and experimental) to suit the research requirements.

#### Experimental design:

The researcher applied the experimental design with partial control. Figure 1.

Measurement tools	Independent variable	Groups
Achievement test	Teaching according to the strategy of talkative groups	Experimental group
Test of chemistry	Teaching in the usual way	Control group

Figure 1 Experimental design of research

#### Identify and sample your search community:

The research problem was diagnosed in the preparatory stage, and the research community was selected to be the fifth grade students for the academic year (2018 - 2019) in the Directorate General of Education Baghdad / Karkh III.

For the purpose of applying the research experiment, the secondary wisdom for boys was chosen intentionally, Division A was chosen to be the experimental group studying chemistry according to the strategy of the talkative groups, and Division B to be the control group studying the same material in the usual way. The number of students of each division (30) students, and there were no students failing in both divisions and thus the research sample reached (60) students.

#### Equalize the two search groups

The researcher sought to verify the control of some variables that may lead

to discrepancies between the two groups and thus affect the results of the experiment and in order to verify the internal integrity of the experimental design, namely (academic achievement in chemistry for the fourth grade of scientific, chronological age, degrees of intelligence, and previous information in chemistry) The two groups were equal in variables.

search tools:

The present research requires two tools to measure the effect of the independent variable on the two dependent variables: an objective test to measure achievement and another to measure the study tendencies of chemistry.

1- Achievement test: -

In the light of the analysis of the content of the textbook of chemistry and specific behavioral purposes, the researcher built a test achievement according to the following steps: -

Setting the main objective of the test:

The objective of the test is to measure the achievement of fifth grade students in the content of the first four semesters of the textbook chemistry scheduled for the academic year (2018 - 2019) and according to the behavioral purposes derived from it.

\* Determine the number of test items:

Determined the total number of test items in the light of the views of a number of teachers and chemistry teachers for the fifth grade of scientific, and took into account the behavioral purposes to be achieved, and agreed that a test includes (50) of the type of objective tests can be appropriate for the level of students at this age and school and in Light time allotted and nature of the material.

\* Preparation of specifications table:

The specification table was prepared in the light of the content of the first four chapters of the book of chemistry for the fifth grade of the scientific and extracted data and joined in the specification table below:

Specification table

((Weighted percentage of behavioral objectives, content and paragraph weights))

To be selected in light of the length of the test

Total	Installation	analysis	Implementation	Absorb	remember	Weight of behavioral purposes		
%100	%3	%10	%12	%47	%28	Weight of separation	Number of servings and time * minute	Content
Number of test items								
10	zero	1	1	5	3	%20	servings 8 360minutes	Chapter One
18	1	2	2	8	5	%30	servings 14 630minutes	Chapter II
10	zero	1	1	5	3	%20	servings 8 360minutes	Chapter III
12	zero	1	2	6	3	%25	servings 10 minutes 450	the fourth chapter
50	1	5	6	24	14	%100	servings 40 1800minutes	Total

\* The time of one session is (45) minutes.

### Formulation of test paragraphs

#### Drafting Instructions to Correct Achievement Test

Typical answers were developed for all test paragraphs, which were used to correct the test. For each of the multiple-choice paragraphs, one score is given if the answer is correct and zero if the answer is wrong, while the abandoned paragraphs are treated as the wrong answer. Thus, the total degree of these paragraphs was determined by the range (0 - 50) degrees.

#### \* Sincerity test:

To verify the validity of the test was presented to a number of experts and specialists in chemistry and methods of teaching, measurement and evaluation and a number of chemistry teachers in the preparatory stage to determine their views on the comprehensiveness of the content that measures it and the clarity of the paragraphs and the quality of their formulation, and the extent to which they measure the levels of behavioral purposes specified for them. The distribution of scores on paragraphs, the logic and attractiveness of alternatives and any other observations that improve the quality of the test. The opinions of the arbitrators have been taken to reformulate or change the order of some paragraphs. Most of the paragraphs

got more than 85% agreement, so they are all valid for measuring student achievement.

\* Statistical analysis of test items:

The test was applied to a sample of the fifth grade students who consisted of (100) students at Al-Hikma Secondary School for boys after completing the study of the vocabulary of the educational content included in the test. The second group (27%) of the lowest group, the lowest group, and thus the number of female students in each group (27) students, and was calculated the number of correct and incorrect answers for each paragraph of the test separately for both groups Upper and lower then find what Come :

• Time taken and clarity of paragraphs:

After applying the test to the sample of the exploratory research it was found that the time taken in the answer ranges between (70 - 90) minutes, and by calculating the average time taken in both cases determined the appropriate time to perform the test, which is (80) minutes, as was verified the clarity of the instructions and test paragraphs from The scarcity of some students' questions about how to answer or clarity of paragraphs

• Easy paragraphs:

The ease of each paragraph of objective questions was calculated using its own equation. He found that its value ranges between (0.42-074), and thus the test paragraphs are acceptable and their ease of coefficient is appropriate.

(Al-Dhaher, 1999) Paragraphs are good if their coefficient of ease ranges between (20.0 - 80. 0) (Al-Dhaher, 1999, 129).

• Power of paragraph recognition:

The discriminatory power of each paragraph of the substantive questions was calculated using its equation and found that its value ranges from (33. 0-66. 0), since the paragraph with a coefficient of discrimination less than (20.0) is considered weak and is recommended to be deleted (return Therefore, the test paragraphs are acceptable in terms of their discriminatory capacity and therefore none have been deleted.

• Effectiveness of wrong alternatives:

After using the equation of the effectiveness of the wrong alternatives for all substantive paragraphs, it was found that the coefficients of the effectiveness of all alternatives are negative, and thus returned all the wrong alternatives effective.

\* Achievement stability test:

The Kuder Richardson equation (20) was used to calculate the stability of multiple-choice thematic paragraphs.

The coefficient of stability of these paragraphs was (82.0). (Allam, 2000, 543) Thus, all the items of achievement test were retained.

## 2- Scale of chemistry

The researcher considered preparing a tool to measure the study tendencies of chemistry suitable for students according to the following steps:

The researcher reviewed the conditions of preparing tendency measures in general, which were referred to in the literature. He also looked at measures of tendency in various subjects in a number of previous studies. After that, the researcher formulated a set of paragraphs consisting of (30) items measuring the study tendencies of chemistry.

Believe tool:

The researcher presented it to a group of arbitrators to judge the validity of each paragraph, and its relevance to the subject matter measured. Bloom explained that if the paragraph obtained an agreement rate (75%) and more than the arbitrators achieved the truthfulness of the content (Bloom, 1971: 76). The researcher has obtained from the ratification of this tool an agreement rate (80%) or more of the arbitrators on each paragraph of the tool has been modified and reformulated some paragraphs did not delete any paragraph of the paragraphs of the tool and thus achieve virtual honesty and content of the tool.

The exploratory experiment for the application of chemistry

In order to verify the clarity of the paragraphs of the tool, and diagnose the vague paragraphs to be reformulated, the researcher applied the tool on a survey sample consisting of (60) students of the fifth grade students applied science.

Correct the inclination tool and find the total score:

In order to obtain the total degree of inclination, the researcher identified two alternatives (two terms) to answer: one indicating or measuring the inclination and given at the correction one score and the other does not measure the inclination and given at the correction score (zero), and thus be the highest score can be obtained by the student (30) and less Degree (zero).

Find the discriminatory power of the paragraphs of the tool:

The distinctive measure is the measure to which different individuals respond differently while they respond similarly or similarly in the case of non-discriminatory scale. In the light of the total score obtained by each student of the survey sample of (60) questionnaire was the following:

- 1- The students' forms are arranged in descending order from high to low.
- 2 - (50%) of the forms with the highest scores were selected to represent



the highest group and (50%) of the forms with the lowest scores were selected to represent the lowest group.

3 - The researcher (25%) adopted a criterion to distinguish paragraphs as an acceptable distinction force for paragraphs, and thus became a tool tendency consisting of (30) paragraph.

Tool stability:

The researcher chose the retest method. Therefore, the tool was applied to the same sample of (60) students and then re-applied to the same sample. Stability was calculated using the Pearson correlation coefficient between the students' grades in the two applications. It reached (94%). This coefficient is a good stability factor that can be adopted (Samara et al., 1989, p. 120).

the fourth chapter

Presentation, analysis and discussion of results:

1. Presentation and analysis of the results of the first objective:

The mean and standard deviation of the students' scores of both the experimental group and the control group were calculated in the achievement test. Table (1).

Table 1

Arithmetic mean, standard deviation and calculated T value

The scores of the two research groups in the achievement test were applied afterwards

Statistical significance	T value		standard deviation	SMA	Degree of freedom	Number of students	the group
	Tabular	Calculated					
0.05	2.00	6.47	12.88	67.5	58	30	Experimental
			11.28	47.3		30	Control

The table shows that the calculated T value (47. 6), which is greater than the tabular value of (00. 2) at the level of significance (05.0) and the degree of freedom (58), which means that there is a statistically significant difference in favor of the experimental group which indicates The superiority of the experimental group students who studied according to the strategy of the talkative groups on the achievement of the control group students who studied according to the usual method of achievement.

Presentation and analysis of the results of the second objective:

The arithmetic mean and standard deviation of the grades of both the ex-

perimental and control groups were calculated in the chemistry study. Table (2).

Table 2

Arithmetic mean, standard deviation and calculated T value

The scores of the two research groups in the chemistry study tendency scale

Statistical significance	T value		standard deviation	SMA	Degree of freedom	Number of students	the group
	Tabular	Calculated					
function	2.00	2.85	1.75	22.7	58	30	Experimental
			2.40	.16 21		30	Control

Using the t-test for two independent samples, the calculated T value is 85.2, which is greater than the tabular value of 00.2 at the level of 0.05 and the degree of freedom (58). This means that there is a statistically significant difference in favor of the experimental group, which indicates the superiority of the experimental group students who studied according to the strategy of talkative groups over the students of the control group who studied according to the usual method of study chemistry.

Discussion of the results:

Provides a natural and useful transition from the status of listening to the individual's decision to progress and work. This is an intermediate step towards taking responsibility from leaders, moving to small groups and then to individuals.

2. It makes the process of active learning meaningful, and allows students to infer the relationships between the information they have.

3 - The role of the strategy of the talkative groups in the organization of the material and the selection of teaching strategies and teaching aids for teaching and various methods of assessment contributed to make students more willing to receive information and thus the organization and integration of the subject in their knowledge structure.

4 - The strategy of the talkative groups and dialogue and the feedback of the students in each group among them led to the exchange of experiences and give students greater confidence in participation, criticism and learning, as the division into groups so that the levels of individuals in each group had the benefits, including increased student experience and understanding For things and cooperation with members of the group and learn from them and exchange views and ideas among them as well as reduce

centralization among them.

5. The identification of behavioral purposes helped the teacher in the choice of educational activities that achieve better achievement of students and also led to the improvement of the quality of educational sequence and educational procedures, and provide the teacher with a clear standard used as a basis for adjusting his decisions after observing the student behavior after the completion of the educational process.

6 - The nature of the presentation of educational material in a sequential and interrelated manner helped to develop learning at all levels and this is consistent with the cognitive psychologists stressed that the educational process must be analyzed according to strategies designed in an orderly and sequential and sequential steps contribute significantly to the development of the teaching process and achieve The impact of students, and this is only through the design of the environment of the learner to suit the abilities and attitudes and perceptions.

7 - The methods of evaluation and feedback have an impact on increasing the achievement of students of the experimental group, where students identify the strengths and weaknesses in their performance in order to improve and develop and progress towards the achievement of behavioral purposes.

8 - The division of students in groups at different levels gave an opportunity to collect information on the problem or questions presented by the teacher and the work was cooperative - where the participation of each student with her colleagues in discussing the subject of the lesson and thinking together, and this naturally raised them to reconsider their cognitive structure and tendencies For material.

Recommendations:

1 - interest in using the strategy of talkative groups as an entrance to the teaching of Islamic education, and in all educational stages.

2 - Enlighten the chemistry teachers of the results of research and studies that dealt with building strategies, so as to benefit from them and use them in the development of concepts, especially chemical concepts.

3 - the inclusion of this strategy in the textbook of the teacher's guide to the curriculum of chemistry to the diversity of teaching methods.

Proposals:

1 - Study the impact of the strategy of talkative groups in the development of scientific thinking.

2- Conducting a descriptive study on the reality of teachers' perception and use of the strategy of the talkative groups.

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Revista de Ciencias Humanas y Sociales

Año 35, Especial N° 21, (2019)

Esta revista fue editada en formato digital por el personal de la Oficina de Publicaciones Científicas de la Facultad Experimental de Ciencias, Universidad del Zulia.  
Maracaibo - Venezuela

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