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## **The effectiveness of the strategy of stimulating mental thinking in achievement in the history curriculum for the students of the fifth literary and the development of their consensual thinking**

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**Abstract---** The current research aims to identify (the effectiveness of the strategy of stimulating mental thinking in achievement in the history curriculum for the students of the fifth literary and the development of their harmonic thinking). I selected the research sample in Med Rasa (Preparatory Ibn Zaydoun for Boys) The research sample (50) students distributed by two divisions (25) students in (A) and (25) students in Division (B). The strategy of mental thinking allowed students to discuss and dialogue with each other, making it easier for them to understand and represent information. The division of students into groups helped students who had a low achievement of active participation with their classmates which led to the promotion of teamwork and intimacy among themselves and raising their academic level to stimulate mental thinking.

**Keywords---**stimulating, curriculum, students, consensual.

### **Research Summary**

The current research aims to identify (the effectiveness of the strategy of stimulating mental thinking in achievement in the history curriculum for the students of the fifth literary and the development of their harmonic thinking). I selected the research sample in Med Rasa (Preparatory Ibn Zaydoun for Boys) The research sample (50) students distributed by two divisions (25) students in (A) and (25) students in Division (B). The researcher conducted statistical equivalence between the two research groups and prepared (100) behavioral goals, the researcher used statistical means T test (t-t est) for two equal educated

samples – the square of the correlation coefficient (Pearson), the equation of the coefficient of difficulty, the equation of the equation of excellence and the equation of Fakerkornbach After analyzing the results, the researcher concluded the following:

- The experimental group that effectively studied the strategy of stimulating mental thinking outperformed the control group that was studied in the traditional way with a statistically significant difference at the touch of Tui (0.05).
- The experimental group studied by harmonic thinking outperformed the control group studied in the traditional way with a statistically significant difference at a level (0.05).

Accordingly, the study recommended the following:

- The importance of using a strategy to stimulate mental thinking in the teaching of history in the educational stages.
- Attention to the need to develop consensual thinking for students to have a positive scientific impact.
- Opening words (Effective, Strategy, Mental Thinking, Achievement, History, Consensual Thinking)

### **Research Problem**

The great cognitive explosion of our time, has directly affected the educational process and from all its pillars and this has become a problem on modern education requires the need to develop new plans and methods that allow the preparation of learners with cognitive learning away from indoctrination and memorization, and unleash their ideas to face all challenges and give way to them to ask questions and search for solutions and alternatives and choose the most appropriate and then make the appropriate decision on them, that The individual himself builds the information and scientific knowledge that he acquires and this depends on the experiences he passes through through the environment in which he lives and interacts with it. (Bilbeisi, 2009: 4)

The use by history teachers of ordinary teaching methods that do not keep pace with modern teaching methods of advanced scientific curricula, caused by the lack of knowledge of teaching staff on thought-provoking teaching methods, the difficulty of the curriculum and the lack of qualifying courses for teachers and other reasons related to the status of the school and the large number of students within the same class, led to a decrease in the level of achievement and scientific among learners in this subject. This is a problem that requires the development of solutions to reform education and teaching of the history curriculum. Al-Bajth believes that the use of the strategy of stimulating mental thinking has a great impact on the organization of the cognitive structure of learners, the development of higher thinking abilities and mental potential, and giving the teacher the ability to connect the study material with the latest modern trends in teaching and address part of the problem.

As for the consensual thinking, which has a close relationship with deep thinking, which depends on higher thought processes, which facilitates learners to perceive and understand and increases their academic achievement, and in order to achieve educational goals, it can be relied on to suffice mental thinking that increases their academic achievement and gain them deep thinking skills represented by consensual thinking, and the problem of research has crystallized in the researcher thus:

- The use of traditional and ordinary teaching methods by the teacher of history.
- The lack of use of strategic history teachers in teaching that has the effect of overcoming learning in learners. Based on the above, the problem of research can be identified in the answer to the following question:  
Does the strategy (stimulating mental thinking) and harmonic thinking affect the achievement of history material for the students of the raw gradex literature ?

### **The importance of research**

Therefore, the importance of the current research lies in the following:

- It provides a model for teaching history using the strategy of stimulating mental thinking as one of the modern methods in the educational process that can be used by those in charge of preparing teachers to meet modern trends in teaching.
- Identify modern methods in teaching history that contribute to the development and acceleration of thinking and mental development in learners.
- The use of the strategy of stimulating mental thinking in the teaching of history is very important because it helps learners to understand and realize the social concepts that students see as difficult and dry, and enhances learning, gives way to the employment of their mental abilities, develops their creativity and distances them from the memorization and repetition that our students intend without understanding.
- Contribute to the development of academic achievement in students using structured classroom discussion
- It increases learners' motivation and ability to make important decisions and develop their self-concept, and learners benefit from it in developing their abilities to solve their daily problems.
- Activating the previous knowledge of learners, which enhances their ability to think, especially consensual thinking, which leads to increasing their academic ability no matter how difficult the subjects are for them.
- Harmonic thinking helps learners interpret, analyze, and process information as one of the highest thinking skills, and makes them able to face the large amount of knowledge.
- The attention of those in charge of the educational process to the importance of integrating thinking into the curricula to develop the potential of students and make them more effective.

- It is also the harmonic thinking that is half of the learner with flexibility, non-rigidity and the ability to absorb the course of educational events and this type of thinking is about solving the educational problems that students go through in daily life permanently, and despite this, their sermons find it difficult to acquire a consensual thinking pattern in their practical and scientific life, due to the inertia that learners acquire. Sometimes be flexible in dealing with ideas. (Al-Awawda, et al., 2019: 297).

The researcher agrees with what is stated in the consensual thinking, as it is a simple thinking in its practice, and is deliberate on the interaction of the learner with the learners, and provide advice and guidance to each other and on the other hand it is a sophisticated thinking that rises to the highest levels of thinking surrounding the development of the student's performance in practical and scientific life and the generation of new ideas. The researcher has reconciled the stimulation of mental thinking and consensual thinking and linking them in his research because of its positive intellectual cross-fertilization and increase in the production of ideas, as well as the acceptance of opinions from other individuals and their keeping pace in building new solutions to problems, the researcher's choice for the preparatory study stage, because its students enjoy an appropriate level of age and mental maturity in building their future, and the research variables need a stage of study in which the student is in the stage of abstract thinking, which provides him with perceptions and bonds that can use it to integrate new learning into its cognitive structure. In the educational ladder where the student needs the ability to think correctly and innovate, as well as broad-mindedness and self-reliance; and because this stage represents the stage of formation of the personality of the student, which qualifies them to enter the channels of university education in order to contribute effectively to the service of their country in the face of the challenges of the times. (Atiyah 2015, 113).

### **Research Objective**

The current research aims: Knowledge (the effectiveness of the strategy of stimulating mental thinking in achievement in the history curriculum to the students of the fifth literary and develop their harmonic thinking).

### **Limits of Research**

Current research is limited to:

- Spatial Boundaries: Represented by the public morning preparatory schools of the Directorate of Education of Ramadi District – Anbar the researcher chose numbers (Ibn Zaydoun for boys) (2021-2022).
- Human Limits: A sample of students of the fifth grade of literature.
- Temporal Limits: The current research is represented in the second semester of the academic year (2021-2022).
- Objective Limits: Current research is determined by the teaching of the fifth, sixth, and seventh semesters of modern and contemporary European and American history.

## Research Hypotheses

In order to achieve the objectives of the research, the following hypotheses were formulated:

- There is no statistically significant difference at the level of (0.05) between the average achievement scores of students (experimental group) who studied history according to the strategy (stimulating mental thinking) and the average achievement scores of the control group students who study the same subject in the traditional way in the post-achievement test.
- There is no statistically significant difference at the level of significance (0.05) between the average scores of students (experimental group) who studied history according to the strategy of (stimulating mental thinking) and the average scores of students (control group) who study the same subject in the traditional way in the test of harmonic thinking.

### Define terms

#### First: Effectiveness: Effectiveness

- He defined it (Hamadneh and Obaidan, 2012) as the positive impact of work that affects good performance through the use of specific teaching methods. (Hamadneh, and Obaidat, 2012, 6).

The researcher defines (effectiveness) procedurally:

They are the variables expected to occur for the two experimental groups due to their exposure to the independent factor (proposed strategies) and their impact on dependent variables (achievement of consensual thinking).

#### Second: Strategy: Strategy

- Hamdan (2018) defined it as the procedures, method or methods followed by the teacher to reach specific learning outcomes or outcomes, which are cognitive (cognitive), subjective (Community), Psycho-motor, or just to obtain information. (Hamdan, 2008, 35).
- Defined (Saadeh, 2018): as a plan that includes organized actions carried out by the teacher with his students in the lesson to achieve a set of crisis learning goals to achieve educational situations for learning (Saada, 2018, 48).
- Strategy Procedure: It is the steps, methods and procedures prepared by the researcher in the teaching of history in order to achieve a desired goal and educational outcomes in the teaching of the subject or topics to be taught.

**Third:** The strategy (stimulating mental thinking) defined by: (Sadiq, 2002): It is a strategy that helps students reach the stage of formal thinking early, instead of waiting for them to reach this stage gradually and includes four steps, namely preparation and discussion, intellectual conflict (contradictions), thinking in thinking, bridging and linking what the student has learned to the environment. (Sadiq, 2002:10).

The researcher defines the strategy (stimulating mental thinking) procedurally: The set of organized and planned events in the teaching of history and aims to raise the level of mental development of students of the fifth grade literary and accelerate their thinking and their transition from the stage of abstract thinking based on strategies to stimulate mental thinking and includes five stages: preparation, cognitive conflict, building concepts, thinking in thinking and bridging.

#### **Fourth: Attainment Collection**

- He defined it as the achievement or efficiency of performance in a particular skill or set of knowledge represented by test scores. (Allam, 2010, 55).
- He was also defined as "a demonstration of the ability to accomplish the educational experiences that have been acquired for him (Aiderman, 2007:p.101).
- The researcher defines it procedurally: the set of knowledge and concepts obtained by the research groups in the dating material and is measured by test scores.

#### **Fifth: Development Development**

- It is defined as the development of students' performance in different teaching-learning situations, and is determined by increasing the average grades they obtain after teaching them on the Mand program (Shehata and Zainab, 2003: 159)
- It is defined as developing and improving students' performance and enabling them to master all skills with an organized degree." (Sayyid, 2005:187).
- The researcher defines it as a procedure: it is the change that occurs by increasing the knowledge and mental abilities in the development of consensual thinking in the students of the research sample in the test prepared for this.

#### **Sixth: Harmonic Thinking**

Weis defined as "the ability of individuals to adapt and adapt to the environment in all fields and are characterized by intellectual interaction to influence others to find the right solution. (Morison, 2011, 0:2)

- It is also defined as trying to reach common ground among learners enabling them to find many solutions to problems. (Al-Awawda, et al., 2019: 297)
- The researcher defines it procedurally: the score obtained by students, the research sample in answering the paragraphs of the harmonic thinking test prepared for this purpose.

#### **The theoretical background**

First of all strategy (stimulating mental thinking): Vygotsky's constructivist and social theory of social interaction is one of the theories of learning that helped the

emergence of modern models in teaching, including the strategy (stimulating mental thinking), and this model (Addy and Sheer) was designed in order to accelerate the levels of thinking of learners to a higher level and develop their meta-thinking, challenge their thinking abilities, accelerate mental cognitive development and increase the level of academic achievement. Learning according to this thinking provides learners with opportunities for continuous and effective communication as it makes the learner employ all his senses during learning provided that a suitable environment is available, and that the teacher uses a style that suits the level of growth of learners.

It also develops in learners a spirit of cooperation and teamwork that indicates a high level of cognitive activity (Muhammad, 2008: 39), and therefore (stimulating mental thinking) enhances the self-confidence of learners and develops the language of communication and cooperation between them, making their role active in the educational process. The philosophy of teaching this strategy is based on the fact that the individual is under the influence of concepts that contradict what he knows and what he has about the natural world in which he lives. Eddie and Shire point out that stimulating thinking aims to develop thinking in thinking and this was designed to become a model for accelerating mental development in learners where learners were encouraged to think about their thinking and develop awareness of their way of thinking and to form a common language of understanding during the discussion of a topic, through the details they interact with during the discussion, which leads to the growth and acceleration of their thinking, teaching according to (stimulating mental thinking). Teaching the learner how to think involves working for thinking. There are a number of definitions that have addressed this strategy:

- Defined by Moses (2002): It is a model that helps learners reach the stage of formal thinking early instead of waiting for them to reach this stage gradually and includes four steps: preparation and discussion, cognitive conflict and contradictions, metacognitive (thinking by thinking), and bridging (linking the subject to the environment). (Moses, 2002: 43).
- It is defined (2004, Kings): as a strategy aimed at developing students' thinking abilities by working in small, open groups and open classroom discussions. (2004:13, Kings)

The importance of teaching using a strategy to stimulate mental thinking: The importance of teaching is determined by the use and according to the stimulation of mental thinking as follows :

- It offers new activities that contribute to raising the level of mental development of learners .
- Increases the level of achievement of learners .
- Helps in broadening the horizon of thinking in learners. This (antiquesdistinguish mental thinking) also helps to:  
Promote active learning, teamwork and thinking in learners. 2- The impact of learning lasts longer without forgetting it. 3 - Linking previous experiences with the new and integrating them with the real life of the learner and using them. (Imran, 2016,22).

### **Strategic steps to stimulate mental thinking**

#### **First: Pre-activity includes**

- Preparation and discussion stage: It is the first step after the introduction to understand the topic of the lesson, where the teacher presents the general framework of the topic and introduces his students to the new terms in the topic of the lesson, and this stage includes:
  - The teacher poses the problem to his students.
  - The role of the teacher guiding important activities and discussions in the development of thinking.
  - The teacher allows his students to express the relationships they have reached or used and the procedures performed. ( Ali , 2000 , 217 )

#### **Second: During the activity**

The stage of cognitive conflict: It is a contradiction between two perceptions of one concept, one of which is a previous one that exists in its cognitive structure and the other is new that represents the sound scientific perception and the contradiction is resolved when the student realizes the perception that he has. This stage includes:

- Learners are exposed to surprises during this activity because the observations are contradictory to their previous experiences, which invites the learner to review his cognitive structure and way of thinking in order to adapt to the new evidence.
- That the state of astonishment in learners increases their activity to solve the problem of cognitive conflict
- Facing them, the teacher uses puzzling activities for the learner until he reaches the maximum of his thinking and reaches a state of balance .

The stage of thinking in thinking: It is the thinking of the individual about his own thinking, as one becomes aware of his inferences and is a high manifestation of thinking. This stage includes:

- This stage aims to make the student think about the reasons that led to thinking about the problem in a certain way so that he understands the meaning of what he says and what he is doing and why he thinks about it through the questions that the teacher asks them, as these questions are considered as a development strategy.
- The teacher encourages his students to talk to each other about how to solve problems by the ways of thinking activities he offers them, and to enable his students to correct and implement activities that contribute to the solution themselves so that it leads to the acceleration of the cognitive mental development of learners (Adey,2006:89)

#### **Third: Post-Activity**

Bridging: is the search for examples to be used in other lessons and in everyday life.

- At this stage, learners' experiences are built from the activities found in the curriculum they are studying and everyday life experiences that make what they learn relevant to their lives.
- The teacher connects the experiences learners have gained in class with their daily experiences
- The role of the teacher in the application of (stimulating mental thinking: Afaneh waLejesh (2009) defined the role of the teacher as follows:
  - It poses controversial classroom problems in which there are some contradictions.
  - Helping learners to build relevance and communication in learning experiences and concepts among themselves.
  - Adjust the lesson, grade and discussions with learners to reach positive results about the teacher's position.
  - Guiding learners to review their thinking in order to reach the completion of honey growth. (Afaneh and the Army, 2009 , 240 )

### **Third: Harmonic Thinking**

Thinking is a mental skill, capable of learning and training, through which the learner can reach good degrees of mastery if he achieves the appropriate attitudes and experiences and conditions of active learning, which is the material of whom and his job, and the development of thinking skills requires learning appropriate mental strategies and processes to be used at specific levels, which in turn limits the degree of mental control over the required task or performance. Consensual thinking means that a person completely moves away from the state of inertia or persistence at a certain idea, but rather means the constant pursuit of the truth, and most often we all use consensual thinking in our lives, at home, at work, with friends and everywhere, to solve problems or participate in discussions, or to reach a solution to a problem, and in our world today we are in dire need of building the concept of consensual thinking without workers. Daily at work, on the street, and with friends, regardless of the status of the learners, is for some an innate thinking skill, which arises with the person and practices it, as any human being can strive to acquire, because it relates to certain personal qualities that man can develop properly. (Al-Awada, et al., 2009, 298).

Harmony is formed and imagined through the process of influence and influence; for his mother expresses a multitude of processes that he practices in the environment in which he lives in order to satisfy his needs, maintain his balance, and get rid of stress, which results in the satisfaction of those needs. (Dendel, 2012:43). The researcher sees consensual thinking comes in the sense of adaptability and keeping pace with ideas, where the student accepts the ideas and views of colleagues and peers, it is a state of adaptation that helped the consensual person to integrate, communicate and get out of one-way ideas, or believe in one idea to the state of give and take to get fruits from new ideas concerned with obtaining solutions to problems or presenting new ideas. Consensual thinking can be defined as "the ability to perceive the moods, goals, intentions, and feelings of others, as well as to sense facial expressions, voice, and gestures by dealing with and integrating with them through communication and careful attention to the actions of others. (2008 p;4,Paula)

### **Characteristics of harmonic thinking**

It is described as "thinking whose owner is characterized by flexibility, inertia and the ability to absorb the course of others, the speeches and decisions that others think, a month of acceptance of their ideas, and expresses his ideas to find an intermediate way to combine his way of processing with the style of others in it." Keeping up with is also one of the most important chapters of consensual thinking, as it is a method of terrific in the form of an individual's tendency to keep up with or keep up with the group. Cretchfeild sees that the pressure of social cohesion is born in the individual. An external impulse to the ego, which directs attention towards the acceptance or rejection of the collective individual", as the walking man avoids the challenge and shows a great concentration around the group and less self-centeredness. The skill of flexibility is also an important pillar of consensual thinking, as it includes a qualitative aspect in the creativity of the consensual thinker, and it entitles "the ability to change and generate unexpected thoughts, and to shift from n and eye from thinking to another type when responding to a stimulus, and the cognitive machines of the learner change with the change of situation."

### **The need for consensual thinking**

- Man needs to think consensually in all walks of life, at home, at work, with family, and friends, and his presence makes things easier, less complicated in life unlike his presence in one party, and is the reason for the need for consensual thinking.
- Reaching the perfect sweet: We face a lot of problems during work, and in our daily dealings, which we want to get solutions to, and with the presence of the most number of colleagues and peers makes us in front of many possible proposals.
- Completion of discussions: Consensus thinking is mainly used to help complete discussions of all kinds, and the purpose of the discussion is to reach common ground in solutions, and this results from the flexibility of thinking in learners to put forward many new ideas. (Al-Awwadeh et al., 2019, 300 )

The researcher agrees with the stated need for consensual thinking in the previous axes is an actual necessity for the learner to be able to coexist with individuals and groups and get the opinions and ideas from co-workers, and intervene in discussions in an understandable artistic way. And clear to everyone, the rules of consensual thinking: I have defined a set of rules for consensual thinking, which are as follows:

- The consensual thinker is more empowered and influential with others.
- He cannot solve the problem with the same mentality that I produced previously.
- The focus is diversity in means and ends.
- If the desired result does not work, the method should be changed immediately. (Abd al-Rahman, 2018:17)

The researcher's familiarity with many theoretical frameworks and previous studies considers that several qualities can be beautified by the conciliatory thinker, namely:

- Listening: The learner's ability to listen well and distinguish what is required to obtain a specific result is represented.
- Flexibility and adaptation: It is represented by the learner's ability to change the direction of his thinking to the direction he wants
- In it when there is a point of view thinking.
- Questioning: It is intended for quick review and decision-making in embarrassing situations.
- Imagination : represented by the ability to have a fertile imagination, and the exit of the conciliatory thinker New and unproposed products.

### **Theories that have explained harmonic thinking**

Through the researcher's familiarity with some of the literature and previous studies, he found a number of theories that explained consensual thinking, including the following: Aldon's theory (Aldon Theory 2003): The harmonic thinking sought by learners is present and arises from the needs of the learner as he seeks to satisfy his needs and achieve his desires, as consensual thinking helps the student to build his personality correctly, and makes individuals enjoy intellectual flexibility away from the state of intellectual inertia or stability at a single idea. (Aldon, 2003, p;22).

He sees that learners who live in one environment reconciled have the ability to dialogue and present their ideas and opinions with others with their ability to communicate their ideas to others, and to all communities, whether family or comrades in order to reach success and achieve the desired goal, and sees (Don) that progress and the spread of modern media and communication in the world of various kinds makes students. There is a great need for consensual thinking to provide appropriate solutions to their problems facing them, which helps them to develop their mental abilities, as successful students tend to use the ideas and solutions of their colleagues in reaching the solution nowinsult, and they do not focus on one idea but change their ideas until they reach multiple problem solutions, and they work to accomplish their work accurately. (Aldon, 2003, p;33-44).

### **Second: Previous Studies**

The Pivotal Strategy for Stimulating Mental Thinking:

- Al-Abdullah and Rahman (2012): This study aims to know the impact of the strategy of stimulating thinking in the development of innovative thinking among students of the second grade intermediate in physics, and this study was conducted in Iraq, and the sample of the study consisted of (51) students, and the researchers used the semi-experimental approach with control and experimental groups, and they built the study tools represented in the test of innovative thinking, and the results showed a statistically significant difference between the average grades of students in the

experimental and control groups. In testing the pre- and post-innovative thinking in favor of the experimental group. (Al-Abdullah and Rahman, 2012)

- Shayer 1997: The study aims to identify (the impact of the project of mental thinking through science and mathematics education on student achievement in the long run). The study was conducted in Britain and the aim of the project was to know the impact of accelerating mental thinking through science and mathematics education on the achievement of students in the long term, and the study sample consisted of (4500) students, and one of the most important results: The use of the project to stimulate mental thinking through the teaching of science and mathematics led to raising the average grades of science and mathematics and improvement in the achievement of the English language (1997 , Shayer)

### **Second Theme: Studies related to harmonic thinking**

Samurai Study (2020): This study aims to know (the impact of a teaching program based on the integrative curve to develop the performance efficiency of the science teacher and their consensual thinking) This study was conducted in Iraq University of Basrah. The sample of the study consisted of (24) teachers and teachers. Among the tools of this study, the card, the observer, the measurement, the performance efficiency and the conciliatory test, and the statistical means of the study are the tests of Wan and the adoption of two independent samples and the test (and Belcoxon) the size of the effect and the results of this study: The following:

- The existence of statistically significant differences between the average performance efficiency ranks of the members of the experimental and control groups and in favor of the experimental group.
- The existence of statistically significant differences between the average ranks of pre- and post-performance efficiency of the members of the experimental group and in favor of dimensional application.
- The existence of statistically significant differences between the average ranks of the harmonic and pre- and post-thinking test for the experimental group members and in favor of dimensional application.
- The existence of statistically significant differences between the average ranks of the test of post-consensual thinking for the members of the experimental and control groups and the good of the experimental group.

### **Research Methodology and Procedures**

The empirical approach is an attempt to control all the variables that affect the phenomenon and also depends on proving hypotheses by taking a series of crisis actions to adjust the influence of factors other than the experimental factor. ( Atwi , 2011 , 193 )

#### **First: Research Methodology**

The researcher used the experimental design (equivalent groups) of the experimental and control research groups with the post-test because the

current research contains one independent variable, which is the strategy of stimulating mental thinking and two dependent variables, namely (achievement) and (harmonic thinking) as shown in Table (1):

Table 1  
Illustrates the experimental design of the research

Pronounced like t	The Collection	Division	valence	Independent variable	Dependent variable	Measuring instruments
1	Experimental	in	1- Chronological age 2- Variable intelligence	Mental stimulation strategy	Collection	Achievement Test
2	The officer	A	3- Parents' academic achievement 4- Mothers' academic achievement	Normal Route	Consensual thinking	Harmonic Thinking Scale

## Second: Defining the Research Community

### Research Community

The research community means all the vocabulary of the phenomenon under study and research, the study community consists of several groups or social units that suffer from a problem, so a research study must be conducted to address the phenomena of this problem. (Awawda , 2002, 6 )

### Research sample

The sample of the current research was identified and tested a sample by the random method represented by a preparatory school (Ibn Zaydoun for boys) for the academic year (2021-2022) and the number of (50) students distributed in two divisions (A and B) The researcher also used the method to test Division (B) to represent the experimental group and the students were (25 ) students , Division A represents the control group and the number of students was (25) students .The equivalence of the two research groups means the identification of some variables that are believed to affect the results of the experiment and these variables are: (Abu Alam, 2013, 261).

- Chronological age calculated in months.
- IQ test scores.
- Academic achievement of parents.
- Mothers' academic achievement.

Chronological age: Data on the age of the students of the two research groups were obtained from the school card and according to their age in months and after extracting the arithmetic average and standard deviation of the age of the students of the two groups, the second test (T-test) was used for two independent and equal samples and the results were as follows:

Table 2  
The arithmetic average, variance, and calculated T value of the two research groups in the chronological age variable

The Collection	Number of students	Arithmetic average	Contrast	The degree of freedom	T value		Statistical significance
					Calculated	Tabular	
Experimental	25	130.72	33.743	48	0.058	1.677	Non-function
The officer	25	130.6	29.424				

Table (2) shows that the calculated T value (0.058) is lower than the tabular value of (1.677) with a significance level (0.05) and a degree of freedom (48) and this indicates that the two groups are equal in the chronological age variable.

### Intelligence

The researcher chose the Raven test, which was designed to measure mental susceptibility as the most widely used and common measure of intelligence and to free it from the factor of verbal ability of the examiners, as it is codified on the Iraqi environment and is suitable for use for age groups ranging from (60-11) years and is not affected by linguistic differences and consists of (60) test paragraphs. (Zoubi, 84,2001). After applying the test to the members of the research sample, the students' answer sheets in each group were corrected by adopting the key of the typical answers by giving a score for each correct answer and zero for the wrong or neglected answer and after extracting the arithmetic average and standard deviation of the test scores of students. The two research groups used the T-test for two independent samples that were equal and the results were as in Table 3.

Table 3  
The arithmetic mean and the calculated T value of the two search groups in the intelligence variable

The Collection	Number of students	Arithmetic average	Contrast	The degree of freedom	T value		Statistical significance
					Calculated	Tabular	
Experimental	25	22.96	5.91	48	0.383	1.677	Non-function
The officer	25	23.24	7.43				

Table (3) shows that the calculated T value (0.383) is lower than the tabular value of (1.677) with a significance level (0.05) and a degree of freedom (48 ) and this indicates that the two groups are equal in the IQ variable.

### Academic achievement of parents

This means that the cultural and scientific condition of the student's family determines the level of maturity and his scientific achievement. (Tashani, 2001, 13). The researcher obtained the information on the academic achievement of

parents from the school card and using the equation of the square of K obtained the results shown in table (4):

Table 4  
Repeats of academic achievement of the parents of the students of the research groups and the calculated and tabular value of Ka

The Collection	Number	The level of father's achievement	The degree of freedom	Ka Value	Statistical significance of the level of 0.05		Preparatory and above	Calculated	Tabular	
		My mother	He reads and writes	Primary	Medium					
Experimental	25	8	6	3	3	5	4	0.391	9.487	Non-D
The officer	25	4	6	3	7	5				

Table (4) shows that the calculated value of (Ka) (0.391) is lower than the tabular of (9.487) with a level of significance (0.05) and a degree of freedom (4) and this indicates that the two groups are equal in the variable of parental achievement.

### Mothers' Academic Achievement

When conducting the statistical analysis of maternal achievement data using the equation of the square of Ka, the researcher obtained the results shown in Table (5).

Table 5  
Frequency of Academic Achievement of Mothers Research Groups and Calculated and Tabular (Ka) Value

The Collection	Number	The level of father's achievement	The degree of freedom	Ka Value	Statistical significance of the level of 0.05		Preparatory and above	Calculated	Tabular	
		My mother	He reads and writes	Primary	Medium					
Experimental	25	6	3	3	7	6	4	0.686	9.487	Non-D
The officer	25	6	4	4	7	4				

Table (5) shows that the calculated value of (KA) (0.686) is lower than the tabular (9.487) with a significance level (0.05) and a critical degree (5) and this indicates that the two groups are equal in this variable as well.

#### **Fourth: Adjust internal variables**

In addition to the equivalence of the two research groups, the researcher was keen to avoid the influence of some extraneous non-experimental factors that are believed to affect the integrity of the experiment, namely (experimental extinction, category testing, measuring instruments, duration of the experiment, study material, location, distribution of classes, educational means). The following is a presentation of these variables and how to avoid their impact:

- **Teacher:** The experimental and control groups were taught by the researcher in order to avoid the impact of the teacher's varying competencies in teaching the two groups.
- **Measuring Tool:** The researcher has used a unified tool to measure the achievement of concepts in the students of the two groups, which is (achievement test) and trend scale.
- **Confidentiality of research:** The researcher agreed with the school administration on the need for the confidentiality of the research and not to inform students of the nature of the research and its objectives in order to ensure the normal conduct of the experiment and to obtain objective results.
- **Teaching Aids:** The researcher used the same teaching aids for the experimental and control groups, namely the blackboard, chalk and map.
- **Distribution of classes:** A weekly schedule for the teaching of history was applied in agreement with the school administration of both experimental and control groups in one day.

#### **Research Requirements**

- **Determination of the scientific material:** The course was defined in the three semesters (Chapter V, Chapter VI, Chapter VII) of the book of modern and contemporary history of Europe and America. For the fifth grade of literature which is Chapter VI (International Situation between the Two World Wars) Chapter VII (World War II 1939-1945).
- **Formulation of behavioral goals:** The formulation of behavioral goals facilitates the evaluation process as determining them in an objective behavioral way facilitates the development of the appropriate test that measures the amount of achievement of the learner, which leads to the improvement of learning outcomes. After the researcher reviewed the three chapters of the book History, Modern and Contemporary Europe and America, for the fifth literary grade, he derived (100) behavioral objectives distributed among the three classifications of Tenif Bloom, namely (knowledge, understanding, application) and then presented them to a group of experts specialized in the field of history and methods of teaching, all of which received the acceptance of experts after making some amendments to them.

- Preparation of teaching plans: The researcher prepared a set of daily teaching plans to achieve the objectives of the study in the light of the behavioral objectives of the topics of the scientific material specified during the duration of the experiment and for both groups. The experimental group according to the strategy of stimulating mental thinking and the control group according to the usual method, the researcher has presented a model of these plans to a group of specialists to show their opinions and observation and in light of this and then make some adjustments and become ready for application.

### Sixth: Research Tools

To achieve the objectives of the research, the researcher uses two tools:

- Achievement Test
- Harmonic Thinking Scale

An achievement test of a multiple-test type consisting of (50) paragraphs was designed and adopted in this test on the three levels of Bloom's classification, namely (knowledge, understanding, application) and on the behavioral objectives formulated in the research and according to the specifications mentioned in Table (6).

Table 6  
Specifications of the achievement test

Doors	Number of servings	Average teaching time	Proportions of the importance of the content of the chapters	Number of behavioral goals by their levels			Total Behavioral Goals
				Knowledge 46%	Understand 34%	Application %20	

Building the achievement test: The table of specifications has been prepared in the light of the scientific material and objectives according to the following table (6):

Table 6  
Specifications Achievement Test

Chapters	Number of pages	Weight. Centennial	Knowledge 46%	Understanding 34%	Application %20	Number. Paragraphs
V	18	%37,5	10	7	3	20
Sixth	10	20,83%	5	4	2	11
VII	20	%41,67	9	7	3	19
Total	48	%100	24	18	8	50

The researcher formulated the paragraphs of the test for the development of harmonic thinking in the light of the specifications of the achievement test and distributed the test paragraphs totaling (50) paragraphs of the type of test from multiple to the level of knowledge by (24) paragraphs and the level of understanding by (18) paragraphs level of application by the reality of (8 ) paragraphs.

## **Presentation and interpretation of the results**

### **First: View Results**

#### **The result of the first hypothesis**

to verify the validity of the first hypothesis, which included "There is no statistically significant difference at a significant level (0.05) between the average scores of the experimental group that studies history according to (the strategy of stimulating mental thinking) and the average scores of the control group that studies the same substance in the usual way in a test. The arithmetic average, variance and calculated T value of the scores of the students of the experimental and control groups in the achievement test were found as such.

Table 7  
Arithmetic Average, Variance and T Value of the Scores of the Two Research Groups in the Test of the Strategy for Stimulating Mental Thinking Towards the History Material

The Collection	Number	Arithmetic average	Contrast	The degree of freedom	T value		Statistical significance
					Calculated	Tabular	
Experimental	25	27.26	33.39	48	3.226	1.677	D at a moral level (0.05)
The officer	25	22.25	27.23				

Table (7) shows that there is a statistically significant difference at the level of (0.05) between the average scores of the experimental and control research groups in the test of achievement of stimulation of mental thinking, the calculated T value (3.226) which is greater than the international T value of (1.677) at the level of significance (0.05 ) and the degree of freedom (48) . Thus rejects the first zero-sum hypothesis.

#### **The result of the second hypothesis**

To verify the second zero-sum hypothesis, which states that "there is no statistically significant difference at a significance level (0.05) between the average scores of the experimental group that studies history according to the strategy of stimulating mental thinking and the average scores of the control group that studies the same substance in a way. The arithmetic average, variance, and calculated value of the scores of the students of the two groups were found in the harmonic Altfakir scale, as in Table 8.

Table 8  
The arithmetic average, variance and T value of the scores of the two research groups in the scale of harmonic thinking towards the material of history

The Collection	Number	Arithmetic average	Standard deviation	T value		Statistical significance
				Calculated	Tabular	
Experimental	25	206.6	20.299	3.5	1.677	D at a moral level (0.05)
The officer	25	184.4	27.079			

It is clear from Table (8) that there is a statistically significant difference at the level of (0.05) between the average scores of the experimental and control research groups in the measure of harmonic thinking of the date material, the calculated T value was (3.5), which is greater than the tabular T value of (1.677) at the level of significance (0.05 ) and the degree of freedom (48). ) thus rejects the second null hypothesis.

### **Second: Interpretation of the results**

The researcher showed why the students of the experimental group who studied using the strategy of stimulating mental thinking outperformed the students of the control group who studied in the usual method of achievement test to emphasize the active role of the learner during learning and that the strategy of stimulating mental thinking. Making the lesson more energetic and attractive to students increased their interaction and retention of information for a longer period of time due to a link between their cognitive structure With the reality of students' lives and the competition between groups helped in the identification of opinions and the exchange of information and distinguish right from wrong which made students able to adjust the steps of the solution and evaluate their results which madethem more understanding of the information studied and thus increase their understanding and achievement. As the researcher pointed out the death of the students of the experimental group for those who studied with the strategy of stimulating mental thinking on the students of the control group for those who studied in the usual way in the test of harmonic thinking in front of the learners and enhances the reason for the humiliation of the teacher in this field to provide an opportunity for the learners in the lesson to discuss and give them enough time to think, which encourages them to raise the level of their harmonic thinking.

### **Conclusions**

In the light of the results of the current research, the following conclusions were reached:

- Teaching according to the strategy of stimulating mental thinking has a clear impact on raising the achievement of students of the fifth grade literary in the subject of history.
- Teaching according to the strategy of stimulating mental thinking has a clear impact in raising the level of harmonic thinking of students of the fifth grade literary in the subject of history.

- The strategy of mental thinking allowed students to discuss and dialogue with each other, making it easier for them to understand and represent information.
- The division of students into groups helped students who had a low achievement of active participation with their classmates which led to the promotion of teamwork and intimacy among themselves and raising their academic level to stimulate mental thinking.
- The use of a strategy in teaching the history curriculum and the use of consensual thinking enhanced understanding and perception of the subjects of the school and the excitement and focus in linking ideas and concepts to the lesson.

### **Recommendations**

In light of the results of the research, the researcher recommends the following :

- He adopted the strategy of stimulating mental thinking in teaching the history curriculum at different stages of study for its contribution to increasing student achievement and developing their harmonic thinking.
- Directing teachers to the science of using the usual method of teaching, and the need to use modern teaching methods, models and methods, especially from its
- A positive impact on raising the level of achievement among students before the strategy of stimulating thinking, brainstorming, etc.
- Train teaching staff on harmonic thinking skills through the use of modern models in the teaching of history, such as the strategy of motivation mental thinking. Brainstorming and therapeutic diagnosis.
- Introducing within the vocabulary of the subject of teaching methods in the faculties of education and the work of serious training courses to train faculty members on how to teach study subjects using the model of stimulating mental thinking .

### **Propositions**

To complement this research, the researcher proposes to conduct a number of the following studies and researches:

- Conducting a study similar to this study on other educational and psychological topics in the intermediate, preparatory and university stages .
- Conduct a comparative study of the impact of this strategy as the impact of other models such as problem solving, critical thinking and brainstorming.
- Conduct a study similar to this research taking into account the gender variable .
- Conduct a study to compare the impact of the strategy of stimulating mental thinking with other strategies in the development of harmonic thinking skills.

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