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Impact of Mental Map on the Achievement of fourth preparatory Grade Students and Improving Their Mental Habits in Arabic Syntax

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Abstract

The study was conducted in Iraq, the center of the province of Nineveh, aimed to identify (the impact of the mental map on the achievement of fourth grade students preparation and development of habits of mind they have in Arabic grammar). The study was based on the experimental design with partial control with both pre and post tests. The research sample consisted of (75) students, who were deliberately selected from the fourth grade literary students, they were divided into two groups and in a simple random way, the experimental group consisted of (38) students and studied according to strategy The mental map and a control group consisted of (37) students and studied in the traditional way. To achieve the goal of the study, the researcher used two tools, an achievement test in the subjects of Arabic grammar, which are taught to the fourth grade literary students and the other measure the habits of mind. After data collection, analysis and statistical processing using T-test, the experimental group showed superiority over the control group in the achievement and development of habits of mind.

Impacto Del Mapa Mental En El Logro De Los Estudiantes De Cuarto Grado Preparatorio Y La Mejora De Sus Hábitos Mentales En La Sintaxis Árabe

Resumen

El estudio se realizó en Irak, el centro de la provincia de Nínive, con el objetivo de identificar (el impacto del mapa mental en el logro de la preparación de los estudiantes de cuarto grado y el desarrollo de hábitos mentales que tienen en la gramática árabe). El estudio se basó en el diseño experimental con control parcial con pruebas previas y posteriores. La muestra de investigación consistió en (75) estudiantes, que fueron seleccionados deliberadamente de los estudiantes literarios de cuarto grado, se dividieron en dos grupos y de manera aleatoria simple, el grupo experimental consistió en (38) estudiantes y se estudió de acuerdo con la estrategia. El mapa y un grupo de control consistieron en (37) estudiantes y estudiaron de la manera tradicional. Para lograr el objetivo del estudio, el investigador utilizó dos herramientas, una prueba de rendimiento en las asignaturas de gramática árabe, que se enseñan a los estudiantes de literatura de cuarto grado y la otra mide los hábitos mentales. Después de la recopilación de datos, el análisis y el procesamiento estadístico utilizando la prueba T, el grupo experimental mostró superioridad sobre el grupo de control en el logro y desarrollo de hábitos mentales.

Research problem :

What distinguishes our time is the continuous and accelerated growth, in all aspects of knowledge and informatics, so that it has become a burden to hardly some to surround its natural size and mechanisms to deal with, especially in the educational aspect, so we need teaching methods and strategies in line with the size and nature of information provided to the student, we find that There are a large number of models and strategies of multi-step teaching, have been developed in order to activate the mechanisms of communication between the teacher and the student, through the researcher's observation of these efforts by educators, found that the Arabic language and methods of teaching remained characterized by the traditional character, it is through a visit The researcher for several schools and access to the results of previous studies show that they still rely on

memorization and memorization, and hence the researcher believes that the effectiveness of the use of an oasis of modern strategies for teaching a strategy map mental achievement, as well as measuring its impact on the most important non-cognitive changes And linked to the emotional side of the habits of mind, note that it carries between the complex overlap in dealing with different situations faced by the student. Some literary material in the Arabic language rules and the development of mental habits. “ The importance and need of research:

Language is a human activity, one aspect of which is the mental effort of the individual. On the other side of this activity is the cognitive processes through which individuals interact with each other. There are those who believe that language is the ability to form a code of agreed symbols to express what is going on. Mindfulness of thoughts, feelings and concepts, on the other hand is the ability to solve or interpret this code and recognize the symbols that make up it (Taibi et al., 2009: 11) It is a prominent social phenomena that was able to make the focus of the individual can not do without the rest of his peers, and can not build Personal social communication tool It enriches human thinking, which is the most obvious human trait, so it should be in the service of man’s real goals and purposes. The difference of the individual is linked to the growth of his language (Zayer & Dakhel, 2013: 24).

From here it was in any society the pot of its culture, which is the tool of thinking, means, expression, communication, understanding and transfer of heritage from generation to generation and understanding of the environment and control through the exchange of knowledge, theories and experiences (Judges et al., 1997: 87)

There is a strong and direct relationship between language and thought that becomes clear once we link the abstraction of thought to the fact that language is a system that operates on the level of concepts and abstracts of categories, relationships and attributes (Ismail, 2013: 28). Their importance in knowing human behavior can be of great value in trying to understand and address conditions of existence, as well as helping a person to understand himself, his actions, emotions and hopes (Ashour and Miqdadi, 2005: 20). It is considered as compared to the other branches of the Arabic language the most important and most dependent on reason and thinking and if we measured it we found already based on the rules and bases from which the student or teacher to the rest of the arts of speech and its branches and without it dealers wandering in the maze without access to its

molecules and thus be the most important Branches received by students in schools and various stages of education as they are able to read correctly and correct writing and tools can maintain proper and sound performance and have a linguistic mind sports based measurement methodology and analysis duly and reasoning to achieve. (Al-Labadi, 1999: 81)

It is the crystallization of language in general laws, and sets the general theoretical standards for language, and design those standards by which the integrity of reading, writing, speaking or listening, and since the syntax design theoretical standards, and establish the general rules it is slow to change, because the fundamentals, controls and general rules are fixed, and that The grammar approach is no different from the language curriculum as a whole must be based on the basis of the psychology of the learner and his need, with the motivation of the learner to learn.

(Adjacent, 1969: 365- 399)

The importance of Arabic grammar comes from the importance of the language itself, so that the language is written correctly only by knowing its basic grammar. (Zureik, 1960: 152). To increase the cognitive achievement in this article must choose an appropriate teaching strategy, and the best of these strategies strategy map mental, and the importance of which enables the learner to take a quick and comprehensive look at a large topic or cross-cutting issue, and collect a lot of information in one place while giving the student the pleasure of work It is a distinct memory tool that allows the use of facts and ideas in the same way that the mind works. This means that remembering and recalling information later will be easier, and more effective than using traditional methods of blogging. Observations (Buzan, 2009: 7) The mental map connects the sides of the brain as the right side of the brain is responsible for creativity, imagination and images, while the left side of the brain deals with language by its words. It also deals with logic, numbers and analysis, and given the mental map. It combines language, words, logical processes, creativity, images, synthesis, and even imagination. This is one of the methods that help to efficiently connect the two sides of the brain (Ambo Saidi and Balooshi, 2009: 470-475). The mind map is an important and useful strategy for education. No, it is used effectively to support higher levels of thinking skills. It is an effective tool in helping low-achieving learners to reach the required levels (Al-Amoudi, 2010: 3) and organizes educational content in a non-linear and complex way by putting the main concept in This makes learning good and meaningful, and this is confirmed by Buzan and Barry, who say that mental maps are similar and facilitate the work of the brain more than

traditional linear constructions, because of their radial nature by virtue of the use of colors and drawings (Buzan, 1993) and make Mind Maps To focus on the learner and his abilities, we have begun to look at the process of learning from a correct perspective, as the student was able to recall easily, remember information and link between topics and the possibility of discovering new relationships (Mahmoud, 2006: 208) It enables the student to imagine Fast to many positions at a specific time and clearly, through which he can plan the ways that will be followed, and make the decision to make him know where he was? And where does he go? It will also encourage him to solve problems, allow him to see new and innovative methods and give him to look and read, as well as collecting large amounts of information in one paper (Busan, 2004: 9) has been characterized by the characteristics of teaching and learning, it teaches learners on a variety of interrelationships interrelated in All aspects of the subject, it is clear through the learner 's knowledge and skill structure in the understanding and interpretation of the structural system of the subject (Mansouri et al., 2009: 20) and works to deepen the understanding when the learner study the subject, in order to ensure the achievement of the learner' s knowledge. Since the educational and educational process is not based solely on the development of the cognitive side only, but beyond that on aspects related to the personal, psychological and mental aspects, the most important is the development of habits of mind of the learner and its importance in that it is an important feature in knowing how to work on them and also use, and this is what the student lacks, as it needs To use these habits in various mental and scientific activities (Katami and Amr, 2005: 102), therefore, the learner to practice so that they become part of his nature, and that the best way to acquire and develop these habits and presented to learners and practice them in preliminary, simple tasks and then applied to complex situations Being directly reinforced (Kazem, 2011: 5), employing them enables students to connect their existing concepts to their daily lives, broadens their own perceptions, and enables them to remember information for many years (Wolf, 2006: 1). Teachers to develop learners and individuals with poor attention, to produce in an information-rich world and to become more willing to use the mind again when faced with uncertain or challenging situations, the development of one of the reasons for success in schools (Jani, 2012: 12) Of deficiencies in the learning process results It is not only the possession of information, but the knowledge of how to work on it, and use it is also a pattern of smart behaviors leading the learner to produce knowledge and not to recall, or reproduce it on a pre-

vious pattern (Al-Sultani, 2013: 20) In this sense came the call of modern education to be Mental habits such as eating, drinking and sleeping habits, as the learner used to wake up early, should be used to the use of mental strategies before doing any of his work (Novell, 2008: 65)

Based on the above, the importance of research stems from the need to:

1- The importance of Arabic language in general and the importance of grammar in particular.

2 - the importance of the strategy of the mental map, which is one of the modern strategies as it focuses on making the learner the center of the educational process, and involved in building knowledge and organizing information in order to achieve educational goals in the least effort and less time.

3 - the importance of habits of mind, learners can perform much better than their actual performance thanks to the habit.

Research Objective:

The research aims to identify “the impact of the mental map on the achievement of fourth grade preparatory students and the development of their habits of mind in the subject of Arabic grammar”

research assumes :

The first zero hypothesis: “There is no statistically significant difference between the average scores of the experimental group studied according to the mental map strategy and the average scores of the control group, which was studied according to the usual method in the achievement of fourth grade literary students in Arabic grammar.”

Second Zero hypothesis: “There is no statistically significant difference between the average difference in the pre and post tests of the experimental group studied according to the mental map strategy and the control group studied according to the usual method of developing habits of mind.”

Search Limits: Search is limited to:

1- Fourth grade literary students in middle and high schools in the center of Nineveh province for the academic year 2017-2018.

2 - Teaching the vocabulary of Arabic grammar for the fourth grade students.

3 - Addressing academic achievement and the development of habits of mind as dependent variables.

Define terms:

The basic terms that will be defined in the research will be defined idiomatic, procedurally and in chronological order.

mental map :

1 - defined (Shawahin and Dundee, 2010) as:

“It is a fluid that helps learners to plan and build, it depends in its implementation on drawing and writing all what you want on a single paper in an orderly manner and helps to understand, remember and focus.” (Shaheen and Badandi, 2010: 35)

2 - defined (Qtait, 2011) as:

“A strategy based on the linking of information and ideas through graphics and words in the form of a map linking each other with meaningful and relationship between this information, as well as the composition of forms and colors, which is one of the means of thinking and storage, which is based on the generation of ideas and remember and link between them.” (Cateit, 2011: 150)

The researcher defined it procedurally as:

Drawings carried out by the fourth grade students of the experimental group on a paper, summarizing their information on the lesson of Arabic grammar, so that the main idea is centered in the middle, and subdivided from the sub - ideas using colors and symbols.

Academic achievement :

Arafa (Hourani, 2011) as:

“The progress of the student in achieving the objectives of the study material, which is measured by the grades obtained in the test” Hourani, 2011: 27).

Arafa (Kubaisi and Saadi, 2012)

“Prove the ability to accomplish what has been gained from the educational experiences that were developed for it”

(Kubaisi and Saadi, 2012: 18).

The researcher defined him procedurally as:

The amount of knowledge acquired by the fourth grade literary students, from information and knowledge on the subjects of Arabic grammar, to be taught to them and the degree to which students receive when responding to paragraphs of achievement test of the material prepared for research purposes.

Habits of Mind:

Defined by (Trad, 2012) as:

“Individual preference for a pattern of intellectual behaviors, over other patterns, means making choices or preferences about which patterns should be used at a given time without other patterns.” (Trad, 2012: 229).

Defined (Jubouri, 2014) as:

“A set of skills, values and attitudes that learners can be trained to practice in practice and measured, to the extent that learners get tested” (Jubouri, 2014: 213)

The researcher defined it as:

A set of skills, attitudes, and values that enable an individual to build preferences, based on stimuli and stimuli to which they are subjected, to lead to the selection of a mental process, measured by the degree to which the students of the two research groups receive the answer to the metric for this purpose.

Previous studies :

Studies of the first axis: mental map

Study (Zubaidi, 2012)

The effect of the mental map on the achievement of the Arabic grammar among the fifth literary students, this study was conducted in Iraq, where it aimed to identify the impact of the mental map on the achievement of the rules of the Arabic language among the students of the fifth literary class, where the researcher adopted the experimental design of two groups equivalent, with achievement test, The study sample consisted of (26) students in the experimental group and (28) students in the control group. To achieve the research objective, the researcher built an achievement test consisting of (30) items. The validity and reliability of the hypothesis were calculated. And shining deviation After the completion of the experiment, the results showed that the experimental group studied with mental maps exceeded the control group studied according to the usual method.

Horana, 2011

The effect of using mind maps strategy in the achievement of ninth grade students in science and their attitudes towards science in public schools, in Qalqilah city. This study was conducted in Palestine, where the study aimed to know the effect of mental maps on the achievement and direction of ninth grade students in the unit of chemical reactions in science. According to the method of teaching and sex and the interaction between the method of teaching and sex. The research community consisted of all ninth grade students in public schools. The control group consisted of (33)

students and (27) female students. The experimental group consisted of (30) male and female students. Achievement test and a scale of trends have been verified the validity and stability of the tools, and after the completion of the experiment it was found that the method of teaching using mental maps has affected the achievement of students positively and for the benefit of the experimental group, and the results showed the absence of interaction between the teaching method and sex, as for the trends have shown improvement Student Attitudes Who studied using mental maps for both sexes.

Studies of the second axis: habits of mind:

Study (Jubouri, 2014)

The study was conducted in Iraq University of Babylon College of Education for Humanities, the study aimed to know (the impact of the strategy of habits of mind in the comprehension of reading fourth grade students) The study was based on the experimental method where the sample of the study consisted of (75) students distributed to two groups (36) Student studied the habits of mind strategy. The control group consisted of (39) students who studied according to the usual method. In order to verify the study objective, the researcher used the reading comprehension test and after collecting, analyzing and statistically processing the data using the T test of two independent samples.

(Study (The Star, 2015

The study was conducted in Iraq, University of Baghdad, College of Education, Ibn Rushd, aimed to identify (design a training program in accordance with the strategies of active learning and its impact on the acquisition of teaching skills of students and the development of habits of productive mind). The study was based on the experimental design with partial control with both pre- and post-tests. The research sample consisted of (78) male and female students. The experimental group consisted of (39) students who studied a training program according to active learning strategies and a control group consisting of (39) students who studied the traditional method. Say. After collecting, analyzing and statistically processing data using the T test, the experimental group showed superiority over the control group in developing habits of mind.

- Aspects of benefit from previous studies

1- Identify the research problem and its objectives.

Formulate research hypotheses.

3 - Choose the appropriate experimental design.

4- Preparing teaching plans.

5. Preparation of research methodology and procedures

6 - benefit from the method of building tests and how to draft paragraphs.

Selecting statistical means to suit the research procedures and the nature of the sample.

8. The findings and how they are presented and interpreted.

Search procedures :

First: Experimental Design:

The experimental design has been adopted with two equivalent samples. 1{

Group	Dependent Variables (pre-test)	Independent variable	Dependent Variables Post -test)(
Experimental group	Test habits of mind	Mental Maps	Achievement test and
Control group		Traditional method	Test habits of mind

Figure1-1-

Experimental design of research

Second: Research sample

A- The sample of schools.

The researcher deliberately chose (Preparatory flowers for boys) and (preparatory Shafi'i for boys) to be the sample of research because there is more than a division for the fourth grade literary, and the cooperation of the Department of junior high, and because the teachers of Arabic language for this grade of excellence and have a desire to develop their teaching methods, which made the researcher Convinced to apply the search in those two numbers.

B - Sample of students.

The research sample consisted of (86) students of the fourth grade literary students. Each division reached the number of respondents in the two groups (75) students. Table 1 illustrates this.

Table (1)

Number of students before and after exclusion in the two research groups

School	Division	Group	Number	Repeaters	Sample
Shafei Junior high	A	Experim ental group	44	6	38
Al zhur junior high	B	Control group	42	5	37

The reason for the exclusion of the repeaters is the conviction of the researcher that they have expertise on the topics, and these experiences may affect the accuracy of the research results, because they had studied the same topics in the past year, which may affect the internal integrity of the experiment, has been excluded from the results only.

C) Equality of the two groups:

Before starting the experiment, the researcher was keen on conducting parity between students of the two research groups in some variables that are believed to affect the safety of the experiment. These variables are:

1. The chronological age of the students is calculated in months.
- 2 - Arabic language degrees for the year
- 3 - degrees of intelligence
- 4 - pre-test scores to measure the habits of mind

Table 2 illustrates this.

Table (2)

The equivalence scores between the two research groups

T-value tabulated	T-value computed	Standard deviations	Mean scores	Number	Group	Variables
1.99)0.05 (1.242	7.01801	198.8684	38	Experimental group	Age
		9.72929	201.2973	37	Control group	
73	1.200	9.85344	80.1316	38	Experimental group	Overall average scores
		11.53621	77.1622	37	Control group	
	0.042	5.41841	93.6773	38	Experimental group	Intelligence quotient
		7.59778	93.60000	37	Control group	
	0.746	25.37453	335.6053	38	Experimental group	Test habits of mind (pre-test)
		29.54767	330.8649	37	Control group	

Since the calculated value of t is less than the tabular value of t for all variables, this indicates that the two groups are equivalent in all variables.

Third: Teaching Plans.

Instructional plans help the teacher to deepen understanding of classroom activities and procedures, making the teaching process a structured process that requires preparation, training and qualification (AlSobh, 2013: 91), it is the successful teacher who prepares a number of successful plans. Therefore, the researcher has prepared teaching plans for the subjects of Arabic grammar that will be studied during the experiment, according to the strategy of the mental map to teach students of the experimental group, while the officer was according to the steps of the usual method, and two models of these plans were presented to a group of experts and specialists

in teaching methods, and in In light of what the experts have made the necessary adjustments to it and its final form is ready for implementation.

Fourth: Research tool.

The research requires the preparation of two tools to achieve its objectives and verify the hypotheses, the first tool was an achievement test, the second is a measure of habits of mind.

1. Preparation of achievement test:

The research procedures require the preparation of an achievement test to measure the achievement of students after the completion of the experiment and since the achievement tests (characterized by being comprehensive for the subject and ease of conducting and correcting) (Samara et al., 1989: 65), so the researcher prepared a multi-choice test consisting of (40) paragraphs The six levels of BLOM included the following steps:

a . Preparation of the test map.

The test map was prepared according to the steps of preparing the specification table (Samara et al., 1989: 50-51).

Table (3)

Specification table for achievement test

Total %100	Creating %10	Evaluating %11	Analysing %14	Applying %18	Understanding %22	remember %25	The ratio	Lessons
4	0	0	1	1	1	1	%11	1
4	0	0	1	1	1	1	%10	2
5	0	1	1	1	1	1	%12	3
6	1	1	1	1	1	1	%14	4
6	1	1	1	1	1	1	%15	5
5	0	1	1	1	1	1	%13	6
5	0	1	1	1	1	1	%12	7
5	0	1	1	1	1	1	%13	8
40	2	6	8	8	8	8	%100	Total

B . Achievement Test Validity:

The test paragraphs were presented with a copy of the textbook with the experimental map with behavioral purposes, to a number of experts in

teaching methods, and in the light of the agreement of 80% of the experts were made amendments, note that the experts did not delete any paragraph, and thus achieved the apparent honesty and content of the test.

C. Apply the test to a prospective sample:

The test was applied to an exploratory sample of the fourth grade students (44) students in a school equivalent to the research sample (prep thesis), after it was agreed with the teacher of the subject, as it set a day for the application of the test, note that the students were aware in advance of the date The test, and through it determined the time it took which is (50) minutes.

Dr . Analysis of paragraphs of achievement test:

1. Difficulty coefficient: After calculating the difficulty coefficient for each of the test paragraphs, it was found to be between (85% - 25%). This indicates that the paragraphs were all acceptable. (80%) (Al - Rousan et al., 1992: 8 4).

2. Discriminatory power: After descending the scores, it was found to be between (40%) and (85%). This indicates that the test paragraphs distinguish between the upper and lower groups. (Zobaie et al., 1981: 8).

3. The stability of the test: The researcher adopted the mid-split method to find the stability of the test, after applying it to the exploratory sample, corrected the answers by giving one score for the correct answer and zero for the wrong answer, as divided by the degrees of individual paragraphs and degrees of even paragraphs and calculate the correlation coefficient (Pearson) between the two groups of scores (0.80 This score represented half of the test scores.

2 - measure habits of mind:

In order to measure the habits of mind in the sample, the researcher looked at the studies and literature that dealt with habits of mind and measured, the researcher adopted a scale (Costa and Calic model), note that this measure is based on the 16 habits collected by Costa and Calic in his model and called the Costa model of habits Mind, where the scale consists of (90) paragraphs divided into (16) usually, and each usually contains five positive and negative paragraphs (61) positive paragraph and (29) negative paragraph, and each paragraph followed by five alternatives (always, often, sometimes , Rarely, never).

The reasons for using this measure were for the following reasons:

1- Has high psychometric properties with respect to honesty and stability.

2 - the fact that the scale was adopted in the preparation of theoretical frameworks.

3. Arbitrators agree on the validity and reliability of the scale.

A - the sample of the survey habits of mind:

After checking the validity of the scale and in order to obtain accurate answers to the members of the research sample, the researcher applied the scale to a prospective sample - the same sample that was used in the achievement test - and it was found that the instructions and paragraphs of the scale are clear and understandable, as well as determine the average time taken in the answer which It reached (60) minutes.

B - Analysis of paragraphs of the scale:

The distinction was calculated after the order of the scores in descending order, and it was found to be between (40%) and (80%).

To verify the validity of the scale, the researcher presented it to a group of experts and arbitrators in education and psychology, and obtained an agreement rate (80%) and thus achieved the apparent honesty of the scale.

C - Stability of the scale:

Although this scale is ready and applied and enjoys high stability, the researcher considered the application of the re-test method, the researcher applied the scale to the individuals of the exploratory sample, and after three weeks of the first application the researcher reapplied the same measure, and after data collection and analysis using a correlation coefficient (Pearson) to find the relationship between the two applications, where it reached (88%) which is a very good stability coefficient, and thus the scale is ready for application.

Fourth: the application of the experiment.

The experiment began on Tuesday 20/2/2018 and lasted until Tuesday 15/5/2018, where the researcher applied a measure of tribal mind habits on the two research groups on 20/2/2018 and the results showed that there is no statistically significant difference between the averages in this scale, As in Table (2) above, and after the completion of the process of teaching the vocabulary that was identified for the experiment, the researcher applied the achievement test on 14/5/2018 on students of the two groups, and the next day on 15/5/2018 the researcher applied the measure of habits of the mind after Research sample students.

Fifth: Statistical means.

- 1 - T-test: for two independent samples for the purposes of equivalence between the two groups, and for the purposes of comparison between the means of achievement scores and habits of mind. (ferguson, 1981: 234)
 2. Pearson correlation coefficient for calculation of stability (Class, 1970: 114)
 3. Spearman-Brown equation for correction of the coefficient of stability of the test extracted by the method of half-fractionation (Gulford, 1978: 426)
 4. Coefficient of difficulty and discrimination for achievement test, and discrimination for the scale of habits of mind (Odeh, 1998: 278).
- research results :

The following are the most important data reached by the research, and the results, as they were treated using T - test of two independent samples as follows.

Results related to the first zero hypothesis:

“There is no statistically significant difference between the average scores of the experimental group studied according to the strategy of the mental map and the average scores of the control group, which was studied according to the usual method in the achievement of fourth grade literary students in Arabic grammar.”

For the purpose of validating the hypothesis, the T-test of two independent samples was used to identify the difference between the average scores of the experimental group students and the average scores of the control group, as shown in Table (4).

Table (4)

T-test results of the experimental and control groups in the achievement test

group	Number	Mean scores	Standard deviations	Degrees of freedom	T-value		Statistically significant
					T-value computed	T-value tabulated	
Experimental group	38	29.1316	4.69140	73	9.956	1.99	0.05
Control group	37	17.2432	5.61944				

The above table shows that the calculated value (t) is greater than the t - value at (73) freedom level and the significance level (0.05). This result

indicates that there is a statistically significant difference for the experimental group, thus rejecting the first zero hypothesis.

The researcher attributes the reason behind the superiority of the experimental group who studied according to the strategy of the mental map, in academic achievement to:

- The strategy of the mental map helped to link the new knowledge with the previous knowledge stored in memory, and through this exploratory learning occurs through the drawing of the mental map, and thus understand the information in a simplified and meaningful according to (Ozil)
- It takes into account individual differences, as it suits all levels of scientific students and for the activities of the students, which helped to increase achievement
- The steps of drawing the mental map helped to evoke a holistic view of the scientific content, through the mental image formed in the mind of the student, where there has become integration and correlation between the hemispheres of the brain (left and right), as it enabled students to find an intellectual framework able to determine the main idea of the content And associated sub - ideas as well as related examples, which made them interact with the article.

Findings related to the second zero hypothesis, which states:

“There is no statistically significant difference between the average difference in the pre and post tests of the experimental group studied according to the strategy of the mental map and the control group studied according to the usual method of developing habits of mind.”

To verify this hypothesis, the habits of mind (pre- and post-scale) habits were unloaded and the difference between the experimental group and the control group was found. It was then processed using T-test for two independent samples, the results of which are shown in Table (5).

Table (5)

The mean difference in the pre and post tests and the T value of the two research groups in answering the mind habits scale

group	Number	Mean scores		The mean difference between pre-post tests	Standard deviations	Degrees of freedom	T-value		Statistical significance
		Pre-test	Post test				T-value computed	T-value tabulated	
Control group	37	330.8649	341.2703	10.40541	2.96698				

By looking at the results of Table (5), we find that the calculated T value was (15.49) which is higher than the T-Table value of (1.99) and the degree of freedom (73). For the benefit of the experimental group, which studied according to the mental map. The second null hypothesis is thus rejected.

This result can be explained by the fact that the strategy of the mental map led to the development of habits of mind, by addressing topics that meet the interests of students and take into account their tendencies and attitudes, because the activities involved in this strategy are diverse, it provided the opportunity to persevere, listen and think flexibly, and think beyond knowledge and other mental disorders, As well as provide an atmosphere of comfort and accept ideas, feelings and mistakes and the adoption of positive criticism, as it provided a positive classroom environment and support for learning to satisfy the psychological needs and respect their potential by drawing the mental map of each student, as well as spread the spirit of receptivity L Respect, trust and invest time effectively.

Conclusions:

In the light of the findings of the research can be concluded the following:

- 1 - the possibility of applying the strategy of the mental map on the fourth grade literary students.
2. This strategy has proved effective in increasing collection.
- 3 - This strategy encouraged students to feel that they are the source of information by relying on them in drawing a mental map.
- 4 - The strategy of the mental map proved its ability to develop habits of mind in students.

Recommendations:

In the light of the search results the researcher recommended the following:

- 1 - Directing teachers of Arabic language to adopt the strategy of the mental map, in order to increase achievement.
- 2 - Holding training courses for teachers of Arabic language to train them to apply the strategy of the mental map.
- 3 - Emphasis on the teachers of the Arabic language on the need to pay attention and focus on training their students on habits of mind through the adoption of the strategy map of the mind in teaching.

Proposals:

To complement the results of this research, the researcher suggested oth-

er complementary studies as follows:

1 - Conducting a similar study to the current study to know (the impact of the mental map on the achievement of fifth grade literary students and the development of their visual thinking).

2 - a study to know (the impact of the mental map and the concept map in the acquisition of fourth grade literary grammatical concepts students).

3 - Conducting a study to know (the impact of the mental map on the development of systemic thinking for fifth grade literary students in the subject of Arabic grammar)

Sources :

- Ismail, Baligh Hamdi (2013) strategies for teaching Arabic language theoretical frameworks and practical applications, the first edition, Dar Al-Manahj for Publishing and Distribution - Amman - Jordan

- Ambo Saidi, Abdullah bin Khamis and Sulaiman bin Mohammed al-Balushi (2011) methods of teaching science concepts and practical applications, second edition. Dar Al-Masirah for Publishing & Distribution - Amman - Jordan.

- Busan, Tony (2004) Control Your Memory, First Edition, Jarir Bookstore, Saudi Arabia.

- Busan, Tony (2009) Mind Maps, First Edition, Jarir Bookstore, Saudi Arabia.

- Jani, Nawal Jouhi (2012) "The effectiveness of a training program based on habits of mind in the development of high-order thinking skills at the preparatory stage students" (unpublished doctoral thesis) College of Education Ibn Rushd - University of Baghdad.

- Jubouri, Najla Ali Sultan (2014) "The impact of the strategy of habits of mind in reading comprehension among fourth grade students", Journal of the Faculty of Basic Education for Educational and Psychological Sciences, University of Babylon, No. 19.

- Hourani, Haneen Samir Saleh (2011) "The effect of using mental maps on the achievement of ninth grade students in science and the development of their attitudes towards science in public schools in the city of Qalqilya"

(Master unpublished)

- Dawood, Aziz Hanna and Anwar Hussein Abdul Rahman (1999) curricula of educational research, Ministry of Higher Education and Scientific Research, University of Baghdad, House of wisdom for printing and publishing.
- Zayer, Saad Ali, and Sama Turki Dakhil, (2013) “modern trends in the teaching of the Arabic language”, House Mortada for distribution, publication and printing, Baghdad, Iraq.
- Zreik, Marouf Mustafa, (1960), “How to take a lesson”, 2nd edition, Publishing House for Modern Education, Cairo.
- Al-Zubaidi, Afrah Latif Hameed (2012) “The effect of the mental map on the achievement of Arabic grammar among fifth grade literary students” (Unpublished Master Thesis), College of Education, Ibn Rushd - University of Baghdad.
- Al - Zobaie, Abdul Jalil Ibrahim and others (1981) tests psychological scales, publications of Mosul University - Mosul University: Iraq.
- Sultani, Mohammed Abbas Mohammed (2013) “the impact of the strategies of movement and image and habits of mind in the development of literary taste and creative expression of fifth grade literary students” (unpublished doctoral thesis) College of Education Ibn Rushd - University of Baghdad.
- Samara, Aziz and others (1989) Principles of measurement and evaluation in education, Dar Al-Fikr for Publishing and Distribution, Amman - Jordan.
- Shawahin, Khair and Shahrazad Saleh Badandi (2010) Thinking Beyond Thinking Using mental maps and graphic organizations for the methodology of thinking, Dar Al-Masirah for Publishing and Distribution. Amman - Jordan
- Subh, Jalal Mezher Mohammed (2013) “The impact of two methods of prophetic dialogue in the development of cognitive exploration of second grade students in the subject of Islamic education” (Master unpublished)

College of Education for Humanities - University of Tikrit

- Trad, Haidar Abdul Redha (2012) “The impact of the program (Costa and Calic) in the development of creative thinking using habits of mind among students of the third stage in the Faculty of Physical Education” Journal of Physical Education Sciences. University of Babylon, Volume V, First Issue, pp. 225-264, Iraq.
- Tibi, Sana Awartani and others (2009) Introduction to reading difficulties, the first edition, Dar Wael for publication and distribution, Amman - Aden.
- Ashour, Rateb Qasem and Mohammad Fakhri Al-Muqdadi (2005) Reading skills and methods of teaching and strategies, the first edition, Dar Al-Masirah for Publishing and Distribution, Amman - Jordan.
- Al-Amoudi, Hala Said Ahmed Baqader (2009) “The Effectiveness of Mental Maps for Teaching Chemistry in Developing Critical Thinking and Understanding the Concepts of High School Students with Different Cognitive Methods in Saudi Arabia”. Journal of Arab Studies in Education and Psychology, Volume 3, Issue 3.
- Odeh, Ahmad Salman (1998) Measurement and Evaluation in the Teaching Process, Second Edition, Dar Al Amal for Publishing and Distribution. Oman Jourdan .
- Katami, Yusuf and Amima Mohammed Amor (2005) Habits of reason and thinking theory and practice, the first edition, Dar thought for publication and distribution, Amman - Jordan.
- Qutait, Ghassan Yousef (2011) Creative Problem Solving, Dar Al Thaqa-fa for Publishing and Distribution, First Edition, Amman - Jordan.
- Al-Labadi, Mohammed Samir Najib, (1999), Learners and Grammar, Teacher / Student Magazine, No. (3), Jordan, pp. 81-88.
- Kazem, Ali Mahdi (2001) measurement and evaluation in learning and education, first edition, Dar Al-Kindi, Irbid - Jordan.
- Al-Kubaisi, Abdul Wahid Hameed and Amar Toma Al-Saadi (2012) “The

effect of using the generative learning model in the achievement of the second grade intermediate students of mathematical concepts and retention” *Journal of Educational and Psychological Sciences, University of Bahrain, Volume (13), Issue (2), 183-211.*

- Mujawar, Mohammed Salah and Fathi Al-Deeb (1999) *Curriculum, Fourth Edition, Dar Safaa for Publishing and Distribution, Amman - Jordan.*

- Mahmoud, Lahuddin Arafa (2006) *thinking without borders contemporary educational visions in the teaching of thinking and learning, the first edition, the world of books for publication and distribution, Amman - Jordan.*

Al - Mansouri, Saud Abdul Aziz et al. (2009) *Islamic Education Teacher Guide, First Edition, Ministry of Education, United Arab Emirates.*

- Nofal, Mohammed Bakr (2008) *Scientific applications in the development of thinking and the use of habits of mind, the first edition, Dar Al-Masirah for Publishing and Printing, Amman - Jordan.*

Buzan, Tony (1993) *The mind map Book: How To Use Radiant Thinking To Maximize Your Brain's Untapped potential.*

Class G.V. and Stanly, J.C. (1970) *statistical Methods In Education psychology. prentice –Hall Inc, Englewood, Cliffs, New Jersey.*

Forguson G.A. (1981) *Statistical Analysis in psychology and Education Fifth (ed) New York: McGraw-Hall, Book Company*

Guilford J.P. and Fruchter B (1978) *fundamental Statistics in psychology and Education: McGraw-Hall, Kogakusha, New York*

Wolf, B. (2006) *Creating Lessons that Encourage Habits of Mind (available online) Retrieved , jan*



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