

# The Effect of Woods' Strategy on Achieving of Second Grade Students in Physics

Dr. Majed Saleem Aziz

**Abstract:** *The aim of this research is to investigate the impact of Woods' strategy in collecting second graders average for physics. To achieve the objective researcher coined the following hypothesis: there was no statistically significant difference at a level (0.05) between the average grades of the experimental group students studying physics as Woods and strategy between the average control group students who are studying the same article in the regular way. Test collection. Search sample amounted to (83) students and (42) students for the experimental group, and (41) students for the control group. Students were subjected to test experiment is composed of (30) after the completion of the experiment. And use appropriate statistical methods researcher as a t-test (t-test) for data processing, the results showed a statistically significant difference between the mean average score for the experimental group students and students in the control group and the experimental group Test collection, thus rejecting the zero hypothesis, this result implies superiority of the experimental group students who studied according to the strategy of Woods, the control group students who studied on this way.*

**Keywords:** Woods' strategy

## 1. Research Problem

Faced with the teaching of physics at all stages of the study, many challenges limit the ability to achieve the desired educational goals, the nature of this article requires them to play a prominent role and contribute to the level of achievement of learners, otherwise become a mere group of later, Otherwise, it becomes just a collection of scattered facts and information, which is contrary to its main objectives. It also helps the individual to solve many of his problems by using information and meaning of things without having to deal with the same things or deal with them in realistic Process Processing (Khalili 1996, 172). This will be achieved only through the adoption of physics teachers to the methods, methods and strategies that help modern learners To raise their level of scientific, and this is what the researcher found from the way of his modest view on a number of literature from the books and periodicals and the results of previous studies in the field of teaching methods, and during his meeting with a number of professors of physics and ask them about the reason for poor interest in physics in second grade students, as it turned out to be due to:

The weakness of the methods and methods followed by the professors of physics based on the teaching and conservation, and this is contrary to the purpose of teaching physics, from developing the abilities of learners, and stimulate their thinking, and motivate them to participate effectively in all issues and issues, and solve the problem(Zeitoun 2003, 30-43).

The understanding of some professors of physics at the present time to the nature of the material they study, they are taught disjointed, and not trying to show the importance of the nature of the material, and try to benefit from the development.

The lack of practice of professors of physics who study in the middle stage of their exact competence, the researcher found that many professors of physics in the middle stage studying more than one material to fill the shortage of teaching staff, which makes them dispersed between the

materials and lack of creativity in their specialty. The researcher believes that most of the challenges facing the teaching of physics in the different stages of education are due to two basic factors, the first relates to the nature of physics, and the second relates to the methods and methods adopted in teaching. A problem can be identified by WW'QQQQQQQTT66 answer to the following question, is there an effect on Woods' strategy in the achievement of physics for second graders?

## 2. Research Importance

As we live in a new cultural age, the countries of the world are competing to raise the level of their peoples in all spheres of life, to realize the leading positions in contemporary human civilization and to seek to develop it and to give generations attention to the need to adopt a sustainable method of development. This approach requires the attention of modern teaching strategies as an important tool to achieve the educational goals, and lead to enabling the individual to absorb the culture and its requirements, In order to be able to communicate with what is going on around them through their interest in the teaching methods, and to take them as a cornerstone of building the educational process as an effective means to make the educational process succeed. The methods and methods of teaching are not the same in every age and in every society; they are the result of needs(Jazee and Ajeel, 1994:133)

The thirteenth scientific conference under the theme of 'Education Pulse and Renewable Human Action' for the period (29-31 / 2011/2011) in the Faculty of Basic Education pointed to the need to develop objectives, content, methods, methods and instructional strategies to keep pace with developments in education Content, methods, methods and instructional strategies to keep pace with developments in teaching and learning. (The Thirteenth Scientific Conference 2011, 109).

Based on the above, and as a result of the tangible progress in the field of education and psychology, many attempts have been made to develop and test teaching methods and strategies to overcome the difficulties and achieve the

objectives of the course without difficulty or confusion. These included the entire curriculum. Teaching strategies are an important component of the curriculum. They are closely linked to content and play a prominent role in achieving educational goals. One such strategy is what is known as The Woods strategy, which is one of the modern strategies in teaching, defines the learners on the interconnected network of interrelated relationships among the various elements of the subject to be presented. It works to improve the teaching and learning process in the various study subjects, It works to improve the process of teaching and learning in the various academic departments in the area of learners' access to information and development, through which the cognitive and skill building of learners in understanding the integrated system and its interpretation, such as planning and social interaction between students Creativity, problem solving, organization of ideas, And the overall vision of the subject. Moreover, it opens the door for learners to participate more actively in completing the lesson, interpreting its results and achieving its objectives by stimulating their readiness, motivating their talents, and enhancing their abilities to conceptualize and innovate with a view to further understanding Kadora, 2009:5).

The researcher believes that the most prominent characteristic of this strategy from others, it can be taught small groups and make students predict the phenomenon to be studied, and conduct experiments based on their predictions and observation of the results, as well as the transition from the wrong interpretations to the correct scientific interpretation.

Based on the above, we are now in need of more methods and strategies to teach our students to enrich their knowledge and develop their mental skills, attitudes and tendencies, by relying on themselves during education rather than indoctrination and giving them a chance to Giving them an opportunity to contribute to discovering and discussing information, encouraging them to ask questions, and giving them the opportunity to express their new ideas. Haber (2003) points out that a good choice of method and instructional strategies leads to more fun and excitement towards the educational material (Habib 2003, 32).

The Woods strategy was supported by researchers such as Kadri 2008, Abdullah 2009 and Wadi 2011. On the effectiveness of this portal in improving the learning processes of learners and qualify them to be successful learners with self-efficacy in learning and problem solving, and the integration of many of the information allows for deep exploration of ideas and focus on the underlying problem (POLITT 2003, 253).

The content of physics is one of the components of the basic curriculum because it has an effect on the formation of the cognitive structure of the students and their development in a desired direction to make them enlightened citizens in science in society, so that they can assume their responsibilities, They recognize the problems surrounding them and their society in order to develop the right solutions for them (Al-Amin, 1988, 103). And that physics teaching seeks to enable students to practice their skills and abilities. Through smart participation rather than seeking to

provide them with information and solid understanding. (Jammel 2002, 201). JRENT (1989) asserts that studying physics helps students solve problems, make decisions, and develop their own abilities (JRENT:1989,150).

Based on the above, the researcher summarizes the importance of research in the following points:

- 1) The importance of the Woods strategy as a modern strategy that makes the learner the center of the educational process interacting with it, and the learner reached an integrated understanding of information.
- 2) The importance of physics and teaching and the advancement of a requirements and needs.
- 3) Help the teachers of physics in the middle stage to learn how to use Woods strategy in the teaching of physics.
- 4) The importance of Woods' strategy is highlighted as one of the essentials of scientific progress in the age of technological competition and the explosion of knowledge.
- 5) The importance of the middle stage that students at this stage need to organize their scientific affairs and teach them flexible teaching strategies away from conservation.

### 3. Aim of Research

The aim of the present research is to find out the effect of Woods' strategy on the achievement of physics in second grade students. - The current research objective can be achieved by the following hypothesis: There is no statistically significant difference at the level (0.05) between the average grade of the students of the experimental group who studying physics according to the Woods strategy and the average score of control group students who study the same material in the usual way in the achievement test.

#### 3.1 Limits of research

The research is determined by the average second-grade students in the day schools of the Directorate General of Education Baghdad Rusafa / I, who study the first three chapters of the book of physics, in the first semester of the academic year 2016-2017.

#### 3.2 Definition of Terminology

**1) The effect / definition of each author for the effect as the following:**

- (Al Seqaf, 2007) is what it perceives as signs, imprints or effects in the influencing element in it, where there is an influential and influential in it in the sense of a separate variable and a dependent variable '(Saqqaq 2007, 19).
- (Ibrahim, 2009) Is the ability of the subject of the study to achieve a positive result, but if this outcome has not been achieved, the worker may be a direct cause of the consequences of negative' (Ibrahim 2009, 30).
- The researcher knows the procedure 'difference in the rate of achievement for students in the second grade intermediate in physics for the students of the experimental group who studied according to the strategy Woods and the control group who studied using (the usual method)'.

**2) Woods strategy / defined by many authors as the following :**

- (Nasser, 2006) 'as a process of organizing educational experiences, and make it arranged logical arrangement that ensures the process of the lesson according to what is true, and planned previously for the purpose of reaching the ultimate goal of the educational process'(Naser 2006, 17) .
- (Fanona , 2012) as a learning process that includes sequential procedural steps that facilitate the teacher to plan his educational activities at the level of goals, implementation and evaluation, and focuses on the stages and steps specific for students 'access to knowledge that enables them to acquire information' (Fanona ,2012, 9).

The researcher defines the procedure as 'a set of planned and planned actions used by the physics teacher to teach intermediate second grade students to access scientific knowledge'.

**3) Achievement / defined by many authors as follows:**

- (Hussein, 2011) is the information obtained by the student according to a program designed to make the student more adaptive to the social environment to which he belongs, as well as to prepare him to adapt to the study environment in general (Hussein 2011, 176).
- (Deeb, 2012) 'is the level of performance in a series of standardized tests that are often educational'. (Deeb 2012,53)

The researcher knows by procedure 'the amount of achievement achieved by the students of the research sample for the second grade is average measured by the degrees obtained in the post-achievement test prepared by the researcher and applied at the end of the research experiment in physics'.

4) Physics: As a science that is interested in studying the general laws of matter and energy in all its forms and all kinds of interactions in the universe, which is the basis of the various sciences, providing the fine details to understand everything from elementary particles to the states of matter and the origin of the universe and its evolution. . etc.

As well as is a scientific study of the material and energy and how to interact with each other '.

**Second grade intermediate ':** it is the second year of the intermediate stage of three years, and includes the study of human materials and scientific materials' (Law of the secondary education system No. 2 of 1977).

**4. Background and Previous Studies**

The Woods strategy is a new dimension in prediction, observation, and interpretation based on all mental skills, memory skills, words, numbers, lists, logic, analysis, colors, imagination, and total images (Delisle 1997, 24).

The Woods strategy is a particular concept or title in the middle of the page (to help focus and remember) and then organize it in an organized way, using both words and images instead of writing down what we want to remember in the usual sentence (Khalili 1996, 32). Based on the above,

The researcher believes that the Woods strategy represents a technique for representing ideas and observations. It relies on the use of symbols and colors and the expression of one central concept, word or idea. It has branches of related ideas that can be used in different areas of life, improving your learning and thinking, in the most efficient way and is used as a memory input method.

**4.1 Woods' strategy**

Woods (1991) designed a teaching strategy that was implemented in the Science Lab to help students to abandon their incorrect concepts and work within small groups. This strategy involves three consecutive phases:

- 1) Prediction Here students are asked to describe the phenomenon under study and to predict what is happening based on their previous experience, and this is done in collaborating teams.
- 2) Observation Here, the groups are asked to observe the experiment to validate their predictions and record their observations. If agreed with their views, their confidence is enhanced but if we disagree, they have no alternative but to go to the right scientific ideas.
- 3) Interpretation in which students explain their results based on their previous ideas, and here the teacher intervenes in order to convey to students a proper understanding agreed with scientific theories. The idea of this strategy crystallized with Rubin woods Since he was studying his two children at home where he was impressed with how children learn basic reading and writing skills, especially in their attempts to explain the natural world, and crystallized this admiration several years later when he became a teacher of science and found a disparity in the interpretation of his students which are (50) students. From the fifth grade stage of the natural world around them, and renewed his desire to understand how children learn different sciences (Khalili 1996, 39).

(Saada, 2011) summarizes the most important steps of the prediction phase in the following:

- 1) Gathering information about a subject, linking it to previous experiences.
- 2) Analysis of data and information, with the search for patterns and possible classifications.
- 3) Predicting the expected results of the data and information that has been presented and classified.
- 4) Apply the steps of skill prediction high accuracy.
- 5) Judging the effectiveness of the work in which the skill of prediction has been applied in the light of three important questions. What has been done so far? And what has not been accomplished?
- 6) What can be done with the remaining things in new and different ways? (Saadah, 2011:562).

Bojz (Al-arfaj (2000) )summarizes a set of behaviors contained in the scientific observation as follows:

- 1) Record as soon as possible after direct observation.
- 2) Distinguish between differences in physical properties of objects or events by direct observation.
- 3) The use of aids to the senses In the note procedure.
- 4) Repeat the observation for accuracy.

- 5) Use measurement to increase the accuracy of observation, whenever possible.
- 6) Record events or views safely.
- 7) Arrange events or views according to their order of occurrence.
- 8) The distinction between salaries and variables (Al - arfaj 2000, 32).

And between (Avon and McCone, 2012) that individual interpretations often fall into three levels are:

- 1) Interpretations with reasonable certainty.
- 2) Interpretations you think are probably correct.
- 3) Interpretations appear to be possible expectations or guesses, but are beyond the meaning of available data.
- 4) Interpretations appear to be possible expectations or guesses, but are beyond the meaning of available data. (Al Avon and Makon 2012, 166 - 167).

#### **How to employ the Woods strategy in teaching**

- 1) Determine the behavioral goals that the teacher wants to achieve through the implementation of the lesson.
- 2) Determine the basic requirements for learning the concept of lesson and disclosure through the initial evaluation.
- 3) Equips the tools and means for use in the notification stage.
- 4) Prepare business cards in the form questions for each stage of the Woods strategy.
- 5) Develop assessment methods appropriate to the stages of the Woods strategy.
- 6) Enabling students to implement the phases of the Woods strategy freely through collaborative groups (Ali, 2003:29).

#### **The role of the teacher in Woods' strategy**

In the light of structural theory Zitoun (2003) mentions the role of the teacher in the Woods strategy :

- 1) To become one of the sources from which the learner learns rather than the main source of information.
- 2) Integrates learners into experiences that challenge their previous concepts or perceptions.
- 3) Encourages the spirit of inquiry and questioning through questions that raise thought and motivation.
- 4) Encourages constructive discussion among learners.
- 5) Allow noise resulting from movement, interaction and social negotiation.
- 6) Variation in the sources of the calendar to suit different teaching practices.

#### **The Role of the Student in the Woods Strategy**

(Zeitoun, 2007) argues that the student must be :

- 1) An active one who discusses, interprets, sets hypotheses and attracts.
- 2) Social The student does not begin to build knowledge only individually, but socially through dialogue and social negotiation.
- 3) Creative individuals, students need to invent knowledge, and it is not enough to assume their active role only. (Zeitoun 2007, 57) The researcher believes that the Woods strategy transferred the student from the passive role of the recipient of knowledge to the role of creative and constructive and composite of past experiences and analyst, and interact with colleagues for the purpose of

creating a new image and a new understanding of this knowledge.

In light of this, the researcher believes that the advantages of the Woods strategy are:

- 1) The student plays the role of the world and the researcher of knowledge, which develop a positive trend towards science and scientists.
- 2) Allows the learner the opportunity to dialogue and discussion with colleagues, which helps to grow the language of dialogue sound.
- 3) Helps the student to connect the theoretical side with the practical side and the employment of knowledge experiences in their lives.
- 4) Provide educational attitudes in a way that urges thinking and stimulate motivation, which contributes to the achievement of the desired goals effectively.

#### **5. Previous Studies**

The previous studies are the theoretical and practical basis for any research. The researcher is able to benefit from its objectives, results and methodology, statistical tools and methods that are used, and to determine its course and steps to adopt on a sound practical basis., The researcher turned to the use of what he found from studies and scientific way, as it dealt with what has to do with its subject directly or indirectly and therefore will present a number of previous studies that are relevant to the subject of the study in terms of nature and objectives and tools as follows:

##### **-Kadristory (2008):**

This study was conducted in the Sultanate of Oman and was based on knowledge of the effectiveness of Woods' strategy in the achievement of social studies in 9th grade students in the Sultanate of Oman. The sample of the study consisted of (70) students of the ninth grade in Zeinab School of Education, The sample was divided into two groups. The experimental group was studied using the Woods strategy. It consisted of (35) female students. The control group consisted of (35) students studied in the traditional way. To achieve the objectives of the study, the researcher used a collection test and a measure of trends, the test consists of (40) divided into three levels of knowledge namely knowledge - absorption - application, and the stability was extracted using the coefficient Kronbach Alpha and reached (0.87). The study found the following: There are significant differences at (0.05) Between experimental and experimental groups for the benefit of the experimental group in the achievement of students at all levels of knowledge, in the use of the Woods strategy in the teaching of social studies (Kadri 2008, 3).

##### **- Abdullah study**

Study (Abdullah, 2009) This study was conducted in the Kingdom of Saudi Arabia, and was divided into knowledge of the effectiveness of the use of Woods strategy in the collection of some topics biology course for students of the first grade secondary in the city of Mecca. The sample consisted of (60) female students. The study group consisted of (30) female students and the control group consisted of (30) female students, and to achieve the objectives of the

study, the students were tested to test the achievement of tribal and past test.

The study found the following results: There were no statistically significant differences between the mean scores of the students of the group studied using the Woods strategy and the students of the group that were studied in the usual way in the post application of the achievement test at the level of remembering after adjusting the tribal collection. - There were statistically significant differences between the mean scores of the students of the group who studied using the Woods strategy and the group students who studied the usual method in the post-application of the achievement test at the level of (understanding, applying, Analysis, composition) and at cognitive levels as a whole after controlling tribal achievement (Abdullah 2009, A - B).

**-Alwide study**

This study was conducted in the Kingdom of Saudi Arabia and was based on knowledge of the use of the Woods strategy on the achievement of third secondary students in the city of Mecca in geography. The study sample consisted of (80) female students and divided the students into two groups, a female control consisting of (40) students and experimental group consisting of (40) students. To achieve the objectives of the study, the researcher used an objective collection test (tribal - past) to measure the achievement of the students of the third grade secondary. The study found that there are differences of statistical significance level of (0.05) between the average scores of the female students of the experimental group who were taught using the Woods strategy and the average scores of the students of the control group who were taught in the traditional way after controlling the tribal achievement (Alwadi, 2011, 2).

**Aspects of the use of previous studies**

The study of the previous studies provided the researcher with the field of benefiting from them in the following aspects:

- 1) To benefit from the previous studies using the methodology used in the current study and choosing the sample.
- 2) Benefit in determining the dimensions of the problem, and setting goals.
- 3) Benefiting in the theoretical aspects related to the research variables.
- 4) To benefit from previous studies in the preparation of the (collection test), and the use of appropriate methods to find sincerity, stability, and the coefficient of difficulty, and differential.

**6. Methodology**

The researcher followed the experimental approach to achieve the objectives of the research, because it is a suitable method for the procedures of research and results, the experimental term is meant 'change something and take into account the impact of change in something else' (Abu Huij 2002, 59).

**7. Experimental Design**

The experimental design is the strategy that the researcher sets to collect information, adjust the variables that can affect the procedures, and the analysis process to answer the research questions, and the researcher must choose the appropriate design that provides an end to the honesty of the results of his work.

Experimental design is the first step taken by the researcher, experimental design depends on the nature of the problem of the study and its variables and the nature of the sample and the circumstances in which the design will be implemented. Educational research has not yet reached an experimental design ideal in the control process, because the provision of sufficient degree to control the variables is very difficult given the nature of educational and psychological phenomena complex (Zobaie and Ghannam 1968, 58). This is the essence of the nature and philosophy of experimental research on which it is based on it, therefore, the current research was based on one of the experimental micro-experimental settings of two experimental groups, one experimental and the other control, as in Figure (1).

**Figure 1:** Experimental design for the research

dependent variable	independent variable	group
Collection test	Woods strategy	experimental
	—————	control

**The research community and its sample**

The current research community consists of all the middle schools of the Directorate General of Education Baghdad Rusafa / First, and the current study requires the selection of one school among the middle schools of the Directorate General to raise Baghdad- Alresafah1. The researcher chose the middle western, and the researcher randomly selected one of the people of the second intermediate grade and the division (A) to represent the experimental group, which will study physics according to Woods strategy, the number of sample is equal (42) students, and chose (b) to represent the control group that will study physics in the traditional way. The number of students reached (41) students, thus the research sample becomes 83 students divided into two divisions. Table (1) shows this.

**Table 1:** Number of students in the experimental and control groups

Number of students	section	group
42	A	experimental
41	B	control
83	<b>total</b>	

**Equivalence of the two sets of research**

Although the two groups were randomly selected, the probability of their inequality is plausible. Achieving equivalence between the students of the two groups is important before the experiment. Therefore, before applying the experiment, Therefore, the researcher was keen before applying the experiment on the equivalence of the two groups of research statistically in some variables that may affect the variables related to the research

- 1) The age of the time of students calculated months.

- 2) IQ test.
- 3) Educational achievement of parents.

### Control of Exotic Variables

The control of the exogenous variables is one of the important procedures in the experimental research in order to provide an acceptable degree of internal validity of the experimental design, so that the researcher can attribute most of the variance in the dependent variable to the independent variable in the study adjustment to other variables (Melhem 2010, 73). Therefore, the non-experimental variables that affect the safety of the experiment were adjusted as follows:

- 1) Accidents associated with the experiment.
- 2) Experimental extinction.
- 3) Choose the sample.
- 4) Maturity.
- 5) Measuring tool.
- 6) Effect of experimental procedures.

### Research materials

To complete the research requirements, the researcher carried out the following procedures:

#### 1) Determining the scientific material :

The scientific material of the research subjects was determined by the first three chapters (Chapter I, Measurement, Chapter II, Movement, Chapter III Audio) from the physics material book for the academic year (2016 -2017).

#### 2) Formulation of Behavioral Goals

The first work the researcher must do when constructing the test is to formulate behavioral goals and 82 behavioral goals are formulated divided into six levels of Bloom (Knowledge, understanding, application, analysis, composition, evaluation) (Qatami et al., 2003, 99).

#### 3) Preparation of teaching plans

Planning means the teacher's readiness for a position that will face him, which requires a vision far-sighted by his knowledge of the subject to be taught (Afon and Al Fattalawi:2011,237)The researcher has prepared (20) teaching plans for each group (experimental and control) and (2 classes per week).

### Research tool

#### Preparation of the collection test

The test is defined as a structured procedure to determine what students have learned (Melhem 2002, 194). Since the current research requires the construction of a test that measures achievement, the researcher has prepared this test of multiple choice type, Of the multiplicity, and thus the number of paragraphs of the test (30) paragraph.

#### Honesty tool

The tool was certified to verify the sincerity of the researcher's research tool (virtual honesty). By presenting the test paragraphs in its preliminary form to a group of experts and arbitrators, to judge the validity of the paragraphs. The researcher counted the approval of the arbitrators On the paragraphs of degree (90) indication of honesty and after the restoration of the tool of experts and arbitrators, where some of the paragraphs were amended in

light of the observations of experts and arbitrators, and remained paragraphs of the scale as is (30) paragraph.

### Stability of the research tool

To ensure the stability of the tool The researcher calculated the coefficient of stability in a retest method applied to the research sample amounted to (40) students, was used Pearson coefficient to find the correlation relationship. Between the first and second degrees of application and with a two - week time interval With a correlation coefficient of test (86.0). Which are a positive indicator of how stable respondents' responses to the test are. (Al-Bayati and WatnaSios 1977, 181).

### Description of the measuring instrument

The test instrument shall consist of (30) paragraphs and four alternatives. Each paragraph has one correct score and the wrong paragraph has zero, where the correction range is from zero to 1. The force is discriminatory paragraphs and means the ability of the paragraph to distinguish between the highest and lowest levels of the mark measured by the test (Al-Ajili 2001, 112). After calculating the strength of the paragraph, it was found that it was between 0.36 and 0.64. This indicates that the scales of the scale distinguish between the two groups (upper and lower) in the social responsibility attribute. Eble considers that the test paragraphs are good if the force of their discrimination is 0.19 and above. After calculating them, all the paragraphs of the scale were found to be valid and well discriminated, so they remained the same. (Eble, 1972 p. 66)

### Procedures for applying the experiment

After the researcher achieved the equivalence between the two groups before the application of the experiment, the researcher carried out the following procedures:

- 1) It was agreed with the director of the medium to apply the research teaching physics according to the Woods strategy of one of the two sections while studying the other section In the traditional way.
- 2) The experimental group started teaching the experimental group according to the Woods strategy and the control group in the traditional way, with two lessons per week for each group. Teaching the two research groups in the first semester of the year (2016 - 2017).
- 3) The researcher applied the teaching plans prepared according to the Woods strategy to the students of the experimental group.
- 4) The test was applied to two samples: the first was from Khalid Ibn Al-Walid boys to 40 students, where the time needed for testing and the clarity of the vertebrae were extracted. The second was conducted on intermediate students of Palestine, where the number of students was (45) Students were extracted from the cycometrical properties through which the validity and stability of the test were verified.
- 5) After completing the teaching of the specific teaching material, the students of the experimental and control groups were told that there would be a test for them in the first three chapters (Chapter I, Measurement, Chapter II, Movement, Chapter III), which were studied during the first class, the collection test was applied to the two research groups. After the application was completed, the

researcher corrected the answer sheets by one score for the correct answer and zero for the wrong or abandoned answer, that is, the correction range from 0-30. Thus, the students' grades (experimental and control) were obtained.

**Statistical Means**

The results were analyzed and processed statistically using the spss program.

**8. Showing and Interpreting of the Results**

**First Presentation of the Results**

To validate the null hypothesis, the researcher calculated the arithmetic mean and the T value using the t-test of two independent samples to compare the average scores of the experimental group and average student scores. The experimental group and average scores of the control group students in the achievement test, and Table (2) shows this.

**Table 2:** The results of the T-test for grades of students of the two groups in the achievement test

Scientific significant at 0.05	T value		Freedom degree	differences	Standard deviation	Arithmetic mean	sample	group
	tabular	calculated						
Significant for the experimental	1.980	9.424	81	9.954	3.155	25.26	42	experimental
				5.305	2.303	19.54	41	control

It is clear from Table (2) above that the experimental mean of the experimental group is 25,26, with a standard deviation of 3,155, while the arithmetic mean of the students of the control group is (19,54) with a standard deviation of (2,303) T calculated is equal to (9,424), which is greater than the scale value of (1,980) at the degree of freedom (81) and at the level of significance (0,05), and this indicates a significant difference between the average scores of the experimental group and the average scores of students of the control group for the benefit of the experimental group in the achievement test, thus rejecting the null hypothesis, this result indicates that the experimental group students who studied according to the Woods strategy were superior to the control group students who studied according to the traditional method of achievement test.

**Interpretation of Results**

The results showed that there were significant differences between the experimental and control groups in achievement. This means that the teaching strategy is superior to that of traditional methods. In light of these results, the researcher dedicates this to the following points:

- 1) The new strategy of Woods and its great importance in the achievement of the student through the creation of motivation and excitement for learning.
- 2) The use of Woods strategy emphasizes the student's positive and ability to build his own knowledge.
- 3) Using the Woods strategy helps the student to build and establish knowledge requirements.
- 4) Using the Woods strategy has an important role in creating a positive learning environment towards physics in particular and other materials in general.

**9. Conclusions**

In the light of the findings of the research, the following indicators can be drawn:

- 1) Learning based on the Woods strategy has an effective effect in raising the achievement level of second grade students.
- 2) The possibility of applying the Woods strategy in the teaching of physics in teaching physics at the intermediate level.
- 3) The Woods strategy has prompted students to seek information from other sources as well as textbooks.

- 4) There is an urgent need for students in the second grade to the middle of modern teaching methods, including Woods strategy to develop the teaching and making it more effective.
- 5) Despite the characteristics of the Woods strategy, which have already been mentioned, they require considerable time and effort when used in teaching compared to the traditional method.

**10. Recommendations**

In the light of the findings and conclusions reached by the researcher, he recommends the following:

- 1) The Ministry of Education should train the teaching staff in middle and high schools to follow modern strategies in teaching, because it is important for students to acquire science and Knowledge as the Woods Strategy.
- 2) The need to confirm the educational supervisors specialists on the importance of using Woods strategy by teachers and teachers of physics, and urged them to use during their field visits.
- 3) Using the Woods strategy in teaching the content of physics.
- 3) Using the Woods strategy in teaching the content of physics in the middle stage by teachers.
- 4) The need to use the Woods strategy to develop the capabilities of creative students in general at the beginning of the intermediate stage.

**11. Proposals**

To complete the current study, the researcher suggests the following studies:

- 1) A study to study the effect of Woods strategy on the development of types of thinking (creative thinking, reasoning).
- 2) A similar study includes the impact of the Woods strategy in the subjects of study and for different stages of study.
- 3) A study on the impact of Woods' strategy on achievement and retention.
- 4) A study to find out the impact of Woods strategy in developing levels of physics teachers.
- 5) A study to know the impact of Woods strategy in the collection of Physics (preparatory students, university students).

## References

- [1] Ibrahim, Majdi Aziz (2009), Glossary of Terms and Concepts of Teaching and Learning, 1, World of Books for Publishing, Distribution and Printing, Cairo, Egypt.
- [2] Abu Jellenbo, Safa Khalil Mohammed (2015), The Impact of Woods' Use on the Development of Critical Thinking and Critical Thinking Skills for Sixth grade students in general sciences (unpublished master thesis), Islamic University of Gaza, Faculty of Education, Department of Curriculum and Teaching Methods.
- [3] Abu Hweij, Marwan (2002), Educational Research, 1, Dar Al Yazourdi, Publishing and Distribution, Jordan
- [4] Ameen, Shaker Mahmoud (1988) Methods of teaching social materials for the fourth grade Teachers and Teachers Institutes and the second grade Teachers' Institutes, Press of the Ministry of Education, Baghdad, Iraq.
- [5] Al-Bayati, Abdul-Jabbar and Athanasius, Zakaria (1977), descriptive and deductive statistics in education and psychology, Baghdad, the Workers' Culture Press.
- [6] Ja'ala, Jawad Mendel and Ajeel Hameed Ghaleb (1994), Determining the Educational Competencies of a Teachers of Geography, Basra Research Journal, p. 10, part 2, p. 133 148).
- [7] Jamil, Abdul Rahman (2002), Methods of Teaching Social Subjects, Dar Al-Maahedah for Publishing and Distribution, Amman, Jordan.
- [8] Janabi, Qais Hatem Hani, Others (2015), The Impact of Woods Strategy on the Collection of History of Civilization And the retention of students in the first grade intermediate, Journal of the Faculty of Basic Education for Educational Sciences and Humanities, University of Babylon, No. (19).
- [9] Habib, Majdi Abdel-Karim (2003), Recent Trends in Teaching Thinking, Arab Thought House, Cairo, Egypt.
- [10] Hassan, Ezzat (2011), Psychological and Educational Statistics, Dar Al-Fikr Al-Arabi, Amman.
- [11] Khalili, Khalil (1996), The Content of Structural Philosophy in Science Teaching, Qatar Journal, Number (116).
- [12] Al-Daleb, Menem Jawad (2012), Introduction to the Teaching Safi, 1, Dar Al-Masirah for publication and distribution, Amman.
- [13] Al-Zobaie, Abdel-Jalil Ibrahim, et al. (1981), Psychological Tests and Metrics, Dar al-Kutab for Printing and Publishing, University of Mosul.
- [14] Zeitoun, Aish (2007), Structural Theory and Strategies of Teaching Science, Dar Al Shorouk, Amman.
- [15] Zeitoun, Kamal, Zeitoun, Hassan (2003), Design of Education from a Constructional Perspective, Studies in Curricula and Teaching Methods, Egyptian Society for Curriculum and Instruction, No. 91, Faculty of Education, Ain Shams University, Egypt.
- [16] Saeed, Jawdat (2011), Teaching Thinking Skills, Dar Al Shorouk for Publishing and Distribution, Amman.
- [17] El-Saqaf, Mona Alawi Hassan (2007), The Effect of Training Methods on Achievement in Mathematics and their Attitudes in the Secondary Stage, Unpublished Master Thesis, Faculty of Education, University of Aden, Yemen.
- [18] Al-Titi, Muhammad Hamad (2002), Social Studies - - Nature - Objectives - Methods of Teaching, Dar Al - Massira for Publishing and Distribution, Amman, Jordan.
- [19] Abdullah, Mohammed Salem (2009), The Effectiveness of the Woods Strategy in the Achievement of Some Biology Subjects for First Grade Students (unpublished Master Thesis), Riyadh, King Saud University.
- [20] Al-Ajaily, Sabah Hassan, et al. (2001), Principles of Educational Measurement and Evaluation, I 1, Dar al-Sadiq, Baghdad.
- [21] Alafoon, Nadia and Makawun, Hussein (2012), training of science teacher according to construction theory, Dar Al-Safa for Publishing and Distribution, Amman.
- [22] The Afoon, Nadia Hussein and Al-Fatlawi, and Fatima Abdel-Amir (2011), Curriculum and Methods of Teaching, Basic Education Library, Baghdad.
- [23] Ali, Mohamed El Sayed (2003), Scientific Education and Science Teaching, Dar Al-Masirah for Publishing and Distribution, Amman.
- [24] Issawi, Jamal Mustafa (1987), the effectiveness of the use of mug style in the development of Thinking Skills of UAE Secondary School Students in History, Journal of the College of Education, UAE University, Q 20, p 22.
- [25] Phenona, Zaher (2012), The Effect of the Use of the Learning Model and the Strategy of Brainstorming in the Development of Concepts and the Orientation towards Biology among Grade 11 Students (Unpublished Master Thesis), Islamic University, Gaza, Palestine.
- [26] Kadri, Fawzia Said (2008), Effectiveness of Social Studies of Ninth Grade Students in the Sultanate of Oman, (unpublished Master Thesis), Amman.
- [27] Kadoura, Hassan (2009), Science Education in Structural Theory, Dar Al-Masirah for Publishing and Distribution, Amman.
- [28] Katami, Yousef Mahmoud, et al. (2003), The Basics of Teaching Design, Dar Al Shorouk, Amman, Jordan.
- [29] Melhem, Sami (2002), Measurement and Evaluation in Education and Psychology, Dar Al Masirah Publishing and Distribution, 2nd Floor, Amman, Jordan.
- [30] Melhem, Sami Mohamed (2010), Research Methods in Education and Psychology, 14, Dar Al-Masirah for Publishing, Distribution and Printing, Amman, Jordan.
- [31] Scientific Conference The thirteenth annual of 29-31 / 2011, Journal of the Faculty of Basic Education, Faculty of Basic Education, University of Mustansiriya.
- [32] Nasser, Ibrahim (2006), The Impact of the Use of the Conceptual Map on Changing the Misconceived Chemical Concepts of Second Grade Students (Unpublished master thesis), Faculty of Education, Mustansiriya University.
- [33] Mr. Mounneef (2011), Using Woods strategy in the achievement of third secondary students in the city of Mecca in geography, (unpublished master thesis), Faculty of Education, Umm Al-Qura University.
- [34] Ministry of Education, 1977, High School System, No. 2, Baghdad, Iraq.
- [35] Al- Arfaj, M. 2000, The impact of three instructional styles of teaching science on students achievement and attitudes dal-a p. 325.
- [36] Delisle, Robert, 1997, "How to use Problem. Based Learning in the class room, Association for



Supervision and curriculum. Development, alexanaria,  
virgina, USA, AS CD.

- [37] Eble r. l. Essentials of educational measurement, New  
Jersey, prentce Hall, 1972.
- [38] Jrent, Dorothy (1989): today's elementary social  
studies mar port, row, London.
- [39] Politt, D (2003): mind mapping your way to a better  
career. career development International. Bradford.  
Vol. 8, Isis. 5, upgs.

