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Impact Strategy (PDEODE) In The Acquisition Of Grammatical Concepts In The Fifth Grade Literary Students And The Development Of Critical Thinking

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Abstract

The researchers followed the experimental design, which consists of two groups, one experimental and the other control and intentionally selected two schools in which to apply the experiment, the researchers used a simple random method, the total number of the two divisions (62) students to be an experimental group studying using the strategy (PDEODE) has been careful before The initiation of the experiment to statistically equal the two research groups in a number of variables believed to affect the safety of the experiment

The researchers identified the educational material to be taught, the Arabic grammar book and the researchers prepared model teaching plans for both groups. The research tool was a test of the acquisition of grammatical concepts, which included (33) test items of a multiple-choice type measuring the three processes to acquire the concept. Of (30) paragraphs were calculated honesty and consistency for this test. After the initialization of the two research tools, the Critical Thinking Test was applied. After the completion of the experiment, the researchers applied the Research Tools (Post-Concept Grammar Test and Post-Critical Thinking Test) to the two research groups. 1 - There is a statistically significant difference at the level (0.05) between the average scores of the experimental group studying the grammar as per strategy (PDEODE) and in the test of the acquisition of the concept of grammar and for the benefit of the experimental group.

In the test of critical thinking after and for the experimental group and in the test before and after critical thinking and in favor of the test after.
In light of the research results, the researchers recommended a number of recommendations, including: The need to conduct training courses for teachers and to inform them on how to formulate questions, and include levels of concept acquisition and equip them with teaching methods of thinking types, especially critical thinking. Among the suggestions put forward by the researchers the effectiveness of the strategy (PDEODE) in the achievement of fifth grade literary students in the subject of Arabic grammar and the development of their visual thinking

Resumen

Resumen de investigación:

Los investigadores siguieron el diseño experimental, que consta de dos grupos, uno experimental y otro de control, y seleccionaron intencionalmente dos escuelas en las que aplicar el experimento, los investigadores utilizaron un método aleatorio simple, el número total de las dos divisiones (62) estudiantes ser un grupo experimental que estudia utilizando la estrategia (PDEODE) ha sido cuidadoso antes del inicio del experimento para igualar estadísticamente a los dos grupos de investigación en una serie de variables que se cree que afectan la seguridad del experimento

Los investigadores identificaron el material educativo que se enseñará, el libro de gramática árabe y los investigadores prepararon planes modelo de enseñanza para ambos grupos. La herramienta de investigación fue una prueba de la adquisición de conceptos gramaticales, que incluyó (33) elementos de prueba de un tipo de opción múltiple que mide los tres procesos para adquirir el concepto. De (30) párrafos se calcularon la honestidad y la coherencia para esta prueba Después de la inicialización de las dos herramientas de investigación, se aplicó la Prueba de pensamiento crítico. Después de completar el experimento, los investigadores aplicaron las Herramientas de investigación (Prueba de gramática posterior al concepto y Prueba de pensamiento posterior a la crítica) a los dos grupos de investigación 1 - Existe una diferencia estadísticamente significativa en el nivel (0.05) entre los puntajes promedio del grupo experimental que estudia la gramática según la estrategia (PDEODE) y en la prueba de la adquisición del concepto de gramática y en beneficio del experimental. grupo. En la prueba de pensamiento crítico después y para el grupo experimental y en la prueba antes y después del pensamiento crítico y a favor de la prueba

después. A la luz de los resultados de la investigación, los investigadores recomendaron una serie de recomendaciones, que incluyen: La necesidad de realizar cursos de capacitación para docentes e informarles sobre cómo formular preguntas, e incluir niveles de adquisición de conceptos y equiparlos con métodos de enseñanza de tipos de pensamiento, especialmente el pensamiento crítico. Entre las sugerencias presentadas por los investigadores, la efectividad de la estrategia (PDEODE) en el logro de estudiantes literarios de quinto grado en el tema de la gramática árabe y el desarrollo de su pensamiento visual.

First: The research problem: -

Grammar teaching faces many obstacles that prevent students from acquiring the concepts, information, facts and types of thinking needed to understand and analyze the rules. These include the methods of teaching the rules, the nature of the material, and the formulas of its organization and its breadth, which made many teachers resort to the use of methods and methods. Many of them rely on memorizing facts and grammatical information without taking into account the level of understanding and perception of learners, which leads to low level of understanding and therefore poor scientific level, where the teacher is the focus of the educational process, while the role of A passive non-participant learner is limited to listening and receiving information which prevents the development of their cultural and cognitive level and their ability to think critically by analyzing grammatical events, and explaining the causes and consequences of these events.

By examining a number of previous studies that dealt with critical thinking such as Al-Muhanna (2013) and Al-Zubaidi (2014), the teaching that provides the students with information is in need of appropriate methods of teaching in order to clarify and bring the information to the students' minds. That is, teaching teaches a far cry from thinking and creativity, as it makes students a machine to receive information, and instructions without the learner to participate in the discussion, dialogue, criticism, analysis and conclusion, and to the facts any students lack the spirit of research and good thinking, including critical thinking.

All these obstacles led researchers to choose strategies, methods and methods of teaching modern development of students' abilities in acquiring grammatical concepts, and develop their critical thinking, to cope with the diminishing of human knowledge, and try to solve the problem by

focusing on student activity.

Based on the above, the problem of the current research is to answer the following question:

What is the effect of PDEODE strategy on the acquisition of grammatical concepts among fifth graders and the development of their critical thinking?

Second: The Importance of Research:

The researchers believe that the PDEODE strategy enables students to interpret phenomena that relate to the concept to be learned, and that students carry alternative ideas on the subject and will show a conceptual change after learning using the strategy (PDEODE), in addition, the use of this strategy will modify the ideas of students towards Grammar concepts, and improve their new knowledge through the discussions that come after the observations, so the PDEODE strategy may be successful because of its ability to help students assess their previous knowledge and retest their ideas within their groups, and this has been proven by many studies, including study The brown -2014), study (Taha --2,014), study (Isa --2,016), which showed that strategy (PDEODE) students make the educational process axis. It develops the scientific thinking of students, and this strategy keeps the impact of learning to them, and can be said that the strategy (PDEODE) focus in learning for understanding, by linking the previous experiences of students with their subsequent experiences, and the formation of relationships among them, so that learning constructively, and to build The new learner has to integrate new knowledge into the current cognitive structure, given the social interaction between students and their teacher in order for learning to be more effective.

Grammatical concepts are the most important components of grammatical knowledge, so the emphasis on the acquisition of grammatical concepts has become the focus of attention of all, from the learner himself and the teacher to the family and society (Al-Obeidi, 2001: 3), and Hergesheimer stressed that the concepts are the core of understanding Which we try to acquire in language studies but in most cases we study them without care and accuracy. (Hergesheimer, 2000: 10)

The acquisition of concepts during the educational process is necessary must each student to get several concepts, and mental images of what is going on in life to become the educational process meaningful. Bruner (1965) emphasized the importance of acquiring concepts among learners, and believes that this importance lies in the fact that the majority of intellectual exchanges involve dealing with categories of things more than

dealing with objects and assets alone. Gange (1975) noted that the acquisition of concepts is Which makes learning possible. Learning concepts makes a person free from adherence to a particular stimulus (Melhem, 1995: 249).

Recent studies have been interested in thinking and perhaps among them critical thinking, which began to increase global interest since the middle of the last century, emerged calls for critical thinking and those calls are emphasized by McFarland "McFarland" One of the educational goals that modern education seeks to achieve in students is to develop Critical thinking, through their training and education, and building their personalities building a comprehensive parallel of active participation in various aspects of life. (Maiden, 2002: 75)

To teach critical thinking skills is an essential goal for most of the world's educational policies, and a major goal of the educational process, and on this basis must prepare students, to become a large ability to think critically, critical writing and critical reading, because of the positive results proved to affect the life of the individual and society. (Habib, 2003: 246)

Critical thinking helps the individual to address problems, and solve them properly in the light of the evidence supported by the facts related to them through efficiency in the examination of proposals and hypotheses rather than jump to the results. (Al-Harthy, 2003: 196) The preparatory stage is characterized as a flexible stage of growth, and it is known that flexibility is a rare opportunity for growth to repair what is crooked in previous stages, and this stage requires guidance, and a deep understanding of the student's situation and needs, the most important of which as proven by studies The need for self-expression, because the expression is an important outlet for encircling the emotional wealth that the student at this stage. (Tamimi, 2009: 21)

The importance of the research can be crystallized as follows:

1. The importance of the strategy (PDEODE) in teaching, which is a modern strategies that focus on the learner as the center of the learning process.
2. The importance of acquiring grammatical concepts when the learner.
3. The importance of critical thinking among students that makes the student able to deduce, analyze, predict and solve problems.
4. The importance of the fifth grade literary being an important class in which students suffer from changes that include many aspects, including physical, psychological and social

Third: Research Objective: -

Current research aims to identify: - The impact of the strategy (PDEODE) for learning in the acquisition of grammatical concepts among fifth grade literary students and the development of critical thinking.

Fourth: Research hypotheses: -

1-There is no statistically significant difference at the level (0.05) between the average scores of the experimental group studying the Arabic grammar according to the strategy (PDEODE) and the control group studying the grammar of the Arabic language according to the usual method (traditional). Grammar Concepts.

2 - There is no statistically significant difference at the level (0.05) between the average scores of the experimental group studying the Arabic grammar according to the strategy (PDEODE) and the control group studying the study of the Arabic grammar according to the usual (traditional) method. Critical Thinking Test.

3 - There is no statistically significant difference at the level (0.05) between the average differences between the scores of students of the experimental group studying Arabic grammar according to the strategy (PDEODE) in the test before and after critical thinking.

Fifth: Research Limits: -

1 - Human limit: fifth grade literary students in secondary and preparatory day schools

2 - Limit of my place: General Directorate of Education of the province of Kirkuk - Center of the province of Kirkuk.

3 - Gnostic knowledge: Arabic grammar book to be taught for the fifth grade literary, edition (2014).

4 - time limit: the first semester of the academic year (2018-2019).

Sixth: Definition of terms: -

1. Strategy (PDEODE) "An important teaching strategy that supports discussion and divergent views among learners. It consists of six phases: prediction, discussion, interpretation, observation, discussion, and interpretation. This strategy supports students to understand life situations." (savander & kolari, 2003, 4-5)

Procedural definition

A teaching strategy based on the constructivist theory, presented to the students of the experimental sample, works to prepare students to lead the situation, whether life or educational through six precise and organized stages that lead to the desired behavior of the student as an icon of the educational process namely: prediction, discussion, interpretation, observation , Discussion, Interpretation.

2. Acquisition of the concept "A set of stimuli to which the student responds, which he can retrieve continuously and whenever he wants, because they result from a prior cognitive arrangement based on a series of ideas that are present to the learner." (Zayer & Inside, 2013: 156) (Attia, 2009: 86)

Procedural definition: The ability of students (research sample) to distinguish, define, and generalize abstract grammatical concepts in the current research, and this ability is measured by the acquisition of students of the research sample (experimental and control) through the test prepared for this purpose in the acquisition.

3. Development "Presentation and development of the learner as a result of exposure to effective educational variables." (Zeyer & Inside, 2013: 157)

Procedural Definition: The process of developing the mental abilities of the students of the experimental and control sample, and the scores obtained in the test are measured by critical thinking prepared for this purpose.

4. Critical thinking "A set of skills that increase the ability of the individual to objectively analyze any cognitive claim or news, so that the individual has the ability to distinguish between hypotheses and instructions and facts and opinions in a logical and clear." (Rabadi, 2008: 18)

Procedural definition: A set of skills that include the ability to think for the truth and accuracy of knowledge, through the ability of students to answer correctly the paragraphs of the critical thinking test prepared for this purpose.

5. Literary Fifth Grade "The fifth literary grade is the second grade in the preparatory stage and the fifth in the secondary stage. Students study in this class the humanities. . (Ministry of Education, 1990: 89)

Theoretical Aspects

Strategy (PDEODE).

The PDEODE strategy is based on collaborative groups. Students are placed in small, divided groups. Each group works as an integrated team to reach the right knowledge. Students are engaged in groups that arouse controversy and conflict. This leads to a better understanding. When students work together in small groups There is a purification of their ideas and this requires that each student has an impact within the group, then get rid of the passivity of some learners through mixing with others in the working groups and work through groups and helps learners by challenging each other's ideas while collecting information, and conduct experiments Walk to get solutions to problems. (Mintzer et al. 1998: 226)

Second: the steps to implement the strategy.

1 - Presentation of the phenomenon (the teacher displays a phenomenon of daily life linked to the concept to be taught, students are asked to explain, and then retains the answers of students without providing feedback on the results so as to identify the previous experiences of students).
2. The teacher introduces the concept using the steps of the strategy as follows:
Prediction: The teacher introduces the phenomenon through the concept to be taught to the students to predict the outcome of the phenomenon individually and justify their predictions.
Discussion Students are asked to discuss in different groups to participate in their own groups and to meditate together.
After the discussion, the teacher asks the students to reach a cooperative solution on the phenomenon, and to share their results with other groups by discussing the whole class.
Observation: Students then experiment with groups and record their observations. They observe the changes that have taken place and the role of the teacher here is to direct them to record observations about the targeted concepts.
E - Discussion: The lesson requires students at this stage to modify their predictions through the actual observations in the previous step, and this requires students skills such as: analysis, comparison and criticism of colleagues in the groups.
F - Explaination Students face all the inconsistencies between observations and predictions. To do this, students begin to resolve the contradictions that may exist within their beliefs.
3 - after the phenomenon presents itself after teaching, and students are asked to explain the phenomenon again.
4. Conduct a comparison of students' responses before and after teaching to identify the effectiveness of the strategy in helping to interpret life phenomena and its ability to help students change their tribal concepts (Qutami, 2013: 391) (Muhammad, 2014: 4).
Second: the components of the concept.
Bruner argues that any concept has basic components:
1. Name of the concept: an agreement has been recognized and (name) refers to the class to which the concept belongs.
2. Examples of concept: These are examples belonging to the concept (positive) and non-belonging examples (negative).
3 - the attributes of the concept: distinctive and non - distinctive, which features distinguish the concept on other concepts.

4 - the value of the attribute: It is the extent to which the adjective of a particular concept, where the concepts differ between them according to the values or degree of attributes.
5 - Definition of the concept (rule): a phrase that determines the description of the basic properties of the concept. (Katami, 2000: 667)
Third: the formation of concepts and stages of formation.

The process of conceptualization is one of the natural processes that accompany the emergence of man from birth to begin in children before they enter school where children discover concepts in the place and the environment they are in. Continuous process, and gradual in difficulty; as a result of increased information and learner experiences and mental maturity and cognitive development. (Fred, 2009: 50)

Concepts usually consist of perceptions carried through the five senses: sight, smell, hearing, taste and touch, and the product of imaginary thought and fantasies as well as memories, and arise the first types of knowledge acquired by the learner's direct experience gained by the five senses and according to theories of learning, and must The learner to be dealing with the perceptual perceptions of the concept before it begins to form (concept) through dealing with it can form a mental image of these perceptions that deal with them, and thus has the concepts of these perceptions. (Saleh, 12: 2009)
Fourth: Types of concepts.
1 - Sensory or physical concepts:
They can be developed through observation or direct and indirect experience using various teaching aids.
2- Abstract concepts:
They are concepts that have no concrete examples and cannot be perceived by the senses. Their learning needs a great deal of abstraction rather than physical concepts and is sometimes called emotional concepts such as unity and others.
3 - concepts of time: They are of two types:
Limited time concepts of something related to the starting point such as six o'clock Monday, July, 2011.
B) Quantitative time concepts are unlimited in nature and refer to the extent of time such as the Middle Ages and the Renaissance. (Hamida et al., 2000,126)
4- Place concepts:
These concepts are similar to the concepts of time in that they are complex, but they are more difficult than the concepts of time because they are more

abstract and undefined such as the peninsula and the cave.
5. New concepts:
These concepts have emerged recently as a result of scientific and technological progress. (Drunken, 2002: 46) Vikotiski categorizes two types of concepts based on the type of situations in which each type is learned in the sense of how the concepts are acquired:
A - Automatic or oral concepts:
It grows as a result of the friction and daily experiences experienced by individuals and their interaction with surrounding circumstances such as the concept of the tribe.
B - Scientific Concepts:
These concepts are the result of educational attitudes, whether by the individual or from an external place, such as the development of the concept of urban movement, and despite the differences between the two attitudes, they belong to each other.
Critical thinking.
The care to teach thinking in America intensified after the publication of a report entitled Nationatrisk Nation. (Imam and Abdul Rauf, 2009, 9).
First: Critical Thinking Criteria.
1. Clarity: The phrase should be clear and understandable.
2. Health: To be true and reliable.
3 - Accuracy: It is intended to give the subject the right of treatment and effort and express a high degree of accuracy and specificity.
4. Linking: means the interdependence between the elements of the problem or situation.
5. Depth: It is intended that the intellectual treatment of the problem or the subject is proportional to the complexities of the problem or the complexity of the subject.
6. Widening: aspects of the problem or situation must be taken in a holistic and comprehensive manner.
7 - Logic: means the organization of ideas and their interdependence in a logical way leading to clear and specific meanings. (Jarwan, 2009, 74-76).
Second: Critical thinking skills.
1. Identify Watson-and Glaser critical thinking skills as follows:
A - Knowledge of assumptions: - Is the ability to examine the facts and data contained in a subject
(B) Interpretation: The ability to derive a certain result from assumed facts with reasonable certainty.
Assessment of arguments: the ability to recognize important aspects that

are directly related to a particular subject, and to distinguish between strong and relevant irrelevant weak arguments.

D - extrapolation: Is the ability to identify the relationships between certain facts and to judge in the light of this knowledge whether the result of what is derived entirely from these facts or not, regardless of the validity of the facts given or the position of the student.

Conclusion: It is the ability to distinguish between the probability of a health outcome or its error according to the degree to which it relates to certain facts given to it (Sakhi et al., 2012: 62).

2. Bayer's critical thinking skills are as follows:

Distinguish between verifiable facts and allegations or value claims, claims and causes related to the subject and unrelated, determine the level of accuracy of the novel or phrase, identify unauthorized assumptions, determine the strength of the proof or claim, investigate bias, identify allegations, arguments or ambiguous data, Identify inconsistencies in the course of thinking or conclusion, decide on the subject and build a sound ground for practical action, and identify logical fallacies (Ghanem, 2009: 184-185)

Dresel and Mahey's critical thinking skills

Ability to identify problems, make stated and undeclared assumptions, formulate and select promising hypotheses, choose information relevant to problem solving, reach honest ends and judge the credibility of conclusions (Atoum, 2012: 54)

previous studies

1 Asmar 2016

The effect of PDEODE strategy on the development of engineering concepts and visual thinking skills The study was conducted in Palestine and consisted of an experimental group and a control group. The sample of the study consisted of 55 students. The researchers used the engineering concepts test, a multi-choice type consisting of (30) paragraphs, and visual thinking test consisting of (32). The researchers used the Koder Richardson equation, the Pearson correlation coefficient and the Spearman-Brown extraction equation. The results of his research exceeded the experimental group over the control in both the test and the scale. (Brown: 2016: 1-123)

2. Black 2015

The effect of SWOM strategy in the acquisition of grammatical concepts among the fourth literary students and the development of their scientific survey. The study was conducted in Iraq. The study consisted of an experimental group and a control group of 64 students. The researchers used the test of grammatical concepts of multiple choice type of (36) items.

The study consisted of (36) items using Pearson correlation coefficient, Spearman equation, Ka2 square and t-test extraction. His research results exceeded the experimental group over control in both the test and the scale 3. The Tribulation 2013

The impact of free discussion in the acquisition of literary concepts in the fifth grade literary students and the development of critical thinking and linguistic ability have been conducted in Iraq and the study consisted of an experimental group and a control group of 54 students conducted a critical thinking test built in the light of the Watson-Classer test which consists of (45 The subjects used the Pearson correlation coefficient, the Gittmann equation, the Alpha Kronbach equation, the Ca 2 square and the t-test. The results showed that the experimental group was superior to the control in both tests (Al-Muhanna 2013: 2- 135).

Research Methodology and Procedure: -

Experimental design

The research adopted an appropriate design for the research problem, hypotheses and objectives, and suitable for testing the validity of the hypotheses developed by the researchers and characteristics of the sample that can be selected (Attia, 186,2010).

A partial experimental design with two experimental and control equivalents was selected to suit current research conditions. The experimental design can be illustrated in Table 1.

Table (1)

Experimental design

The group	Pre-test	Independent variable	The dependent variable	Post- test
Experimental	critical thinking	Strategy (PDEODE)	The acquisition of grammatical concepts and critical thinking	Test the acquisition of grammatical concepts and critical thinking
Control		Normal way		

Third: Determine the research community: -

1- Research community

The research community consists of fifth grade literary students in second-

ary and preparatory day schools for boys in the center of Kirkuk province for the academic year (2017_2018) and got the names of the schools (68) schools, where the number of students (1125)

2 - Selection of the research sample: It is a partial group of the study population is selected in a certain way and the study on it, and then use the results and disseminated to the whole of the original study community, (Taya, 2007: 32), and to determine the sample of the research follow the researchers used the simple intentional method In selecting two schools, Shorouk secondary and Tigris for boys, the researchers identified Shorouk secondary and Tigris secondary for boys in which the experiment will be applied. Ah pilot that will be taught using the strategy (PDEODE), and secondary Tigris represent the control group, which will be taught in the usual way, reached the total of two divisions (62) students .waljdol No. 2 illustrates this.

Table (2)

Number of students in both research groups before and after exclusion

The group	Number of students before exclusion	Number of excluded students	Number of students after exclusion
Experimental	30	5	25
Control	32	4	28
Total	62	9	53

Fourth: The equivalence of the two research groups: -

Before starting the experiment, the researchers were keen on the equivalence of the students of the two research groups statistically in some of the variables that are believed to affect the safety of the experiment.

1. The chronological age of the students is calculated in months.
2 - last year rate for the fourth grade literary.
3- Grades last year for the rules.
4- IQ test.
5- Study level of parents.
6 - The level of education for mothers.
7 - the test of critical critical thinking.

1. Chronological age of students calculated in months

Fifth: Adjust some extraneous variables: -

There are factors or variables - other than the independent factor - that somehow affect the safety of the experiment (Alusi, 2005: p. 164).

These factors include sample selection, experiment conditions, associated accidents, maturity, experimental extinction, measurement tools, pre-test effect and regression.

Sixth: Research Requirements: -

1- Determination of scientific material

Before the start of the experiment, the researchers identified the scientific material that will be studied for students, and included topics from the book of Arabic grammar scheduled for the fifth literary grade for the academic year (2018/2019)

2. Define grammatical concepts

The grammatical concepts were identified from the Arabic grammar book. The researchers presented all the 11 grammatical concepts to a group of experts and specialists.

Preparing teaching plans

A teacher who seeks to grow and succeed in his profession can not do without the prior planning of his teaching, and those who do not plan to expose themselves and their teaching to the factors of failure when faced with the impediments to teaching, making their work a heavy burden on them and their students. (Jubouri, 2015: p. 179) The researchers presented two models of these plans to a group of experts and specialists, to explore their opinions, suggestions and observations, for the purpose of improving the drafting of those plans, and make them sound and valid to ensure the success of the experiment, and in the light of what experts have made the necessary amendments to it The final is ready for implementation.

Seventh: Setting up the search tools: -

1. Test the acquisition of concepts

The researchers prepared the test consisting of (33) paragraphs and has followed a set of steps in the preparation and application of the test, namely: -

Determine the purpose of the test

The aim of this test is to measure the effect of PDEODE strategy on the acquisition of concepts for fifth grade literary students (experimental and control group) in Arabic grammar.

Determine the content of the material

In order to ensure that the test paragraphs of the vocabulary of the content of the material balanced representation in the achievement of the test, which is the most important characteristic of a good test (Badri, 2013: p 83)

Formulation of test paragraphs

Multiple choice is an objective test, as it measures learners' knowledge level, such as remembering information, understanding concepts and applying them in new situations. (Goldsmith, 2000: 31)

Instructions to answer the test

The researchers prepared for the test understandable and clear instructions in order to determine what is required of the students in a clear and specific, these instructions explain the performance required in the test, and show the way and where to answer.

Correction of the test

The highest score for the test was (33) and the lowest (zero).

Validity of the test

Ebel points out that the best way to verify the validity of the test is to present it to a number of specialists to assess the extent to which the test paragraphs have attained the qualities or qualities to be measured (Ebel, 1972,566).

Virtual honesty

The researchers prepared the test in its preliminary form.

G - the exploratory application of the test

The researchers applied the test to a survey sample from the same research community, which consisted of (100) students the amount of time allocated for the test according to the average time of the test by summing the time of student answers divided by the number of students, so the researchers set the test time by (27.20 minutes)

Statistical analysis of the test items

After correcting the answers of the students of the survey sample, the researchers ranked their scores in a sequential and descending order from the highest score to the lowest score, then a percentage of that sample (27%) was selected representing the students who got the highest scores (the highest group) and (27%). (Odeh, 2000, p. 285)

Thus, the number of students in each group of the upper and lower group (27) students. The following is an explanation of the procedures of statistical analysis of the test paragraphs:

• Level of difficulty of paragraphs

The researchers found that the difficulty coefficient of paragraphs ranges between (0,20 - 0.75) and thus the test paragraphs were not very difficult, or very easy and thus fell test paragraphs within the acceptable range, as (Bloom) believes that the test paragraphs are acceptable if the difficulty factor Between (20,0) and (80,0). (Bloom, 1971: 66)

• Power of paragraph recognition

The discriminatory capacity of the test paragraphs ranged between (0.23-0.60). (Abu Sal, 2002) believes that the paragraph with a coefficient of distinction of more than 0.25 is considered acceptable. Or delete so according to these numbers the test paragraphs are acceptable in terms of their distinction.

• Effectiveness of wrong alternatives

After examining the alternatives to the paragraphs, the researchers found that they were effective. Their negative values ranged between (0.53-) and (0.03), as they attracted more members of the lower group than the members of the upper group.

• Stability of the test

The researchers chose the method of internal consistency (Alfa Kronbach), which is one of the important methods in measuring stability, where the coefficient of stability (0.81), a good ratio and thus the test is ready for application in its final form of (33) paragraphs.

• Final image of the test

After the completion of the procedures statistics related to the test and its paragraphs became the final test consists of (33) paragraphs in the acquisition of grammatical concepts of (11) a concept of multiple choice type.

Critical thinking test

The researchers prepared a test consisting of five abilities and these capabilities included (10) the positions of each position include (3) paragraphs and thus the total number of paragraphs (30) paragraph and the researchers adopted in the preparation of this test by reviewing several tests in addition to the preparation of instructions for students explain how to Answer the test paragraphs and give an illustrative example of each test capability, to facilitate the answer.

Virtual honesty of the test

The researchers took the opinions of the arbitrators into consideration and using the Kay square to compare the responses of the consent and disapproval of the experts on each of the test paragraphs, in order to find out the differences between the opinions of the experts at the level of significance (0.05) and the degree of freedom (1). A position containing three paragraphs, all of which were statistically significant, as shown in Table (3), and after obtaining their views and proposals amended a number of paragraphs, and did not delete any of them, because they have the approval rate, which was determined by the researchers (80%) Of the total number of experts, thus leaving the test the same except for the amendment Simple

language which was conducted on a number of paragraphs.

Table (3)

Percentage and Chi- square values to indicate validity of critical thinking test item

N.	the field	Situation	Number of experts	Approvers	Not approve	percentage	The degree of freedom	The value of ka 2		Significance at (0,05)
								Calculated	Tabulated	
1	Conclusion	the first	15	15	_	%100		15		significant
		The second	15	13	2	%87		8.07		
2	Knowledge of assumptions and postulates	the first	15	14	1	%93		11.26		significant
		The second	15	15	-	%100		15		
3	Elicitation	the first	15	15	-	%100		15		significant
		The second	15	15	-	%100		15		
4	Explanation	the first	15	15	-	%100		15	3.84	significant
		The second	15	15	-	%100		15		
5	Evaluation arguments	the first	15	15	-	%100		15		significant
		The second	15	15	-	%100		15		

Exploratory experience

The researchers applied the test to a survey sample from the same research community, which consisted of (100) students from four secondary schools. After applying the Critical Thinking test to the exploratory sample, the researchers estimated the average test time by applying the following equation: -

The researchers set the test time to (30.42 minutes)

The students were then informed of the test date, and the researchers themselves supervised the application.

B - statistical analysis of the test paragraphs

The researchers carried out statistical analysis of the test items to extract the coefficients of difficulty and differential strength, and judged the validity of statistically valid for application, and corrected the answers of the students of the (100) survey sample, the scores were sorted down and selected (27%) of the highest scores to represent the top group and (27%) of the lowest scores to represent the lowest group as the best two groups to represent the sample. (Al-Ajili et al., 2001: 69)

Then the following statistical analyzes were conducted:

• Coefficient of discrimination

When calculating the coefficient of discrimination for each test paragraph, it was found to range from (0.22-0.70), appendix (16). Above is an acceptable paragraph. (Apparent et al., 1999: 130)

• Stability of the test

The researchers chose the method of internal consistency (Alpha Kronbach), which is one of the important methods in measuring stability, where the value of the coefficient of stability (0.78), and this indicates that the coefficient of good stability and acceptable as the tests are good when the coefficient of stability (0.65) And above. (Abu Allam, 165, 2000)

• The final picture of the critical thinking test

The final test consists of five critical thinking skills containing (10) test positions comprising (30 paragraphs) of (3) alternatives for each position, as the score is calculated by considering one of these alternatives is true and the rest is wrong. The pass is zero, so the highest test score is (30) and the lowest (zero).

Table (4) Number of Attitudes and Paragraphs by Five Capabilities of Critical Thinking.

Table (4)

Number of positions and itemss distributed according to the five capabilities of critical thinking.

N.	Capacity	Number of positions	Number of items	Sequence of items
1	Conclusion	2	6	6 -1
2	Knowledge of assumptions or postulates	2	6	12 – 7
3	Elicitation	2	6	18 – 13
4	Explanation	2	6	24 – 19
5	Evaluation arguments	2	6	30 – 25
Total		10	0 3	

Ninth: Statistical means:

The researchers used the program (Spss-16.0) to extract statistical means and analyze the results of his research: -

1. Presentation and interpretation of results

A- The result of the first zero hypothesis: -

For the purpose of verifying the first zero hypothesis which states that (there is no statistically significant difference at the level (0.05) between the average scores of the experimental group studying the Arabic grammar according to the strategy (PDEODE)) and the control group studying the grammar of the Arabic language according to The conventional method, in the test of the acquisition of grammatical concepts, the researchers applied the test of the acquisition of grammatical concepts on the two research groups, and after the correction of grades was extracted the mean of each group, the average of the experimental group (24,16) degrees and standard deviation (4,46) , While the average score of the control group When using the t-test of two independent samples to measure the significance of the difference between the two averages, the calculated t-value was (2.54), which is greater than the t-tab value (20,79). 2,00), at the level of (0.05) and the degree of freedom (51), which indicates a statistically significant difference between the average scores of the experimental group studied according to the strategy (PDEODE), and the average scores of the control group studied in the usual way and for the benefit of the experimental group, according to Therefore, the zero hypothesis was rejected, which states that there is no statistically significant difference at the level (0.05) between the mean scores Follicular taught Arabic language rules in accordance with the strategy (PDEODE), and the control group taught Arabic language rules in accordance with the usual method (traditional) in testing the acquisition of grammatical concepts.

B - The result of the second zero hypothesis: -

For the purpose of verifying the second null hypothesis, which states that (there is no statistically significant difference at the level (0.05) between the average scores of the experimental group studying Arabic grammar according to the strategy (PDEODE), and the control group studying the grammar In the post-critical thinking test, the scores of the experimental and control groups were calculated in the post-critical thinking test. The average scores of the experimental group students were (22,60) and standard deviation (2,92). While the average score of students of the control group (17,61), and standard deviation (2,76) Note that there is a difference between the two averages in favor of the experimental group, and

to measure the significance of the difference between the two averages, the researchers used t-test for two independent samples, as the calculated T value (5,95), which is greater than the t-value of the tabular value of (2 This indicates that there is a statistically significant difference between the average scores of the students of the two research groups and for the experimental group. Accordingly, the second null hypothesis which states that there is no difference is rejected. Statistically significant at the level (0.05) between the average scores of the experimental group studying the grammar Arabic according to the strategy (PDEODE) and the control group that study the subject of Arabic grammar according to the usual (traditional) method. In the test of critical critical thinking.

C - the result of the third zero hypothesis: -

For the purpose of verifying the third zero hypothesis which states that (there is no statistically significant difference at the level (0.05) between the average differences between the grades of students of the experimental group studying Arabic grammar according to the strategy (PDEODE) in the test before and after critical thinking).

The scores of the experimental group students were calculated in the pre- and post-critical critical thinking test. The researchers observed that there was a difference between the two tests in favor of the post test, and to measure the significance of the difference between the two averages, the researchers used T (t-test) for two correlated samples as the calculated T value was (7,68), which is greater than the T value. The result is statistically significant and in favor of the post-critical thinking test, thus rejecting the third null hypothesis which states that there is no statistically significant difference at the level of (0, 0). 05) Between the average differences between the grades of the experimental group studying Arabic grammar according to the strategy of (PDEODE) in the pre and post test of critical thinking.

Second: Interpretation of Results: -

The results indicate that the students of the experimental group who studied Arabic grammar according to the strategy (PDEODE) in the acquisition of grammatical concepts, and critical thinking over the students of the control group who studied the same material in the usual (traditional) method.

Interpret the result related to the test of acquiring grammatical concepts: -

1 - PDEODE strategy focuses on the student, in that it makes it the center of the educational process, which, which generates probabilities, predicts access to facts from educational situations, and discusses his colleagues

about the concepts contained and interpreted as well as the development of thinking skills through the thinking processes used by Students face problems in the educational situation, and overcome these problems and difficulties through their own abilities, which may help increase the acquisition of concepts.

2 - The strategy (PDEODE) as a modern strategy in the presentation of Arabic grammar, contributed to the acquisition of positive experimental group students such as the desire to continue the lesson and active participation in the classroom.

3. The PDEODE strategy has helped to attract students' attention and increased their focus and thinking as a modern teaching strategy that has never been taught, leading to increased acquisition.

Explanation of the result related to critical thinking: -

1 - The strategy (PDEODE) works on the growth of critical thinking among students of the experimental group through the presentation of concepts and focus on them, as it works to increase the desire of students to search for facts and investigation of outstanding information through increased discussions and the abundance of questions and inquiries.

2 - The current study focused on providing freedom for students to ask their questions, and satisfy their needs. It allows the student to generate probabilities and predict, as well as to solve problems and when students reach the facts increase their self - confidence, and all this leads to the development of critical thinking among students.

Third: Conclusions:

1 - The possibility of applying the strategy (PDEODE) on the fifth grade literary students in the subject of Arabic grammar.

2 - The feeling of the students in the cooperative groups that they perform their duties in a cooperative group, and their sense that they are responsible for the completion of their duties, and that the success of the individual in the group means the success of their groups, they accept to learn more than their peers in the usual way.

3 - The strategy (PDEODE) provides an opportunity for students to search for facts and information.

4 - The use of the strategy (PDEODE) in teaching Arabic grammar requires an additional effort from the teacher.

Fourth: Recommendations:

1- Diversification in the teaching methods used in teaching Arabic grammar with interest in using the strategy (PDEODE) in teaching for the preparatory stage; because of its impact in achieving the objectives of the

lesson.
2 - Teach Arabic teachers the importance of the strategy (PDEODE) and its advantages and steps to walk and how to use.
3 - the need for the work of training courses for teachers and insight on how to formulate questions, and include levels of concept acquisition and equip them with the methods of teaching types of thinking, especially critical thinking.
Fifth: Proposals:
1. The effectiveness of the strategy (PDEODE) in the achievement of literary fifth grade students in the subject of Arabic grammar and the development of their visual thinking.
2. The effect of PDEODE strategy on the acquisition of grammatical concepts among second graders and developing their critical thinking.
3. The effect of PDEODE strategy in correcting the misconception of grammatical concepts among fifth grade literary students and developing their attitude towards them.
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