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Universidad del Zulia  
Facultad Experimental de Ciencias  
Departamento de Ciencias Humanas  
Maracaibo - Venezuela



# **The Effect of the Pentereish and Raguloth Models on the Acquisition of Linguistic Concepts among the Second Intermediate Students and Developing Their Systemic Thinking**

**Assit. Prof. Dr. Falah Salih Hussein  
Dr. Maad Salih Fayyadh**

**Republic of Iraq Salah Al Den Governorate  
University of Tikrit  
College of Education for Human Sciences**

## **Abstract**

The research was carried out in Iraq and aims to identify “the effect of the Pentereish and Raguloth models in acquiring the linguistic concepts of the second grade students and the development of their systemic thinking”.

The sample of the research consisted of second grade students. The average number of students was 60. The number of students was divided into two groups. The first experimental group studied the Pentereish model. It consisted of 20 students. The second experimental group was studied according to the Rijloth model. Of the (20) students, while the control group, which was studied in the usual way, went from (20) students. The two experimental and control tests were evaluated in a number of variables (age, achievement, intelligence). The teaching plans for the Pentereish and Reigluth models were prepared in the usual way and then the language acquisition test was prepared. All the necessary cykometric properties to adjust the scale. At the end of the experiment, the test of the system thinking skills was applied before and after a period of (21) paragraphs. After applying the test, the data were processed statistically The research reached the following result:

The Pentereich and Reigluth models help to develop the systemic thinking skills of second-graders and acquire linguistic concepts. The researchers suggested that other models of structural theory should be adopted and their impact on systemic thinking skills.

## **El efecto de los modelos de Pentereish y Raguloth en la adquisición de conceptos lingüísticos entre los segundos estudiantes intermedios y el desarrollo de su pensamiento sistémico**

### Resumen

La investigación se llevó a cabo en Irak y tiene como objetivo identificar “el efecto de los modelos de Pentereich y Raguloth en la adquisición de los conceptos lingüísticos de los estudiantes de segundo grado y el desarrollo de su pensamiento sistémico”. La muestra de la investigación consistió en estudiantes de segundo grado. El número promedio de estudiantes fue de 60. El número de estudiantes se dividió en dos grupos. El primer grupo experimental estudió el modelo de Pentereish. Consistió en 20 estudiantes. El segundo grupo experimental se estudió según el modelo de Rijloth. De los (20) estudiantes, mientras que el grupo de control, que se estudió de la manera habitual, pasó de (20) estudiantes. Las dos pruebas experimentales y de control se evaluaron en una serie de variables (edad, rendimiento, inteligencia). Los planes de enseñanza para los modelos Pentereish y Reigluth se prepararon de la manera habitual y luego se preparó la prueba de adquisición del idioma. Todas las propiedades psicométricas necesarias para ajustar la escala. Al final del experimento, la prueba de las habilidades de pensamiento del sistema se aplicó antes y después de un período de (21) párrafos. Después de aplicar la prueba, los datos se procesaron estadísticamente. La investigación alcanzó el siguiente resultado: Los modelos de Pentereich y Reigluth ayudan a desarrollar las habilidades de pensamiento sistémico de los alumnos de segundo grado y a adquirir conceptos lingüísticos. Los investigadores sugirieron que deberían adoptarse otros modelos de teoría estructural y su impacto en las habilidades de pensamiento sistémico.

### Research problem :

The problem is the weakness of the traditional methods of teaching and the lack of awareness of learners of linguistic concepts and this is one of the reasons that lead to the lack of recognition of the links between the concepts or even parts of the topics of the Arabic language, which makes it an integrated learner aware of the content of grammar Arabic language school in general and Arabic grammar in the middle stage. In particular, which leads to the weakness of the learners' awareness of the cognitive

structure of language, as confirmed by the study (Mayouf, 1999) and the study (Karkhi, 2007).

The majority of Arabic grammar teachers present the subjects of the Arabic language as they are in the textbook without adopting any teaching model that gives the spirit of vitality and suspense to these subjects, making them dry and complex, which makes the majority of learners complain about the difficulty of learning Arabic grammar topics. The study of Al-Ani (2012), Al-Naimi (2014), and Al-Obeidi (2017) study. This is the result of weakness in the acquisition of linguistic concepts for learners.

The teaching based on the memorization of the review without trying to connect the old and new concepts and provide superficial and disjointed objects of the rules of the Arabic language and was the rules of silence is hardly drowned by the student, caused by the weakness of teachers' perception of systemic thinking in the teaching of Arabic grammar, Learners and the weakness of linking Arabic subjects in meaningful systems. (Al-Chalabi, 2013), Al-Shara (2013), Al-Jaf (2015), Al-Khazraji (2015), and Pasha (2017). Based on the above, the problem of research arises in the attempt to answer the following question: The influence of the Pentereich and Reigluth models on the acquisition of linguistic concepts among second graders and the development of their systemic thinking

The problem of research is what comes

1. Weak learners' awareness of the linguistic structure of knowledge.
  2. Not to adopt any teaching model that inspires a spirit of dynamism and excitement in teaching Arabic grammar topics.
  3. Presenting disjointed topics to the rules of the Arabic language.
  4. The weakness of the development of thinking among learners and the weakness in linking the topics of Arabic in meaningful systems
- research importance:

Arabic grammar helps to develop a lot of mental abilities and growth such as (the power of thinking, reasoning, proof, induction, reasoning, creativity, thinking, imagination, generalization, discovery, etc.), and a grammatical rule contains intellectual challenge. (Sadiq, 2001: 163-167)

To highlight the relationships between the concepts found in the content of the Arabic grammar helps to form a knowledge structure between its branches, which leads to the learner to acquire a comprehensive awareness and awareness of the dimensions of the problem or the expressive position that he faces, starting from a holistic perspective, and from the relationship of all to the part and the relationship of parts to each other , Their relationship to the overall position of the material, and the manage-

ment of thinking and thinking in Metacognition. (Al-Maliki, 2006: 2)

So many researchers and educators worked to find a number of models that help students to facilitate the process of learning and correct their misconceptions with a misconception and the formation of new concepts Among the modern models that were designed for the process of conceptual change emerged Bentrigh model used this model to help students to get rid of concepts With the wrong understanding.

Concepts help to solve some learning difficulties and serve as a fulcrum for what follows. Concepts help to organize mental experience. Concepts are basic thinking and inquiry tools in the school curriculum. More attention needs to be paid to the formation and development of students. (Sa'ada and Abdullah, 2004: 267)

Most researchers agree that the Penterech model is based on several assumptions, most notably: (assumption of active construction, assumption of probability of control, assumption of objective, criterion or test, and assumption of self-organization activities that mediate between personal, contextual, real or performance characteristics) Impact on learning and achievement directly (Wolters, et al, 2003, p.135).

The Penterech model is an important part of the student's learning process and gives him the true range of work according to his or her cognitive abilities and abilities. Therefore, according to this model, the student does not seek assistance unintentionally, but deliberately and electrically to understand a particular point or paragraph, Important and useful in learning (Schunk, 2005, p.88).

The importance of the Penterech model is important because it takes into account the context in which learning is learned so that it can focus attention and overcome distractions. In general, the learner tries to arrange the learning environment in order to make the learning process easier and easier. The possibility of completing work without any disruption, The order of the learning environment in the image of the individual's preference, and this can be seen in the preference of a student to learn alone in a closed place, with his colleagues, or while listening to radio or music, or at night because of his preference for calm (Wolters & Rosenthal, 2000, p.803-804 ).

The most important general principles that determine the effectiveness of the Penterech model are:

- مبدأ Principle of privatization: The effectiveness of the educational model varies according to the degree of integration between the model used and the characteristics of the course, or the subject of the study on the one hand and the characteristics of the learner on the other.
- مبدأ The principle of executive control: The production aspect is related to the student's knowledge previously, and the effectiveness, and choose the appropriate model, periodic evaluation.
- مبدأ The principle of personal competence: This principle emphasizes the degree of sensitivity or beliefs of personal competence in the face of the demands of the task.
- مبدأ The principle of obstetrics: which means the possibility of composition or re-formation and formulation of information when using the model, which contributes to raising the level of performance. (Sharqawi, 2008, 207-210).

The Penterech model stands out as important as other educational models that are concerned with learning facts, concepts and knowledge, and the ability to think properly as it helps students to deal with information or knowledge in a way that builds knowledge of integrative value. Most educational models emphasize the importance of student autonomy, Actively contribute to the learning process, and develop their thinking. (Al-Laqani and Awda, 1991, 141).

The self-organized learning of the Penterech model is designed to help the student to think effectively, to gather ideas, to give the right judgments and decisions to reach the right conclusions, and to achieve this, the researchers must provide an environment in which students are personally involved in the process of construction. When a student listens or observes when information is given to him in the classroom, the teacher must allow the students to reach their own conclusions and assert their right to do so. If the learner understands the linguistic position in all its aspects and considers it within a coherent framework that enables the representation of that position in the form of a system of total relations that connect the parts of each other in terms of expression and control of text movements in the oral and written expression, and the relationship of each part of the whole system, It acts as a total system in accordance with the laws of system building. Thus, the Bentrigh and Riggluth models are based on prediction, observation and interpretation in the teaching of linguistic concepts and their reflection on the organization of organizational thinking skills and their adoption by students in the study of Arabic grammar by recognizing

the relationships between linguistic concepts.

Therefore, the importance of research is highlighted by the following points:

1 - the need to adopt new models interesting and make the learner effective in the teaching of linguistic concepts, including the models Bntereich and Reguluth.

2 - The Arabic grammar is an integrated system, good teaching is the one that reflects this system in the minds of students and raise their ability to find relationships between linguistic concepts and their composition correctly can therefore continue to study the rule of the Arabic language.

3 - the importance of systemic thinking skills, especially in the middle stage, because of this stage of importance in the development of mental abilities of students.

Search Goal:

The current research aims to identify “the effect of the Pentereich and Reiglth models on the acquisition of linguistic concepts among second graders and the development of their systemic thinking”.

Research Hypothesis: To achieve the objective of the research, the researchers put the following hypotheses: -

1. There is no statistically significant difference at the level of (0,05) between the average scores of the two experimental groups who study according to the Pinterish and Reguluth model and the average scores of the control group students who study the regular method of testing the systemic thinking skills in the tribal and post-test.

2. There is no statistically significant difference at the level of significance (0.05) between the average scores of the two experimental groups who study according to the Penteresh and Reguluth models and the average scores of the control group students who study the usual way of testing the acquisition of linguistic concepts in the post-test.

Search limits: This search is limited to:

1 - the human limit

Second grade students for the academic year 2018-2019

2 - Knowledge limit

a. The experience included the classrooms of the second-grade intermediate book.

B. Bentrich and Regeloth models.

T. Systemic thinking skills (dynamic, closed loop, total, structural, practical, scientific, and related)

3. Time limit

The first semester of 2018 - 2019

Terminology:

1 - Penterech model

Wirth & Leutner (2008): "The ability of students to plan independently, implement and evaluate learning processes, and involve making continuous decisions about the cognitive, motivational and behavioral aspects of the learning process." (Wirth & Leutner, 2008, p.103).

Definition of the Bantirish model:

A set of teaching procedures used by the researchers with the students of the experimental group according to the stages of the series are: (Introduction, Alteration - planning and stimulation (activation, observation, control and organization, reaction and self-reflection, and evaluation) to acquire the concept and systemic thinking in the Arabic grammar for the second grade The average through self-organized learning positions according to predetermined educational goals, reflected in their responses to the concept acquisition test and the post-organizational thinking experiment.

2. Regulus model

Arafa (Qatami 1998)

As a strategy used by the teacher in the educational situation in order to achieve educational outcomes of students, based on the proposals based on the model, and it determines the role of the teacher and students and the appropriate evaluation method (Qatami, Yusuf, Nayfa 1998: 36).

Definition of the Reguluth Model: -

The strategies used by the teacher to achieve educational outputs to employ sequential or sequential movements in the presentation of educational material and presented in accordance with regulatory frameworks based on interpretive viewpoints to achieve the objectives of the educational process of the experimental group students reflected by their responses in the concept acquisition test and the test of systemic thinking.

3. Acquisition of the linguistic concept

Known by: Anwarulasafi (2005)

"An expression of an experiment formed by the generalization of molecules, a word of weight is a concept because it is the expression of many observations of things that are rather heavy or light" (Anwarulasafi, 2005: 52).

The conceptual definition of the concept is “a set of objects, symbols, stimuli, and accidents that share common fundamental characteristics. The concept is an abstract mental image of these common properties, expressed by name or symbol, and consists of the generalization of common characteristics and characteristics.”

4- Systemic thinking skills:

Nabhan (2007) defined it as: “a set of components, including the analysis of systems into subsystems, with the re-installation and arrangement of these systems within the framework of the subject matter.” (Nabhan, 2007: 457)

Alklouk (2010) as: “a set of skills that fit the concept of systemic thinking, in terms of inclusion in the analysis and structure, through the analysis of the main systems to subsystems, and identify the components, and the relationships that connect these components, and then build new relationships Based on an understanding of the relationships between these components. “ (Al-Akluk, 2010: 7)

The procedural definition is: (A system of interconnected mental processes in which intermediate second-grade students can adopt the following skills (dynamic, closed loop, total, structural, practical, scientific, and related) On the related relations between him and measured by the degree obtained by the students of the research sample through a test prepared for this purpose.

Theoretical Background:

First: Benrich's model:

The idea of this model has crystallized in Pantherich since he taught his child at home where he was impressed with how children learn basic reading and writing skills, especially in their attempts to explain the natural world. Teaching was according to the following steps:

- 1 - make students predict the phenomenon.
2. Conduct experiments based on their predictions and observe the results.
3. If their theories contradict the empirical evidence, students should be helped to move from the wrong theories to the correct scientific interpretation.

Stages of the Penterech Model: Components of the self-learning process according to Benrich's model.

The Penterech model and his colleagues in the field of learning are an attempt to interpret self-organized learning processes by bringing about a combination of cognitive and motivational components. This model is divided into two main dimensions:

1. Cognitive components.

2: the driving components:

Which can affect or determine self-organized learning processes. Pintrich & De Groot, 1990, p.35)

Cognitive components of Bentrich's self-learning processes

Cognitive components include knowledge and knowledge, and knowledge is divided into components:

- Knowledge of the report: includes what the learner knows about the information provided.

- Actual knowledge: Stable in the cognitive structure, cognitive strategies for learning and thinking, these two components represent the parallel distinction between knowledge of the report and procedural knowledge.

- Procedural knowledge: involves knowledge of ways to learn, remember and understand that information. (Al-Samman, 2012, 24).

Metacognition includes strategies for planning, monitoring and organizing.

- Planning: The individual's ability to preconfigure the best ways to accomplish a task, including setting objectives, identifying procedures and steps used to achieve these goals, arranging sequence of processes or steps, sensitivity to problems, selecting implementation strategies and skills, Methods of coping with difficulties, and predicting desired outcomes. (Smadi, 2010, 103).

- Observation: A process in which the individual examines in succession and in a way that permeates performance. This skill includes: keeping the target in focus, maintaining sequence of operations or steps, knowing the time of achievement of the sub-goal, knowing when to move to the subsequent process, Processes, selecting the appropriate process to follow the context, and discovering the difficulties and mistakes and how to overcome them. (Nadia et al., 2003, 206).

- Organization: The student possesses the necessary skills to organize the basic cognitive processes according to the level of knowledge of the individual and awareness of the processes and strategies of thinking and ability to assess and organize its own thinking processes, ie how and why do what he does? (Titi, 2006, 63).

The driving components

The motivational components of self-organized learning processes according to Bentrich's model

Motivation according to the Penterech model consists of three general

components that seek to play an important role in student motivation towards self-organized learning:

### 1. Value component. Value-Component:

It includes a set of general objectives determined by the student for himself from the study of an article, and includes a set of variables such as the importance of the material and the possibility of benefit, as well as the components of the expectation to answer questions such as: Why do I do this job? It consists of: the internal orientation of the goal, the external orientation of the goal, and the value of the task.

a. The internal orientation of the goal: refers to the student's understanding of the reasons for his integration in the task of learning, and it reflects the attitudes of the student towards the curriculum, and relates to the degree of awareness of the reasons that lead to participate in a task, and these reasons challenge and curiosity, and excellence, and indicates the high internal orientation of the student. However, his participation in the academic mission is an end in itself rather than a means.

B. External orientation of the goal: The external orientation of the goal and the internal direction of the goal complement each other, the external orientation relates to the degree of perception of the individual reasons for participation in a task, and these reasons: grades, rewards, performance and evaluation of others, competition, and when the student is high in the external orientation of the goal. The main goal of the student is related to the external issues and causes that are not directly related to the task itself. That is to say, the orientation of the goal (internal / external) indicates the reasons for the participation of the student in the task. The?

T. The value of the assignment is related to the student's assessment of his interest in the task, its importance and its usefulness. This is related to the following question: What do I think about this task? The higher the value of the student's job, the greater the student's involvement in learning. Their relevance and usefulness to them. (Razuki and Abdel Karim, 2015, 199-200).

### 2. Expected Component. Expectancy-Component:

Includes the student's belief in his ability to perform various tasks and duties, and includes the answer to the following question: Can I perform this task? It consists of: tuning learning beliefs, self-efficacy in learning and performance.

a. Adjustment of Learning Beliefs: The process of discipline aims at reinforcing the student's belief that his efforts to learn will give him positive results. These results depend on the student's efforts. The difference in the

degree of effort to study will lead to differences in the students' learning. It will be more willing to develop what subsequent strategies need to make changes desirable.

B. Self-efficacy in learning and performance: It is a self-report of the student's vision of his ability to perform a particular task in a specific field, and includes provisions on the ability of the student to accomplish the task as well as his confidence in his skills and abilities to perform that task (Husayn, 2010, 42-43).

### 3. The emotional component: Affect-Component

This aspect addresses the emotional reaction to the study mission and represents two sub-components, one of which is related to the negative beliefs of the students when the cognitive failure occurs, and the emotional one is the psychological and emotional counseling the students undergo, and includes answering questions such as: this mission. (Pintrich et al., 1990, p.40)

The motivational components lead to three general patterns of behavior (choice of doing less than the last, level of participation, integration into the task or work effectively) as well as the extent of processing and processing at deep levels (perseverance).

### Reigeluth Model

Instructional Design has employed learning and teaching theories to serve people, especially students, and ensure that educational goals are achieved in the shortest possible time and effort. Models and theories were introduced that used methods to organize and teach the content of the educational material on the other hand. One of the most recent of these theories is Raigloth's The Elaboration Theory (Raad & Acharon, 2005: 179). Rigelgoth developed the theory of expansion and used it primarily to regulate educational content at the macro level. This theory is expansive because it Not only to organize one pattern of learning content but also to include all patterns of facts, concepts, principles and procedures and assume that they will develop learning at all levels of Knowledge, Apply Application, Discover Discovery, Merle, or Remember Knowledge, Comprehension, Application, Analysis Analysis, Synthesis and Synthesis Weim, as quoted by Bloom (Al-Zind, 2004: 292), (Thunder and Others, 2005: 179-80).

Second: Systemic thinking skills:

Richmond points out that there are seven system-based thinking skills that work together and simultaneously and are closely related to the Systemic dynamic (SD) model:

1) Dynamic Thinking: Any thought of the problem as a result of continuous circular processes that appear over time rather than merely as a result of a combination of factors.

Closed-loop thinking: This thinking expresses the skill of taking advantage of the results of position analysis in the installation process, ie understanding the ring nature of the systems, which is strongly related to dynamic thinking, and this means thinking of the problem as a set of continuous and approved processes. Some of them more than just think of them as based on one-way relationships between the components of the problem, so when we look at the problem we see it as a loop (a circular relationship between cause and effect), so that these rings are responsible for generating patterns of behavior that appear in the problem, that is the relationship between cause and effect is not one-way, but the result leads to feedback to affect one or more of the causes, and these same causes affect each other in some.

3) Generic Thinking: It means the total vision of the system, that is, the ability to comprehensively view the relationships that connect the constituent parts of the system. Structural thinking: It means the ability to organize parts of the system within a framework or structure of relationships.

5. Practical Thinking: It is the ability of the individual to see how the parts affect each other and not just to stand at the end that these parts affect each other. Practical thinking helps to identify the idea of mutual influence between the parts. Component of the system.

6 - Scientific thinking Scientific Thinking: (common scientific thinking skills).

Continuum Thinking: Any skill in identifying and identifying invisible relationships, in the sense of reaching deep building as a connected mind with a panoramic view of the interrelationships between the elements of the situation. (Richmond, 1993: 122- 131)

The importance of the development of the skills of systemic thinking through the provision of meaningful and meaningful systems that help the learner to structure knowledge and analysis and the introspection of relations quickly and accurately through the holistic vision of the system of the nature of the network and dynamic interaction between them, these skills help prepare generations with a structured ideology, (Richmond) after taking the opinions of the experts and discussing their relevance to the thinking processes of middle school learners.

Search procedures :-

First: Experimental Design:

The researchers used the design of the partial and partially controlled groups, which included the first experimental group to study Arabic grammar according to the Penteresh model, the second experimental group which taught the Arabic grammar according to the Reguluth model, and the control group, Normal.

Table (1)

Dependent Variable	Independent variable		Group
Systemic Thinking Skills	Peneteresh Model	Group Equivalence	First experiment
	Raguloth Model		Second experiment
	Normal Method		Traditional

Second: Selection of the society and sample of the study:

The current research community represents all middle-grade students in Salahuddin Governorate. The sample of the research was randomly selected from the medium of science for boys. The sample consisted of 60 students in the first experimental group (20), the second experimental group (20) and the control group (20).

Third: "Equal groups: -

Before applying the experiment, the students of the three study groups were equivalent in some variables that may affect the results of the study:

- 1- The chronological age variable.
- 2 - the previous collection variable in the Arabic grammar.
- 3 - Variable IQ test.
- 4 - variable educational level of parents: -

It was noted that the calculated T value is less than the T-value of the table with the significance level (0,05) and the degree of freedom (69) and (4) in the educational level variable for the parents.

1 - Preparation of teaching plans and behavioral purposes:

The researchers set up instructional plans within the specific scientific subject of the classes. Behavioral purposes were derived on the basis of these, and the objectives were distributed on the three lowest levels of Bloom's knowledge classification.

The objectives were presented to a group of experts to verify their coverage of the educational content and the correctness of its formulation. It

obtained approval from more than (0.84) expert opinions. In light of these views, some of them were modified. Behavioral objectives (104) , (39) behavioral targets for cognitive level, (38) behavioral targets for the level of absorption, and (27) behavioral objectives of the level of application.

In addition, three types of daily teaching plans were prepared for the study groups (the two pilot courses, which are taught according to the Ben-terish and Reguluth models, and the control unit according to the usual method). The number of daily teaching plans for the study groups reached (45) For a 45-minute study, examples of these plans were presented to a group of experts specialized in Arabic grammar, teaching methods and material teachers, to take advantage of their views and proposals.

## 2. Study tool (test):

2-1 Preparation of a test of the skills of systemic thinking: The researchers prepared a test of the skills of systemic thinking somewhat similar with the characteristics of the research aimed at measuring the skills of systemic thinking of the concepts and generalizations and skills accumulated for students as well as the subject matter within the limits of the experiment, according to the specific thinking skills that fit With the students of the second intermediate, the seven skills of systemic thinking, which are: ((dynamic thinking, closed loop thinking, holistic thinking, structural thinking, practical thinking, scientific thinking, thinking). The test included (21) Each skill consists of (3) test paragraphs. The weight of the score of each paragraph (system) is between (0-4), ie when the student answers to one sub-system within the main system, only one score is counted.

(2) to show their views on the paragraphs and the judgment and in the light of the opinions of the arbitrators kept the paragraphs that supported the validity (92%) and more With the amendment of some paragraphs, the test became its final form, Annex (8), and this procedure is achieved in the test of the apparent honesty.

2. Statistical analysis of the subjects of the systematic thinking test: The test was applied to a sample of (126) students in Tikrit secondary school for boys belonging to the Directorate General of Salahuddin Education on Monday, 14/1/2019. After correcting the answers, (27% of the highest group) and 27% of the lowest group. The total number of students in each group was 34 students from the upper group and 34 students from the lower group. The two groups of statistical analyzes:

1. The difficulty of the test paragraphs: Therefore, the subjects of the system-based systematic test with the objective answer and the essay were calculated by using the difficulty equation for each of them, and it was

found to be between (0 - 72. 0) and it falls within acceptable limits. That any paragraph in the distribution of difficulty coefficients ranging from (20 - 0 - 80. 0) is good and acceptable (Bloom, 1971,96).

2 - The coefficient of discrimination: The power of discrimination for each of the paragraphs of the test of systemic thinking according to their equation of distinction was calculated ranging between (24, 0-55, 0) and the paragraph is good if the coefficient of discrimination more than (20, 0 - 80, 0 ). (Al-Zaher et al., 1999: 131).

3. The stability of the test: In order to calculate the internal consistency of the systematic thinking skills of the exploratory sample, the researchers applied the alpha-kronbach formula in the light of the student responses which reached (0.98), which is greater than the minimum required by educational and social studies (Dulaimi, 2002: 90). - 100).

1. The stability of the correction: 45 randomly selected test papers were withdrawn from the survey sample for the purpose of calculating the stability of the correction over time. The researchers corrected them after seven days of the first correction. Using the Cooper equation, the results showed that the correction ratio reached 92.0 ), And then again corrected the papers of the answer again by the researchers and using the same equation was the ratio of the agreement (93. 0) is a high stability coefficient (return, 1999: 367). After ascertaining the implications of the validity of the test of systemic thinking and stability and statistical analysis of its paragraphs, Ready to apply.

Apply the experiment:

After preparing the requirements of the experiment and preparing the teaching plans for the experimental group and the control and control the variables affecting the experiment and after the division of the students in equal groups started the school material teaching on 2/10/2018 and ended on 13/1/2019 in light of the following procedures:

1 - Applying the teaching plans allocated to the two experimental groups according to the Pinterish and Rijloth model and follow the following steps:

A) The division of students into (5) groups in each group (4) students from the beginning of the year.

B - the preparation of the subject of the school by clarification.

C) Presenting a working paper for each group in each lesson: The teacher asks the students for what is included in the worksheet:

1. Predict the solution by developing a plan to solve each individual student in the group. It is intended to make each student think with himself in

developing a plan to solve sentences that consist of linguistic concepts in a special record called the activity log.

2 - Note the application of colleagues in one group and participation to reach the correct solution in a consolidated worksheet and record the solution in the (activity log).

3 - Interpretation of the solution in the record of each individual student in his own way to develop the spirit of interpretation and linguistic expression among students.

D - Display each group the correct solution on the plate after the division of the panel on the number of totals and display the correct interpretation and compared with what they reached and recorded in the record of activity here is the correction of the correction on what they have to confirm and encourage the right solution and the correct interpretation.

Instructing and instructing the students and leading the discussion to arrive at a sound scientific interpretation and help them make comparisons between their observations and predictions before reaching a concept or solution.

2 - Applying the teaching plans of the control group according to the traditional method, according to the order of the book in the lesson material.

Statistical means:

1- ANOVA analysis

2 - Equation ratio of the agreement to Cooper: to find the stability of the performance observation and essay questions.

3 - Equation ratio ratio

4. Equation of Item Discrimination: To calculate the power of discrimination of the objective achievement test paragraphs.

(Return, 1998: 288)

5 - Equation of Item Difficulty: to calculate the difficulty of each paragraph of the objective collection test.

Person-Coefficient Correlation: This is used to establish the consistency of the objective achievement test paragraphs.

(Allam, 1985: 288)

7. Percentage:

8. Cooper's equation: used to calculate the correction of the essay questions for systemic thinking

9 - Equation (Alpha - Kronbach): used to calculate the stability of questions to test systemic thinking

(Dulaimi, 2002: 123)

View and interpret results:

This chapter includes presentation and interpretation of the results as well as recommendations and proposals.

First: Display the results

It includes two main areas:

a. Academic achievement :

For the purpose of verifying the first hypothesis which states that: (There is no statistically significant difference at the level of significance (0.05) between the average score of students of the experimental group, which are based on the models of Pentergic Reguluth and the average grades of control group students who study the usual way to test thinking skills Systematic in the Tribal and Remote Tests

Computational circles and standard deviations of grades of students of the three research groups

Statistical processing

Standard Deviation	SMA	Group
66,5	33,37	First Experimental group
6,46	6,66	Second Experimental group
7,50	58,62	Traditional group

The table shows that the average scores of the students of the first experimental group in the achievement test (33,73) and the standard deviation (66.5). The average number of students in the experimental group was 6.66 and the standard deviation was 6.46. The average of the students in the control group was 58.62 and the standard deviation was 7.50. The calculated values indicate that there are apparent differences, but we can not accurately judge the significance of the differences. Therefore, the researchers used the analysis of variance to indicate the significance of differences between the three research groups

Results of analysis of variance and value of the scores of the students of the three research groups in the achievement test

Level of indication	Calculated Alphanumeric value	Average of Squares	Degree of flexibility	Total of squares	Source of contrast
Function ( 0,05)	17,12	51,56	2	03,1121	Among groups
		02,46	57	55,2623	Inside groups

Table (10) shows that the calculated numerical ratio (17,12), while the alpha ratio of the two categories of freedom (2, 57) and the level of significance (05,0) is (15.3), and since the calculated value of Fahrenheit is greater than the value Tissue Alphanumerum means that there is a function above the three search groups, thus rejecting the null hypothesis and accepting the alternative hypothesis, but this does not specify the group in which the differences are in their interest.

In order to detect the significance of the differences between the three groups, the Tukey (Honestly Significant Difference) test was used to determine the differences between the averages of the three groups,

Comparisons between the test scores of the students of the three research groups

Traditional group 58,62	Second Experimental group 6,66	First Experimental group 3,73	All three groups and average
45,10	7,6	0	First Experimental group 3,73
75,3	0	0	Third experimental group 6,66
	0	0	Traditional group 58,62

The following table shows:

1. There are statistically significant differences between the average of the experimental groups I and II with a value of (7.6), which is greater than the value of (H.S.D.) Calculated (15.5) for the benefit of the first experimental group.
2. There were statistically significant differences between the mean of the experimental and control groups, which reached (45.10), which is greater than the value of (H.S.D.) calculated (15.5) for the benefit of the first experimental group.
3. There were statistically significant differences between the average of the experimental and control groups (75.3), which is smaller than the calculated value of (H.S.D.) of (15.5).

B. practical skills :

For the purpose of verifying the second hypothesis, which states that:

There is no statistically significant difference at the level of (0.05) between the average score of the experimental group students who study according to the Penterech and Reguluth models and the average score of the control group students who study the usual method of testing concepts acquisition Linguistics in the post-test.

The score of the three research groups was calculated by calculating the score and the arithmetic mean of the scores of the students of the three research groups was calculated in all systemic thinking skills.

Explanation of the results: The reason for the increase in the experimental group resulting from teaching according to the Penterech model may be due to the following reasons:

1 - The interaction that occurs during the stages of the Penterech model may have a deeper look at the linguistic subject and the relations that create between it and other subjects of Arabic. As in the study (Daini, 2001) and the study (Ibrahim, 2006)

2 - The recording of predictions, observations and interpretations in the activity log and compare them with what the student reaches at the end of work and adjust them helps to involve more than the sense and the formation of meaningful learning and works to learn and retain the material as long as possible.

3 - To make the student predicts and notes solution and solutions of colleagues and discussed in the collaborative groups helps students to think and continue the process of thinking during the lesson until they reach the result that is convinced and recorded in his blogs record activity and this is the nominal purpose of the learning process.

4 - Teaching based on the Penterech model helped to create meaningful systems in the minds of students through the amendment to the Matawloa of the linguistic information wrong or emphasis on the correct language information plans to be a successful solution in his mind used in the positions of new language expression.

**CONCLUSIONS:** In the light of the results of the study we conclude what follows:

1. The Penterech model has allowed for an increase in the skill of systemic thinking among second-grade students. The Pinterish model ensures that the student works individually and collectively. The student is active and positive with the teacher and fellow students.

2 - the need to pay attention to the skills of systemic thinking because it gives the student the overall view of the subject and the relationships that permeate the parts and subsystems so different from other types of think-

ing skills.

Recommendations: In light of the results of the study, we recommend the following:

1- The Ministry of Education recommends the need for training in modern models so that the teacher can meet all the educational situations in a positive way, which aims to deliver the Arabic grammar in the best way and to create a teaching culture for the teacher.

2 - We recommend colleges of education in all Iraqi universities to adopt modern teaching models in the preparation programs students teachers and emphasis on various teaching models to promote the educational process.

Proposals: In light of the results of the study, we suggest the following:

1 - the impact of the Penterech model in the collection of literature and texts among the second grade students and the development of literary taste.

2 - the effect of the Reguluth model in the acquisition of rhetorical concepts among students of the fourth literary and the development of systemic thinking skills.

3 - The effect of the Bentrigh and Reguluth model on the acquisition of literary concepts among students of faculties of basic education and the development of composite thinking

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