The Effectiveness of the Thinking Acceleration Model in the Achievement and the Acquisition of Grammatical Concepts for Fifth-Grade Students in the Grammar Subject

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Abstract

The researcher adopted the experimental method with partial control for the two research groups, and the research sample consisted of (60) students. The researcher rewarded the two research groups with grades of the fourth grade, and he determined the behavioral goals and teaching plans. The results showed the superiority of the thinking acceleration model for the experimental group in the achievement test and the acquisition of grammatical concepts for the grammar subject over the control group. In light of that, the researcher puts forward a number of proposals that may contribute to the development of methods of teaching grammar in all stages.

Keyword: Accelerate the thinking of grammatical concepts.

Introduction

Since the world is witnessing a hude scientific progress in the field of education, which necessitates the development of modern teaching methods and methods for the purpose of changing the behavior of learners towards attention, focus, participation, and in addition to understanding the educational material. Through the researcher's sense of the problem through his work and direct contact with the learners, he noticed their lack effeciency of Arabic grammar material, which negatively affects their inability to communicate with the material in the field of solving exercises or understanding some grammatical concepts. Therefore, there is an urgent need to find new strategies and models that help learners (Al-Bayati 2010), and this is what the symposia and conferences have indicated, which emphasized the use of multiple methods and methods that keep pace with modern developments.

<div align="center">(Education Conference: 2005: 11)</div>

Hence, the researcher asked two questions:

1. What is the effectiveness of the thinking acceleration model in the achievement of fifth grade students?
2. What is the effectiveness of the thinking acceleration model in acquiring grammatical concepts for the fifth grade of primary school for grammar?

Modern trends in education have given care and attention to the use of effective methods and methods, and considered them as a cornerstone in the educational process because of its great importance to achieving educational goals (Razuqi and Fatima: 2005: 7). Therefore, the teacher must possess these modern methods in order to be able to deliver the educational material to their ears (Al-Samarrai: 2000: 6) and give a real opportunity for the

abilities and desires of the learners to share their educational activities (Jassim and Hussein: 2015: 8).

The researchers' attention came towards the use of effective models, including the (think acceleration model), which represents a type of behavior and mental activities that enable humans to deal with different situations with the external environment (Farman: 2012: 17). In a logical and scientific manner, the intellectual methodology is rooted in his mind in building their knowledge and the growth of their personalities (Jaber: 2010: 27). Furthermore, the main idea of the thinking acceleration model is to help students acquire mental skills and promote division by themselves, as well as paying attention to abstract thinking and developing it to the stage of observation and then to conclusion and inference that leads to raising the level of students' achievement away from memorization and memorization (Al-Maghribi: 2005: 16). This model has a prominent role in the acquisition of concepts because it represents a coherent and more stable fabric and is less prone to forgetting (Nashwan: 1989: 88). The learner must be aware of the variables in interpretation, judgment, and prophecy (Al-Azrajawi: 1991: 297), especially with his two sons, the grammatical concepts in building the subject of grammar, since grammatical concepts and all grammatical rules and their linguistic skills depend entirely on (concepts) in their formation, use and acquisition (Ashour and Al-Mahawamdah: 2007: 286).).

The importance of research in terms of:

1- The importance of the Arabic language, as it is the language of the Qur'an.
2- The importance of acquiring grammatical concepts in primary education
3- The importance of the model is the cornerstone in achieving educational goals.
4- Thinking is a mental, inquisitive, reproducing and logical activity that distinguishes between right and wrong (Ghubari and Khaled: 2011: 14).
5- The importance of the model in that it combines modern teaching methods such as investigation, problem communicating, discovery, and asking questions in an organized manner, which makes the student focused on the educational process. (Abu Sijla: 2007: 5)
6- It contributes to collective thinking to rent the appropriate solution and gives the learner self-confidence. (Razooki and Suha: 2013: 24)
7- This study is an objective response to what educators and specialists advocate
8- The necessity of presenting the study material with modern methods and models that emphasize the interaction between the teacher and the students, and the student is the center of the educational process. (Al-Janabi 2011: 270)

Research objective

The current research aims to know the effectiveness of the thinking acceleration model in the acquisition and acquisition of grammatical concepts for fifth grade students in the subject of grammar.

Research Hypothesis

1- There are no statistically significant differences at the (0,05) level between the average scores of the experimental group who study according to the thinking

release model and the average scores of the control group who study according to the usual method in the grammatical concepts acquisition test.

2-   There are no statistically significant differences at the (0,05) level between the average scores of the experimental group who study according to the acceleration thinking model and the average scores of the control group who study according to the usual method in the achievement test.

Research limits:

1-   Students of the fifth primary grade in Al-Maqdousi School for Boys affiliated to the Diyala Education Directorate (Al-Muqdadiyah District).

2-   The first six topics of the Arabic grammar book for the fifth grade of primary school (2015/2016) eighth edition.

3-   The first semester of the academic year (2018/2019)

Research Methodology and Procedures:

The researcher adopted an experimental design with partial adjustment to suit the research conditions, and Table (1) illustrates this.

Table (1)

Group	Independent variable	Dependent variable
Experimental control	The model for accelerating thinking, the usual way	Attainment and grammatical concepts

Second: The research sample:

It means all the sample members included in the phenomenon of the current study (Al-Jabri and Daoud: 2013: 151). The current research community consists of fifth grade students from Al-Maqdisi School for Boys affiliated to the Diyala Education Directorate in Al-Muqdadiya District. The experimental group (B) and the control group (A) were represented, and the number of sample members was (60) students, with (30) students for the experimental group and (30) students for the control group.

Third: Equality of the two study groups:

1- Academic achievement in Arabic grammar for the fourth grade of primary school.

The scores of the two groups were obtained through the school records, the mean scores of the experimental group were (11.14) and standard deviation (1.02), and the average scores of the control group were (11.22) and standard deviation (1.10). After using the t-test for two independent samples, it appeared that there was no statistically significant difference at the level (0.05), and the calculated t-value (1.7) was smaller than the tabular t-value of (2) and with a degree of freedom (60), which indicates that the two groups are statistically equivalent. Table (2)) explains it as follows:

Table (2)

Grades of Arabic language for the fourth grade of primary school for the two research groups

Group	NO.	SMA	Variance	Standard deviation	Degree of freedom	T		Statistical significance (0.05)
						Calculated	Tabular	
Experimental	30	26.36	18.86	4.34	60	2.71	1.98	Statistically significant
Controllar	30	22.51	74.88	6.90				

Fourth: Determining the scientific material:

The researcher identified (6) study topics from the Arabic grammar book, as well as identified grammatical concepts and presented them to a group of specialized experts, Annex (1) and Table (3) illustrate this:

Table(3)

5th grade grammar topics and concepts

No.	Topics	Page	Concepts
1	Parts of speech	10	Speech
2	Nominal and Verbal Sentence	15	Noun and Verb
3	Verb (past - present - imperative)	18	Verb Tense
4	The subject	23	The Subject
5	Object	28	Object
6	Subject and Predicate	32	Nominal Sentence

Fifth: Behavioral objectives and formulation:

They are the basic objectives of any educational program that help define the educational material in terms of its organization and the selection of appropriate means, methods, tools and activities (Maqloo: 1986: 141). The researcher formulated 66 behavioral goals and presented them to specialists in the Arabic language and its teaching methods according to Bloom's levels, and obtained an approval rate of (80%) and above, with (24) goals for the level of remembering, (22) for the level of understanding and (20) for the level of application.

Sixth: Teaching plans and preparations:

It is a set of procedures and steps organizing the success and achievement of educational goals and the detection of difficulties facing the implementation of the school curriculum (Abdul Salam: 2001: 72). The researcher prepared training plans for grammar topics according to the model of accelerating thinking for the experimental group, and in the usual way for the control group, and presented to a group of experts and arbitrators to benefit

from their opinions, and approval was obtained with an agreement percentage of (80%) or more.

Seventh: The search tool:

a. A test of acquiring grammatical concepts for Arabic grammar:

The researcher adopted objective tests as they are characterized by comprehensiveness of the largest possible number of material and the answer is faster (Raichon et al.: 1965: 114). The researcher prepared a test of grammatical concepts with (18) multiple-choice paragraphs of grammatical concepts (6) a concept in which to measure (definition, distinction and application of the concept).

a. The validity of the test:

It is one of the important characteristics that the test designer confirms to judge in measuring the phenomenon to be studied (Melhem: 2002: 266).

b. Correcting the grammatical concepts test:

Numbder 1 was assigned for the correct paragraph, the number zero for the wrong answer, for the missing paragraph or the paragraph with more than one answer.

c. Applying the concept test to an exploratory sample:

The researcher applied the test to a sample of (60) students from (Umm Al-Haytham School for Boys) and after correcting their answers, they were arranged in descending order, and the highest and lowest (27%) were tested to balance the two groups. The objective of the exploratory sample is (to know the unclear paragraphs for the purpose of reformulating them, finding the coefficient of difficulty, ease and effectiveness of alternatives, and calculating the time taken for the test).

d. Analysis statistics for the grammar concepts test:

It is examining the responses of individuals for each item to find out the difficulty, ease, effectiveness or ability to distinguish in the multiple test items (Al-Ajili: 2001: 67), the difficulty was between (0.58) (0.78), the strength of distinction (0.37) (0.70) and the effectiveness of the wrong alternatives (- 0.2) (-0.37). Here, the alternative has a basic task, which is to distance the weak students from the correct answer (Ibrahim et al.: 1989: 78).

e. Grammar test consistency:

The researcher used the split-half method to calculate the stability of the test, which is the most common method for finding the stability of the test and it eliminates the effect that occurs on the student's scientific and psychological condition, which affects the level of test performance (Melhem: 2009: 263).

The researcher used with the scores of the exploratory sample of the (Umm Al-Haytham Boys) School, the Pearson correlation coefficient to find stability, which amounted to (0.78), and then corrected it with the (Spearman-Brown) equation, and the stability reached (0.85), which is an acceptable value, and the concepts test is ready for implementation.

2. The achievement test for Arabic grammar:

It is an objective test that does not include the researcher's subjectivity and opinions in the test results (Al-Kindi: 1988: 153). This test allows taking a large sample that may cover

the whole curriculum in a short time (Al-Ghareeb: 1996: 281). The researcher formulated (16) paragraphs of the type of multiple test.

a. Specification table work:

It is the balance between the types of behavior and content as imposed by the educational goals that are the basis for the achievement test, and it has two dimensions: vertical representing the goals and horizontal representing the content (Al-Zayoud and Hashem: 2005: 80). The test items were identified with (20) items distributed according to the three levels of Bloom's classification, and weights estimates were calculated at a percentage of 100%, and Table (4) illustrates this.

Table (4)
Behavioral objectives and achievement test items according to the test map

Levels	Pages	Percentage	Behavioral Goals				Test			
			Knowledge	Understanding	Application	total	Knowledge	Understanding	Application	total
Parts of speech	4	%22	2	4	5	11	1	1	1	3
Nominal and Verbal Sentence	2	%12	1	3	3	7	-	1	1	2
Verb divisions	4	%23	1	4	7	12	-	2	2	4
The subject	3	%16	1	2	4	7	1	-	2	3
Object	2	%11	1	2	3	6	-	1	2	3
Subject and predeicate	3	%16	1	3	3	7	1	2	2	5
The total	18	100	7	18	25	50	3	7	10	20

b.   The validity of the test:

The researcher relied on apparent honesty by presenting it to a group of arbitrators in teaching methods.

c. Correcting the achievement test for Grammar subject:

A point was assigned (1) for the correct paragraph, and (zero) for the wrong answer, and for the missing paragraph or the paragraph with more than one answer.

d. Applying the achievement test to the exploratory sample:

The sample was applied to a school (Umm Al-Haitham for Boys) consisting of (20) students for the purpose of identifying the time taken, the difficulty, ease and effectiveness of each paragraph and its distinction in the individual differences of the characteristic to be measured.

e. The stability of the achievement test for the grammar subject:

One of the characteristics of a good test is that which gives close or the same results if the test is applied more than once in similar circumstances.

f.   Procedures for applying the experiment:

1- The researcher studied the two research groups using the acceleration thinking model for the experimental group and using the usual method for the control group with two lessons per week for each group and continued teaching for the first semester of the academic year (2018-2019).

2- The grammatical concepts acquisition test for grammar was applied to the students of the two research groups simultaneously on Wednesday (2/1/2019).

3- The achievement test of grammar was applied to the students of the two research groups simultaneously on Thursday (3/1/2019).

Presentation and interpretation of results

First, show the results:

1- The research hypothesis is to test the acquisition of grammatical concepts of grammar.

After correcting the answers of the students of the two groups in the test of acquiring grammatical concepts, Supplement (6), the average scores of the experimental group were (36,26) and the average scores of the control group (22.51), and Table (5) shows that.

Table (5)
Arithmetic mean, variance, standard deviation, calculated and tabular T-value in grammar concepts test.

						Calculated	Tabular	
Experimental	30	26.36	1.86	4.34	60	2.71	1.98	Statistical Function
Controllar	30	22.51	74.88	6.90				

The study showed that the students of the experimental group outperformed the students of the control group. Thus, it rejects the null hypothesis which states (there are no statistically significant differences at the level (0.05) between the average scores of the experimental group who studied according to the acceleration of thinking model and the average scores of the control group who studied according to the usual method in acquiring grammatical concepts).

2- The hypothesis of the research with the achievement test for the subject of grammar.

After correcting the answers of the students of the two groups in the achievement test, Annex (7). The average score of the experimental group was (74.933) and the average score of the control group was (63.666), and the table (6) shows that.

Table (6)
Arithmetic mean, variance, standard deviation, and a calculated and tabular t-value in the selection of achievement

Group	NO.	SMA	Variance	Standard deviation	Degree of freedom	T		Statistical significance (0.05)
						Calculated	Tabular	
Experiment	30	74.93	165.443	12.862	58	2.670	2000	Statistical

al		3							Function
Controllar	30	63.666	374.091	19.341					

It was found that the students of the experimental group were superior to the students of the control group, thus rejecting the null hypothesis which states (there are no statistically significant differences at the level (0.05) between the average scores of the experimental group who studied according to the thinking acceleration model and the average scores of the control group who studied according to the usual method, the achievement test).

Second: Interpretation of the results:

In light of the first research hypothesis by testing the acquisition of grammatical concepts for grammar, the students of the experimental group excelled in acquiring grammatical concepts who studied according to the acceleration of thinking model over the students of the control group who studied according to the usual method. After sorting the concepts from each other in terms of (the definition of the concept, its distinction, and its application) and one degree was given to each concept and the student obtained two degrees out of the three degrees for each concept with a ratio of (66.6) as a criterion for acquiring the concept, and the percentage of the two groups and the table (7) illustrates this.

Table (7)
The number of acquisition of grammatical concepts for the two research groups and the percentage

No.	Grammatical Concept	Experiemntal		Controller	
		Concept Acquisition Number	Percent	Concept Acquisition Number	Percent
1	**Talk**	28	%93	23	%72
2	**Noun And Verb**	28	%93	26	%80
3	**Verb Tense**	28	%93	25	%76
4	**The Subject**	29	%97	26	%80
5	**Object**	28	%93	16	%48
6	**Nominal Sentence**	29	%97	20	%60

It was found that there are differences in the acquisition of grammatical concepts of grammar in favor of the students of the experimental group over the students of the control group, and the researcher attributes to the following matters:

a. The acceleration of thinking model emphasizes the role of the learner in quickly understanding, acquiring and building information in the cognitive structure.
b. The thinking acceleration model works to create a kind of mental conflict that helps the learner to modify his ideas and usefulness towards learning.

c. This model divides students into groups that helps them to acquire concepts quickly through dialogue among them.

2. In the light of the second hypothesis of the research by examining the achievement of grammar subjects:

It was found that the students of the experimental group who studied according to the acceleration of thinking model were superior to the students of the control group who studied according to the usual method with the achievement test, and the researcher attributes to the following matters:

a. The thinking model contributes to understanding and perceiving meanings and ideas in an orderly manner leading to knowledge.

b. It contributes to raising the level of academic achievement because it provides them with skills and topics by explaining the subject according to its controls.

c. achieves a vital aspect in education, which is the attention to the participation of the largest number of students in the lesson.

Third: Suggestions:

1. Conducting a similar study that reveals the effectiveness of the thinking model in other dependent variables.

2. Conducting a study similar to the current study in other branches of the Arabic language at different stages of study.

3. Preparing a program based on training teachers on how to use modern training models.

Resource:

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