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## **Metacognitive Thinking Skills Implied in Questions and Activities of Computer Textbook for the Fifth Grade Preparatory**

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### **Summary of the research**

The research aims to know the availability of supra-cognitive thinking skills in the questions and activities of the computer book for the fifth grade preparatory scientific and literary branches in Iraq for the academic year 2018/2019, as the researcher has prepared a list of supra-cognitive thinking skills included two areas and (6) key skills and (27) A sub - skill, where by the questions and activities of the aforementioned authors were analyzed. The researcher followed the descriptive analytical approach "method of content analysis", and adopted the explicit and implicit unit of analysis, as was verified the validity and stability of the analysis, and the results showed unevenness and imbalance in the distribution of supra-cognitive thinking skills in the evaluation questions and activities contained in the book, where it focused on ( Concept Awareness Skill) significantly relative to other skills and omission of many skills (giving reasoning, strategic switching skill, context optimization skill, problem solving skill, re-planning skill, product modification skill, process manipulation skill, thinking organizing skill) Of relevance, then The researcher presented a number of recommendations and suggestions according to the research findings.

**Keywords:** supra-cognitive thinking skills, questions, activities, textbook.

### **Chapter One: Definition of Research**

#### **First: Research Problem**

Most countries of the world seek to raise the level of their people in various aspects of life, as the advancement of nations and their progress depends on the educational system plans, goals and scientific and educational programs, so

educational institutions must be aware of the rapid developments and changes in the age of knowledge openness, and this requires the development of plans. We need a generation of productive thinkers who have the capabilities and capabilities to solve the problems they face, and after the researcher directed a random questionnaire consisting of (20) teachers. And school for what? Of computers in secondary and middle schools of the General Directorate of Education Baghdad / Rusafa the second academic year (2018/2019) in which students clarify the capabilities to answer questions. From the results and the views of teachers, it was noted that students prefer questions that need to be memorized, i.e., which measures the level of remembering more than questions that measure higher levels that require different thinking processes, as students have difficulty in answering questions that require skills and intellectual effort, as well as. The computer book for the fifth grade preparatory is the last book in the series of computer books for high school (the absence of a special book for the sixth grade), so this book must provide the skills of cognitive thinking for the importance of this type of thinking to improve the way students think and awareness, and the sensitivity of the stage and its importance in achieving the scientific and academic trends, and revealed shortcomings and weaknesses of the questions and educational activities contained in the book of computer fifth grade intermediate. The researcher sees the need to study the availability of cognitive thinking skills above, so the research problem is determined to answer the following question:

What are the cognitive thinking skills involved in the questions and activities of the fifth grade intermediate computer book?

### **Second: The Importance of Research Importance**

Education has occupied the interest of philosophers and researchers for many years because of its impact in detonating the capabilities of the individual and his energies and creativity, education is an advanced process with education and has given great attention in many countries of the world (Munshed, 2014: 9), since education can not grow in isolation from the field of education, It is the most important field that serves the public interest as it contributes directly to building generations and determining the future of nations (Askoul, 2003: 4).

The curriculum is the basis of the educational process system, and a means to translate the objectives into experiences and attitudes that interact with students (Salama, 2008: 15), and this system includes several components and elements interrelated with each other to achieve predetermined educational objectives, namely (objectives, content, teaching methods, and evaluation), This is one of the most important elements of the teaching system (Sabri, 2009: 13), and the textbook is one of the elements of the curriculum, which is the content of educational learning to be provided to students, as it derives its importance from the importance of the content (Al-Issawi and Dawood and Zainab, 2012: 125), activities represent the means to achieve Learning objectives are the heart of the curriculum (Attia, 2013: 79), as well as the evaluation questions at the end of each unit, it is a unit of the book important and one of the elements that help the learner On the self-learning calendar (Attia, 2013: 248), the diversity of exercises and activities is of great importance, as it helps the learner to develop his thinking skills and improve learning (Alia, 2012: 107).

The researcher believes that a society can not develop or progress unless its members have thinking skills that help them to advance and improve their society, and this determines the urgency imposed by the present era to teach and develop skills of all kinds. Thinking supra-cognitive has a great interest because it is important in improving the thinking of learners, as it increases the awareness of what they are learning. He is a productive thinker (Al-Jarrah and Alaa, 2011: 146), and supra-cognitive thinking is the ability of the abilities that play a prominent role in increasing students' experience of perceiving and observing processes. Learning, they are part of the human abilities that help develop the Experience (Imel, 2002: 123), as the study of supra-cognitive thinking is important in the field of work and learning, it increases the confidence of the learner's abilities and make him the ability to return the success of his learning to himself (Bahjat, 2002: 300), as well as the importance of this Research is manifested in two levels, one theoretical, and the other applied, as follows:

### **Theoretical significance**

□ Show that there is no similar study to the knowledge of the researcher reveals the supra-cognitive thinking skills included in the questions and activities of the computer book for the fifth grade preparatory.

- Demonstrates the areas of supra-cognitive thinking and its main and sub-skills.
- Reveals the effectiveness of evaluation questions and educational activities included in the computer book for the fifth grade preparatory.
- Highlights the importance of supra-cognitive thinking skills in developing learners' experiences and increasing their awareness.
- The research contributes to the detection of shortcomings and weaknesses in the evaluation questions and educational activities of the computer book for the fifth grade preparatory.

### **Applied importance**

- Provides researchers with a questionnaire analysis in the areas of supra-cognitive thinking skills and its main and sub-skills to analyze other books accordingly.
- Availability of research results for stakeholders and specialists in computer motivation curricula to reconsider the structuring of evaluation questions and educational activities in the content of the fifth grade preparatory computer book and enrich its content with questions and activities taking into account the skills that have been omitted.
- Enlighten computer teachers with different cognitive thinking skills that should be given attention to their role in making students effective thinkers and producers.

### **Third: Research Aims**

The research aims to:

- 1- Prepare a list of the areas of supra-cognitive thinking skills and the main and sub-skills that should be included in the evaluation questions and activities contained in the computer book for the fifth grade preparatory scientific and literary branches.
- 2 - the availability of the areas of thinking skills supra-cognitive and the main and sub-skills emanating from them in the evaluation questions and activities contained in the computer book for the fifth grade preparatory scientific and literary branches, and the goal of this research is achieved by answering the following question:

- What is the percentage of the inclusion of the evaluation questions and activities contained in the computer book for the fifth grade preparatory scientific and literary branches of the areas of thinking skills above the cognitive and the main skills and subsidiary emerging from them?

#### **Fourth: Limitations Research**

Search is limited to:

1 - Evaluation questions and activities contained in the computer book for the fifth grade preparatory scientific and literary sections, by a committee of the Iraqi Ministry of Education (1), issued by the Ministry of Education / Directorate General of the curriculum.

2 - time limits: the academic year 2018 - 2019 m.

#### **V. Determination of Terms**

##### **Metacognition thinking skills**

Defined by (Sternbery & Daividson, 1986): "High control processes whose function is planning, monitoring and evaluation of the individual's performance in solving the problem. : 226).

He defined it (Flavell, 1992) as "the knowledge of an individual's cognitive processes, products, or anything related to them, such as the characteristics and relevance of information or data relating to learning, and refers to active observation and subsequent organization, and the harmony of this process and its relationship to the cognitive goal" (Flavell, 1992: 207). .

The researcher defines them procedurally as:

Awareness of students of the fifth stage preparatory scientific and literary branches of cognitive processes or knowledge about the phenomena of knowledge and the use of this awareness in the improvement and control of cognitive processes.

#### **Questions**

Defined by (Al-Moussawi, 2011): "One of the components of the textbook and a cornerstone of successful teaching, it is the most important communication tool between the teacher and the student and among the students themselves work to

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(1) Dr.Ghassan Hameed Abdul Majeed, Dr. Abdul Wahab Sami Ibrahim, Bushra Karim Rashid, Hala Hassan Mahmoud and Haitham Latif Hassan.

stimulate their interest and stimulate their minds and develop their thinking skills, as well as its role in determining students' prior knowledge Their weaknesses are diagnosed "(Al-Moussawi, 2011: 446).

The researcher defines them procedurally as:

Assessment questions at the end of each chapter of the fifth book preparatory sections of the scientific and literary sections of the computer material that calls for a response and requires a degree of reflection and retrieval of information stored by students to help them the correct answer.

### **Activities**

Defined by (Al-Afoun and Fatima, 2011) as: "Educational practices performed by students within and outside the school environment as part of the process of learning and education intended under the supervision of the teacher in order to build expertise and acquire the necessary skills in the educational process in the areas of cognitive and psychomotor, emotional and social" (Al-Afoun and Fatima, 2011 : 89).

The researcher defines them procedurally as:

One of the components of the Computer Science curriculum is the effort exerted by the students to acquire knowledge and experience leading to the development of its knowledge and skills in the field of computer

### **Textbook:**

Defined by (Marei and Mohammed, 2009): "It is a readable source that includes the element of knowledge content, and is the main source of student education, and consists of structured and unstructured knowledge, so it must be open-ended to allow enrichment, modernization and modification" (Marei and Mohammed, 2009: 251 ).

The researcher defines him procedurally as:

Textbook for the fifth grade preparatory students scientific and literary branches in Iraqi schools of the Ministry of Education / Directorate General of the curriculum for computer.

## **Chapter II: Theoretical framework and previous studies**

First: Theoretical framework: The theoretical framework of this research will be presented, which includes three axes as follows:

### **Axis 1: Metacognition thinking skills**

#### Skill Concept

Is the performance of the individual and easily, quickly and accurately, whether mental or dynamic, while saving in effort, time and costs (Al-Hashemi and Taha, 2009: 23).

#### The concept of thinking

It is a deliberate search of experience for a purpose that may be an understanding, problem solving, decision making, action, planning, or judgment of something (Al-Khalili, 2005: 133).

#### The concept of supra-cognitive thinking

This term has many labels in the Arabic language, including (above knowledge, metacognition, and cognition), all of which symbolize (thinking in thinking). (Brown, 1987) explained that metacognitive thinking (metacognition) refers to the understanding of knowledge, reflected This understanding of the clear description and effective use of knowledge is of interest, as well as it refers to the knowledge and control of the individual's cognitive system (Brown, 1987: 65).

Quoting (Al-Daba, 2013) mentioned (Al-Said, 2002) that the concept of supra-cognitive is one of the most exciting topics, as the term appeared in the seventies by the world (Flavell) and his colleagues, and continued explanations and clarifications



about it, which revolve around knowledge, thinking and learning, And control and control, to set some definitions for him as follows:

- 1- Thoughts on ideas.
- 2 - The learner's knowledge about his knowledge.
- 3- Knowledge and control of knowledge.
- 4- Knowledge reflected in regulation and control.
- 5- Understand and organize cognitive processes.
- 6- Decision-making processes that regulate the selection and use of forms of knowledge.
- 7- Learning about thinking.

(Al-Daba, 2013: 38)

□ The importance of cognitive thinking

Quoting (Abu Jada and Muhammad, 2010), Costa & Kallick, 2003 sees great importance for cognitive thinking, including:

- 1- Enables the individual to develop the plan of action, and then maintain for a period of time in their minds, and then reflect on, and then evaluate.
- 2- It is easy to issue interim judgments, evaluation and comparison for other activities.
- 3- Enables individuals to observe, interpret and monitor the decisions they make.
- 4- Increases the perception of the individual's actions and their impact in others and the environment around him.
- 5- Increases the development of the conceptual mapping skills before carrying out tasks.
- 6- Develops from the process of self-evaluation of individuals with the aim of improvement.
- 7 - Enable individuals to collect information and solve problems that face them easily.

8. Enables individuals to monitor plans during implementation with the required correction if the plan is below the expected level.

(Abu Gado and Mohammad, 2010: 347-348)

□ concept of supra-cognitive thinking skills

It is the learner's awareness and awareness of what he is learning and his ability to develop specific plans to reach the specific goal as well as choose the appropriate strategy to solve a problem and modify it and its ability to evaluate and review itself continuously (Badran, 2009: 21).

Here the researcher agrees with (Al-Azzawi, 2013) that the above cognitive is a kind of internal mental dialogue of the same, as the learner asks himself about the task required to accomplish and its nature and the problems and difficulties faced to get to implement them and how to overcome them and think different ways to get to accomplish them (Al-Azzawi, 2013: 56 ).

What supra-cognitive components?

Many educators (Henson & Eller, 1999), (Bruer, 1995) and (Lindstrom, 1995) argue that supra-cognition aims to educate the individual about the patterns of thinking and understanding of the methods of control and control and control the processes of guidance or learning or organization in order Understand or understand the content of learning, so supra-cognitive is divided into two components:

1. Self-awareness of knowledge.
2. Self-organization of knowledge.

The first component (self-awareness of knowledge) consists of three main types, namely:

1. Conceptual knowledge, including:

Consciousness of the concepts: any awareness of the concepts that learners are dealing with and their understanding of the components of these concepts and the relationship between the concepts.

Awareness of terms: any awareness of learners the meaning of the terminology and its content, whether scientific, social, mathematical, economic or other.

Awareness of symbols: any awareness and understanding of the meanings of abstract symbols or if they came within a certain content.

Awareness of laws: knowledge of the components of the law, whether mathematical or administrative or constitutional or other and its relationship to other relevant laws.

## 2.Procedural knowledge, including:

Recognize steps: learners learn the steps they follow to reach the goal without addressing the solution or implementation of the plan.

Knowledge of models: any understanding of the forms or schemes that relate to a particular subject and organization or composition.

Knowledge of solutions: Any knowledge of methods of solution to a particular problem or issue, as aware of the manner of dealing or the steps of the solution.

Knowledge of structures: any awareness of learners how to draw a model or structure of a particular sentence or building a plan, any awareness of the steps of construction and installation.

## 3.Contextual knowledge, including:

Awareness of the conditions: any awareness of the conditions or conditions of learning a particular problem of the occurrence of learning or behavior.

Understand the reasons: the perception of learners reasons to understand a particular situation (making learning in students easy).

Give justification: any justification for the occurrence of a certain phenomenon (clarification of weaknesses or failures in that phenomenon).

- Define criteria: any standards or units of measurement.
- Problem Solving: Any understanding of the problem or issue and trying to solve it using a certain strategy.

The second component (self-organization of knowledge) also consists of three main types, as follows:

1. Management of Knowledge, including:

- Identify strategies: the selection of specific strategies of value and benefit to the management and organization of knowledge.
- Develop plans: Any plan or plans to implement a specific task.
- Building Steps: A configuration of a set of steps to accomplish a particular task.
- Recognize relationships: an understanding of the relationships between various aspects of the cognitive position.
- Create conditions: the availability of conditions or a classroom climate appropriate to the implementation of the task.

2. Evaluation of Knowledge, including:

- Modify a pattern: Any learners modify patterns of behavior or learning style to solve a particular problem.
- Strategy Switch: Any learner's realization that the strategy he uses to achieve a particular goal is not useful in the development of skills or abilities of the direction of a specific situation, it is replaced by another more useful.
- Improving the context: Any learner use a certain method in the presentation of his ideas in a particular subject, and be a method is convincing, resort to the reformulation of the context better and in another way.
- Ensure the solution: Any use of a method to ensure the validity of a particular subject, with the possibility of modification or continuation.

3. Regulation of Knowledge, including:

- Re-planner: Any learner can reorganize the scheme or the steps you use after discovering the strengths or weaknesses to reach the desired goals.
- Modification of products: Any learner can modify certain products through feedback, or modify himself himself.
- Clarify errors: ie identify errors, where, when, and how they occur?
- work remedies: any learner can conduct real-time treatments through follow-up and review of learning steps.
- Organization of thinking: is the highest levels of cognitive, that is, the learner to organize patterns of thinking comprehensively from time to time according to the circumstances it is going through. (Afaneh and Nayla, 2004: 139-142)

The researcher adopted the aforementioned classification of supra-cognitive components in the preparation of a list of supra-cognitive thinking skills to be included in the questions and activities of the computer book for the fifth grade preparatory scientific and literary branches to suit the goal of the research, as the researcher believes the importance of self-awareness of knowledge to obtain self-organization of knowledge and not exceeded, as it does not Self-organizing skills can be accessed without mastering self-awareness skills, which cannot be isolated or separated from one another.

## **Axis II: Questions & Activities**

- Concept questions

They are linguistic stimuli that require specific answers that aid learning and indicate their occurrence (Al-Agha and Abdel moneim, 1990: 645).

- Objectives of the questions

Questions have many objectives, including:

1. Increased thinking ability.
2. Helping learners to organize and interpret the subject.
3. Cognitive development.

4. Clarify the relationships between cause and effect.

5. Review the course material.

6. Calendar.

(Clark & Starr, 1981: 172-173)

The researcher believes that the questions are exciting requires the student to use the full knowledge and mental abilities to solve the problems faced during the answer, and this contributes to increase the knowledge of the student and the occurrence of learning.

#### Concept of activities

Activities are the third elements of the modern curriculum, and have great importance in the educational process, because they contribute to the achievement of educational goals, and the activities of the textbook are two types:

1 - Enrichment activities: It was allocated to the outstanding learners, as the availability of selected information to meet their needs and achieve them integrated growth.

2 - Therapeutic activities: These activities are planned in advance by the teacher and the learner to help learners to overcome difficulties during education, and help their progress according to their growth rates with their peers.

(Al-Issawi and Dawood, and Zainab, 2012: 127)

#### Pros of activities

1. Developing the capacity for cooperative and collective action, planning and innovation.

2. Acquire concepts and information more deeply.

3. Develop the ability of learners to think through their activities to solve problems related to their lives.

4. Learners acquire a great deal of skills in various fields.

5. Learners acquire a set of positive trends and habits. (Salameh, 2008: 158)

The researcher believes that the activities contained in the textbook supportive and auxiliary to the educational process, as it stimulates students to learn through work and participation, as well as increased interest in students with the material they study.

### **Axis III: Textbook textbook**

- The concept of the textbook

It is a book that contains a set of knowledge and information that works to achieve specific and pre-planned educational goals (cognitive, psychokinetic, and emotional) in a scientific and organized way to teach a particular subject within a given course of study for a specific period of time (Al-Zwaini and Dhia and Haidar, 2013: 102).

- The concept of a computer book

This course gives students the ability to deal with computers by acquiring knowledge and skills, and enables them to live in the advanced technological world. Through this science they can solve problems, process information and deal with computer requirements and programs (Yassin and Hatem, 2010: 51).

- The importance of the textbook

1- Provide students with an appropriate amount of facts and information that achieve the desired goal in their behavior.

2- Gives the opportunity for students to practice reading skills.

3- The curriculum column shall be prepared according to the previously planned objectives.

4- Deals with the scientific article examples and methods of life and perception of the students so as to be easily absorbed and understood.

5- Is the basic scientific reference for both teacher and student, as it is the first starting point for students to the world of knowledge, research, access and organized thinking.

6 - Includes a variety of teaching aids such as maps, pictures, illustrations and graphs enrich the process of education.

(Al-Zwaini and Dhia and Haidar, 2013: 103-104)

## Second: Previous Studies

Two previous Arab studies related to the subject of this research, as well as aspects of agreement and differences between them and this research will be reviewed in Table (1) prepared by the researcher in chronological order.

**Table (1) Two previous Arab studies**

study reached	Statistical means	Approved instrument and analysis unit	The sample	Research Methodology	Aim of the study
<p>hology books ary stage in r grades ith and tenth) b-skills of the (conceptual and</p>	<p>-Duplicates. -Percentages -Cooper equation</p>	<p>The content analysis tool and the analysis module are the phrase.</p>	<p>Full questions in the books of technology for the upper basic stage in Palestine for grades (VII, VIII, IX, X).</p>	<p>Descriptive analytical method</p>	<p>- Build a list of skills beyond Knowledge to be available in Questions books of technology For the upper basic stage in Palestine. - The extent of including questions written Basic stage technology Palestine 's Higher Skill beyond knowledge.</p>
<p>ercises in the k for grades (I, e three sub- ive thinking ill, contextual , as the : skills varied ons and e books in an manner. ercises of ed many sub- ary to build an ty capable of blems. ommed the count the eral format of it there is a</p>	<p>- Duplicates. - Arithmetic averages. - Percentages. - Holste equation.</p>	<p>The content analysis tool and the analysis module is the paragraph.</p>	<p>Complete questions and ercises in the Arabic language book for grades (I, II, and III) for the lower basic stage second semester.</p>	<p>Descriptive analytical method</p>	<p>- Build a list of thinking skills Supra-cognitive. - The extent of the included ercises And activities contained in Books Arabic language for the stage Basic thinking skills Supra- cognitive. - Proposed perception to enrich the exercises And activities contained in Books Arabic language for the stage Basic thinking skills Supra-cognitive.</p>



<p>recommended educational of the needs macro to the skills of ve students.</p>					<p>the aspects of agreement and differences between the two previous studies and this rese</p>
<p>a disparity</p>	<p>Descriptive and analytical approach, and this research agreed with the previous two studies</p>	<p>Evaluation questions and activities in the computer book for the fifth grade preparatory, and thus agreed the current research sample with the sample of the previous two studies in the sample questions and activities of textbooks, but differed with them in the study material.</p>	<p>The approved tool is a content analysis tool, so this research agreed with the previous two studies, while the unit of analysis is the idea (honest and implied), and thus different from the previous studies.</p>	<p>- Duplicates - Percentages - Holste equation. Thus, this research agreed with the previous two studies in terms of the computational methods used (iterations and percentages), but it differs from the study of Hijo using Holste equation instead of Cooper equation in finding the coefficient of stability, and agrees with the study of Al</p>	<p>Preparation of supra-cognitive thinking skills and the main and sub-skills emerging from them to be included in the evaluation questions and activities contained in the computer book for the fifth grade preparatory. - The availability of the areas of supra - cognitive thinking skills and the main and sub - skills emanating from them should be included in the evaluation questions and activities in the computer book for the fifth grade preparatory.</p>

### Chapter III: Research Methodology and Procedures

#### First: Research Methodology

The descriptive analytical method was adopted to analyze the questions and activities of the computer book for the fifth grade preparatory scientific and literary branches in the light of supra-cognitive thinking skills by adopting the method of content analysis; because it is more suitable for the nature of this research.

#### Second: The Research Community

The research community consists of a computer book for the fifth grade preparatory scientific and literary branches in the Republic of Iraq for the academic year 2018-2019.

### Third: The Research Sample

The sample of this research are evaluation questions and activities contained in the content of the computer book for the fifth preparatory students scientific and literary branches, as shown in table (2).

Table (2)

Computer book scheduled for the fifth preparatory students (scientific and literary)

The book	Publish & year	Chapter Title	Number of evaluation questions analyzer	Number Analyzed activities
Computer for the fifth grade preparatory	Fourth Edition For the year 2014	Chapter 1 / Microsoft Access	14	3
		Chapter 2 / Visual Basic	15	9
		Chapter 3 / computer viruses and electronic penetration	5	0
		Chapter 4 / Computer configuration and maintenance	4	0
<b>Total</b>			<b>38</b>	<b>12</b>

### Fourth: Research Tool

The list of analysis of the evaluation questions and the activities contained in the content of the computer book for the fifth preparatory year has been prepared in the light of supra-cognitive thinking skills which included two areas according to the following procedures:

- Setting up the tool

- Access to a group of specialized educational literature that has to do with supra-cognitive thinking.
  - Review previous Arab and foreign studies that dealt with topics related to the analysis of the content of activities and questions for some textbooks and cognitive thinking.
  - Taking the views of experienced specialists in the field of teaching computer science and curricula and methods of teaching science, measurement and evaluation.
- Prepare the analysis list

A list of supra-cognitive thinking skills was prepared by the following procedures:

1 - Determine the goal of the list: The goal of the list is to identify the skills of supra-cognitive thinking to be adopted in the analysis of questions and evaluation activities contained in the content of the computer book for the fifth grade preparatory.

2. Identifying supra-cognitive thinking skills: Two areas of supra-cognitive thinking skills were identified and each area includes a set of main and sub-skills. On the paragraphs of the list, and the percentage (80%) was adopted to agree on the amendment, and this is the validity of the list (the validity of the analysis tool), and the final list consists of (27) skills distributed between two areas as follows:

- The first area (self-awareness of knowledge): consists of (3) key skills and (13) sub-skills.
- The second area (self-organization of knowledge): consists of (3) key skills and (14) sub-skills.

The list is thus ready for analysis.

Analysis process

- The objective of the analysis: Determine the availability of the areas of supra-cognitive thinking skills and its main and sub-skills in the evaluation questions and activities contained in the content of the computer book for the fifth grade preparatory scientific and literary branches.

- Analysis sample: It was represented by the evaluation questions and activities contained in the content of the computer book for the fifth grade preparatory scientific and literary branches in accordance with the approved books for the academic year 2018/2019 in the Republic of Iraq.

- Categories of analysis: the list of analysis according to the skills of supra-cognitive thinking in its final form.

- Analysis Unit: The researcher adopted (explicit and implicit idea) as a unit of analysis, being suitable for research, and works to add new dimensions of the analysis process (Al-Hashemi and Mohsen, 2011: 221).

- Census Unit: The unit of repetition was adopted as a unit to enumerate the emergence of the idea for each skill of supra-cognitive thinking according to the final analysis list.

#### Content analysis steps

- Reading the content of the computer book for the fifth grade preparatory reading thoroughly.

- Careful reading of the content of calendar questions and activities accurately and more than once.

- Identify the expressions in the questions and activities, whether explicit or implicit idea to include or not to include the skills of thinking above the cognitive.

- Match the idea in the question or activity with the skills in the final analysis.

- Unloading the results of the analysis in the special form by calculating the number of times achieved or not achieved skill relative to the idea.

#### honesty analysis

The analysis of a model consisting of the questions of the first chapter of the computer book for the fifth grade preparatory according to the final analysis list, and based on the sincerity of the arbitrators, where the analysis model was presented to a group of arbitrators specialized in the field of curricula and teaching methods who have experience in the analysis of content have agreed on Goodness.

Table (3) shows the analysis of a sample of the questions of the first chapter of the computer book scheduled for the fifth preparatory students.

Table (3)

Analysis of a sample of the questions of the first chapter of the computer book scheduled for fifth preparatory students (p. 66)

S	The idea	Type of idea	No paper	Skill field	Key Skills	Sub Skill	NO sub Kno we deg e
1	Q 3 / Put a (✓) in front of the correct statement and a sign (X) in front of the wrong statement. - A query is to apply specific conditions or criteria to the data in the table to retrieve constraints to which those criteria apply.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Concept awareness skill	1
2	Have the database file extension in Access mdp.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of symbols	3
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Concept awareness skill	1
3	When creating a table via the design window a window appears consisting of four parts including field name, data type, description, and	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Procedural knowledge skills	Installation knowledge	8

	field properties	Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
4	In determining the field name, the name must not exceed 70 characters.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Contextual knowledge skills	Skill awareness of conditions	9
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
5	The main key is selected by selecting a field, pressing the left mouse button, and selecting the Primary Key command.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of laws	4
		Implied	66	Self-awareness of knowledge	Procedural knowledge skills	Skill perception steps	5
6	To delete records from the table must be the display type	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Contextual knowledge skills	Skill awareness of conditions	9
7	It is used (Column Width) Changes the column name of the field	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2

8	The default name to save the filter as a query is Query	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
9	The table that houses it is called	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Procedural knowledge skills	Installation knowledge	8
10	The master key With (Related Table) and the other table with (Primary Table)	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
11	The master key cannot be repeated in the same table.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Contextual knowledge skills	Skill awareness of conditions	9
12	(Standard Height) Returns the row height to the standard height.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Contextual knowledge skills	Skill awareness of conditions	9
13	The master key cannot be repeated in the	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25

	same table.	Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Concept awareness skill	1
14	Restriction fields are not required to be similar in type and sequence in a single table.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of terms	2
15	Database applications provide only the order of constraints by the first field.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of laws	4
16	The query provides the ability to retrieve from a single table in a multi-table database.	Honest	66	Self-organization of knowledge	Knowledge organization skills	Skill clarifying mistakes	25
		Implied	66	Self-awareness of knowledge	Conceptual knowledge skills	Skill awareness of laws	4

□ Stability analysis

Persistence means obtaining stable results if analyzed by time and analyst (Al-Nimr, 2008: 77), and the researcher adopted two types of stability to reduce the subjectivity of the researcher:

1- Persistence Through Time: The researcher selected a sample of the evaluation questions and activities contained in the content of the computer book for the fifth grade preparatory (chapter I specifically), and the process of analysis for two times between an interval of (19) days in order to be acceptable and correct must not exceed



the duration The time interval between the two analyzes was at least three weeks and not less than two weeks (Adams, 1964: 85).

2 - stability through analysts: The researcher gave the same sample above to specialized analysts (\*), to be analyzed according to the list of analysis, and conducted each analysis separately after agreeing on the controls and procedures, and determine the stability of the analysis between analysts and researcher by adopting Holste equation Table( 4) illustrates this.

Table (4)

Stability analysis results

<b>analyst</b>	<b>Stability coefficient</b>
<b>The researcher through time</b>	<b>97.02 %</b>
<b>The researcher and the first analyst</b>	<b>92.6 %</b>
<b>The researcher and the second analyst</b>	<b>87.4 %</b>

The stability coefficients shown in Table (4) are statistically acceptable according to what was referred to (Al-Dulaimi, 2010: 120), as the stability coefficient is acceptable if the ratio exceeds 70% (Al-Dulaimi, 2010: 120).

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\* The second analyst. Hala Mohammed Abed, Computer Teacher at Al-Mishahada Secondary School for Girls, holds a Bachelor of Science in Computer Science and a Master of Curriculum and Teaching Methods.

□ Conduct Analysis:

The analysis was carried out according to the objective of the analysis after verifying the validity of the list and the stability of the analysis.

#### Fifth: Statistical Means

Frequencies and percentages (two arithmetic means) (Adas, 2013: 16).

Holste equation.

$$R = 2M / (N1 + N2)$$

R = stability factor.

M = Number of responses agreed between the two analyzes.

N1 = number of answers of the first analysis.

N2 = number of answers of the second analysis.

(Holsti, 1969: 140)

#### **Chapter Four: Presentation and Discussion of Results**

To achieve the aim of the research "the availability of the areas of supra-cognitive thinking skills and the main and sub-skills emerging from them in the evaluation questions and activities contained in the computer book for the fifth grade preparatory scientific and literary branches", must answer the following question:

What is the percentage of the inclusion of evaluation questions and activities in the computer book for the fifth grade preparatory scientific and literary branches of the areas of thinking skills supra-cognitive and the main skills and subsidiary emerging from them?

In the areas of supra-cognitive thinking skills

Table (5)

Frequencies and percentages of the areas of supra-cognitive thinking skills in evaluation questions and activities in the fifth grade computer book.

12600

S	The field	Repeat	Ratio	Level
1	Self-awareness of knowledge	256	68.45 %	1
2	Self-organization of knowledge	118	31.55 %	2
<b>Total</b>		<b>374</b>	<b>100 %</b>	

It is clear from Table (5) that the evaluation questions and activities contained in the computer book for the fifth grade included (374) idea about the areas of supra-cognitive thinking skills distributed between the two fields in varying proportions, and the researcher believes that the computer book for the fifth grade preparatory addressed the areas of supra-cognitive thinking skills, but Addressed in an irregular and balanced, as he paid great attention to the field of self - awareness of knowledge relative to the field of self - organization of knowledge, Figure (1) shows that.

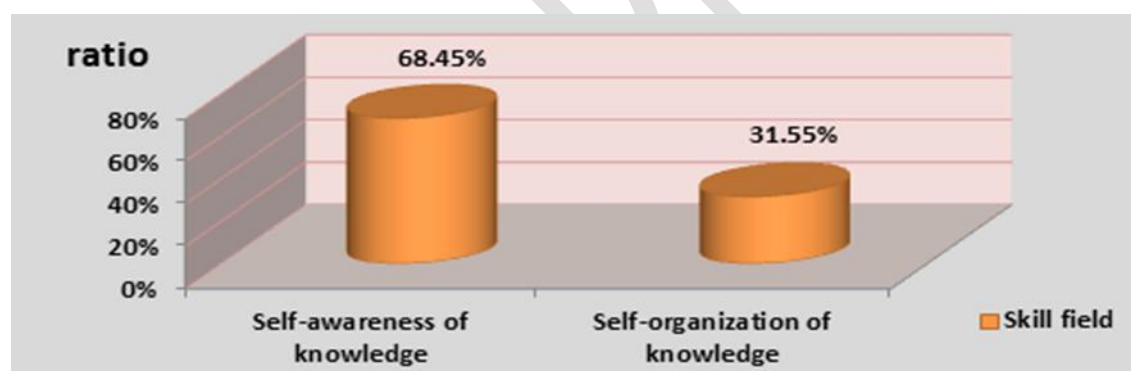


Figure (1)

Percentages of the areas of supra-cognitive thinking skills in the evaluation questions and activities in the computer book for the fifth grade (prepared by the researcher).

- With regard to the main thinking skills above cognitive

Table (6)

Frequencies and percentages of key cognitive thinking skills in evaluation questions and activities in the fifth grade computer book

The field	Key Skills	Repeat	Ratio	Level
Self-awareness of knowledge	1- Conceptual knowledge skills.	122	32.62 %	1
	2 - Procedural knowledge skills.	64	17.11 %	4
	3. Contextual knowledge skills.	70	18.72 %	3
Self-organization of knowledge	4- Knowledge management skills.	86	22.99 %	2
	5- Knowledge evaluation skills.	5	1.34 %	6
	6- Knowledge organization skills	27	7.22 %	5
Total		374	100 %	

From the observation of Table (6) we find that (conceptual knowledge skills) ranked first with the highest percentage followed by (knowledge management skills, contextual knowledge skills, and procedural knowledge skills) respectively, then comes (knowledge organization skills) by a small percentage, while not obtained (Knowledge evaluation skills) Very small percentage in the evaluation questions and activities contained in the computer book for the fifth grade preparatory, Figure (2) shows that.

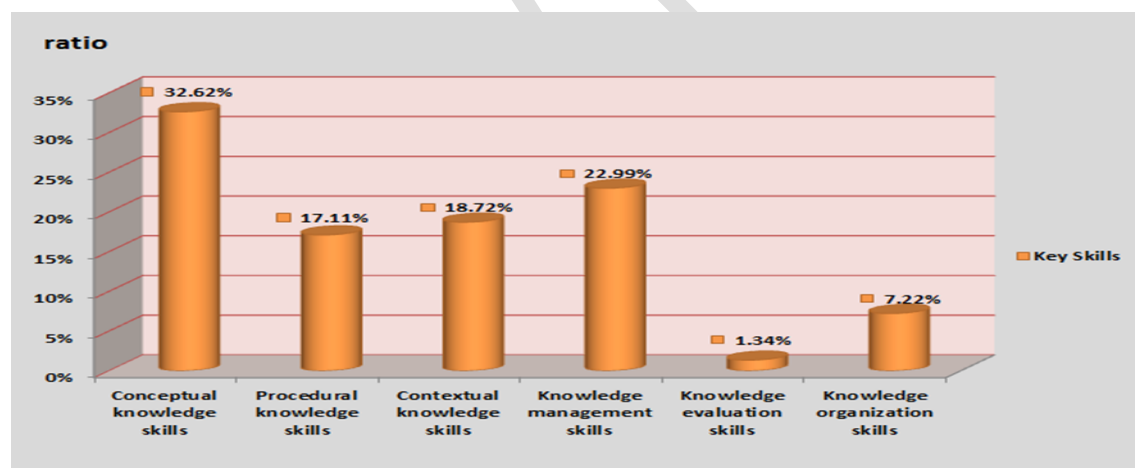


Figure (2)

Percentage of main cognitive thinking skills in the evaluation questions and activities in the fifth grade computer book (prepared by the researcher).

With respect to supra-cognitive thinking skills:

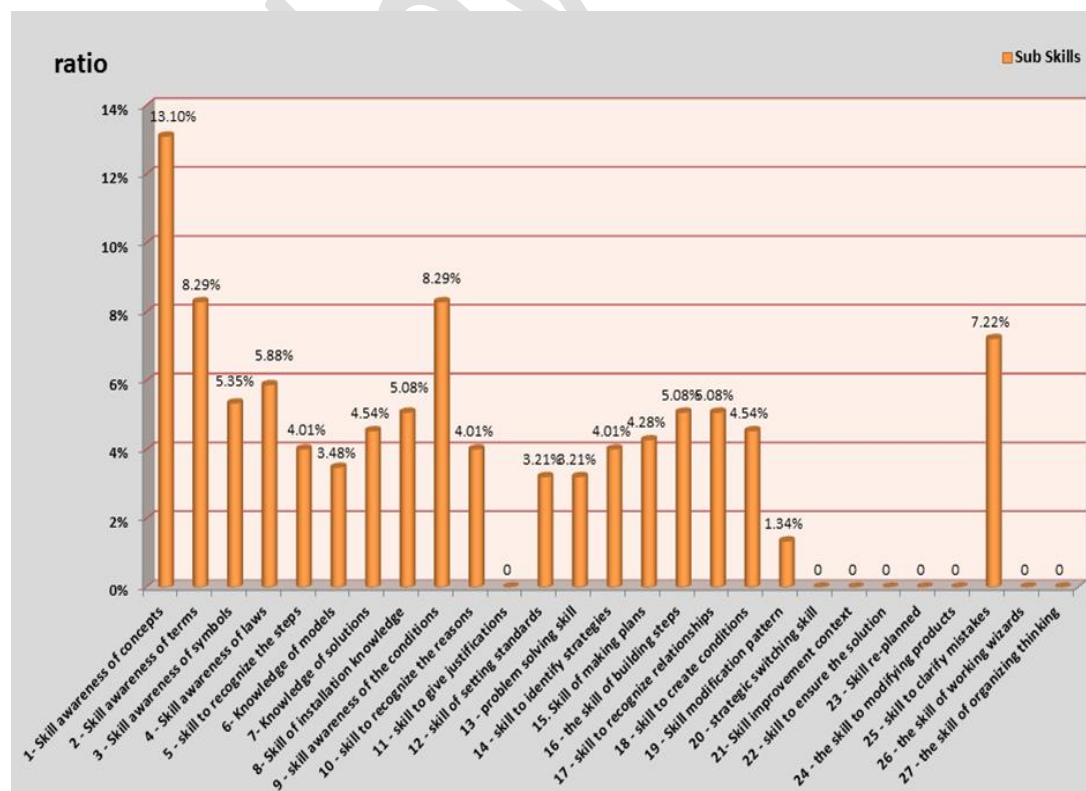
Table (7)

Frequencies and percentages of supra-cognitive thinking skills in evaluation questions and activities in the fifth grade computer book.

The field	Key Skills	Sub Skills	Repeat	Ratio	Level
Self-awareness of knowledge	1 - Conceptual knowledge skills.	1- Skill awareness of concepts	49	13.10 %	1
		2 - Skill awareness of terms	31	8.29 %	2
		3 - Skill awareness of symbols	20	5.35 %	5
		4 - Skill awareness of laws	22	5.88 %	4
	2 - Procedural knowledge skills.	5 - skill to recognize the steps	15	4.01 %	9
		6- Knowledge of models	13	3.48 %	10
		7- Knowledge of solutions	17	4.54 %	7
		8- Skill of installation knowledge	19	5.08 %	6
	3 - Contextual knowledge skills.	9 - skill awareness of the conditions	31	8.29 %	2
		10 - skill to recognize the reasons	15	4.01 %	9
		11 - skill to give justifications	0	-	-
		12 - skill to determine the standards	12	3.21 %	11
		13 - problem solving skill	12	3.21 %	11
Self-organization of knowledge	4 - Knowledge management skills.	14 - skill to identify strategies	15	4.01 %	9
		15. Skill of making plans	16	4.28 %	8
		16 - the skill of building steps	19	5.08 %	6
		17 - skill to recognize relationships	19	5.08 %	6
		18 - skill to create conditions	17	4.54 %	7
	5 - Knowledge evaluation skills.	19 - Skill modification pattern	5	1.34 %	13
		20 - strategic switching skill	0	-	-
		21 - Skill improvement context	0	-	-
		22 - skill to ensure the solution	0	-	-
	6 - Knowledge organization skills.	23 - Skill re-planned	0	-	-
		24 - the skill to modify the products	0	-	-
		25 - skill to clarify mistakes	27	7.22 %	3
		26 - the skill of working wizards	0	-	-
		27 - the skill of organizing thinking	0	-	-
<b>Total</b>			<b>374</b>	<b>100 %</b>	

In general, it is clear from table (7) that the rates of inclusion and representation of supra-cognitive thinking skills vary, as we find that the evaluation questions and activities contained in the computer book for the fifth grade preparatory achieved (19)

of the skills out of (27) skill (70.37%), which is a percentage While there is disparity and imbalance in the distribution of skills, while focusing on the (conceptual awareness skill) to a large extent relative to the rest of the skills, and neglected to include each of the skills (skill to give justification, and skill to change strategy, and skill to improve the context, and skill to ensure the solution , Skill Reset Blueprint, Skill Modification Products, Skill Work Processors, Skill Organizing Skill Despite its importance, this is confirmed by (Abdul Aziz, 2009) as he explained that the skills of supra-cognitive thinking are complex mental skills, which are the most important components of intelligent behavior in the processing of information and grow with the advancement of experience and age, as these skills work in the control of thinking activities to use The learner for his cognitive abilities effectively or to solve a problem, in addition to supervising, organizing and making judgments about the way to solve problems, it aims to raise the level of independence of learners and their effectiveness in the practice of self-directed thinking and improve the level of oral and reading comprehension and representative reasoning, they manage activities Thinking and its orientation (Abdul Aziz, 2009: 211-212), Figure (3) illustrates the supra - cognitive thinking skills in the evaluation questions and activities in the computer book for the fifth grade preparatory.



### Figure (3)

Percentages of supra-cognitive thinking skills in evaluation questions and activities in the fifth grade computer book (prepared by the researcher)

#### **Conclusions**

1. The focus of the evaluation questions and the activities of the computer book for the fifth grade preparatory on the field of (self-awareness of knowledge) at the expense of the field (self-organization of knowledge).

2 - For the skills of the President (skills of conceptual knowledge) the highest percentage at the expense of other key skills, while (skills evaluation of knowledge) ranked last by a very small percentage in the evaluation questions and activities contained computer book for the fifth grade preparatory.

3 - The sovereignty (skill awareness of concepts) on the rest of the sub-skills and get the first place in the questions and activities of the computer book for the fifth grade preparatory.

4 - Omission of evaluation questions and activities contained computer book for the fifth grade preparatory Include many thinking skills supra-cognitive (skill to give justifications, and skill to change strategy, and the skill of improving the context, and skill to ensure the solution, and the skill of re-planning, and the skill of modifying products, and the skill of the work of processors, And the skill of organizing thinking).

5 - Disparity and imbalance in the inclusion of supra-cognitive thinking skills in the evaluation questions and activities of the computer book for the fifth grade preparatory.

6 - Lack of ownership of those concerned and responsible for the development of the computer curriculum for the fifth grade preparatory conditions for the right number of questions and activities to be available in the chapters of the book, as well as the omission of the book and any activity mentioned in both chapters III and IV.

#### **Recommendations**

1- Restructuring the evaluation questions and activities of the fifth grade middle school computer book so that there is a fair and balanced distribution of all the skills of supra-cognitive thinking, which achieves the development of all skills among students.

2 - Preparing seminars and training courses for computer teachers in particular to illustrate the importance of supra-cognitive thinking skills to achieve the desired and comprehensive growth of students in all areas.

3 - Increasing attention to the evaluation questions and activities of the fifth grade preparatory computer book by enriching them with the skills that have been overlooked because they contribute to the development of the educational process and raise the level of thinking among students and promote the content of the book.

### **Proposals**

1- Analytical study of computer books for other stages according to the skills of supra-cognitive thinking.

2 - A proposed program for the development of supra-cognitive thinking skills for preparatory stage students.

3 - Preparing a guide for the teacher in accordance with the skills of supra-cognitive thinking for the computer book for the fifth grade preparatory.

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