

Evaluating The Content Of Fourth Grade Literary Level Geography Book According To Systemic Thinking Skills

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Abstract

This research aims to (Evaluating the content of fourth grade literary level geography book according to systemic thinking skills), and to achieve the goal of the research, the two researchers adopted the descriptive analytical approach, a method of research, and represents the research community in the geography book for the fourth grade literary, and the research sample was represented by the content of the geography book for the fourth grade literary.

In order to answer the research question, the researchers prepared the research tool, which was to prepare a list of systemic thinking skills in its initial form, which included a number of (24) indicators distributed on (5) key skills, and the validity was confirmed after presenting them to the arbitrators, and then the researcher analyzed the content of the book with the number of its pages (128) pages, and the researchers extracted the stability of the analysis in two ways: stability over time, and stability between the analysts, as the coefficient of stability over time reached (90%), and the coefficient of stability between the researcher and the other analyst was (88%), and to analyze the data, the researcher used the statistical methods and methods represented by: Cooper's equation to calculate the coefficient of stability, frequencies and percentages, and Ki square, and the results of the research showed that there is a discrepancy in the availability of the systemic thinking skills included in the content of a book for the fourth grade literary level , and the skill (classification) obtained higher frequencies and a percentage of (70.5%), followed by the daily management of relationships) by a percentage (10.9%), then came the evaluation of the organizers (6.31%), systematic structure skill (6.2%), and the structured analysis (6.2%) and the structured percentage of the structured analysis).

Keywords: Evaluation , Geography, Systemic Thinking, Systemic Thinking Skills

Chapter One : Definition of Research:

Research Problem:

The educational reality in our schools shows us that the linear curriculum is prevalent in the content of geographical books and the acquisition of geographical knowledge, where educational experiences are presented in the form of separate

topics, which ultimately leads to a huge and unconnected accumulation. When the student studies a specific geographical topic, it does not show its relationship with other related topics, which results in a weakness in the interrelationship and relations between its parts as a system, and between parts and the system as a whole, so students need to understand this integrated system so that the student is able to see

the comprehensive future of the topic without losing its parts. (Qasim, 2011 : 8)

So one of the most important goals of the curriculum is to teach students how to think? This is done by developing their abilities on how to think, and how to process information to benefit from it in different life situations, so that they are able to invention and innovate and practice thinking skills and processes. (Asr,1999: 75)

In line with global trends that emphasize that education reform is through systemic thinking in curriculum building, many scientific conferences have been held at the international and local level, including the eleventh scientific conference held at the University of Mostansiriyah in (2005) , which called for a number of recommendations, including the need to continue developing curricula, including curricula for social subjects , for this development to include goals, content , methods, techniques ,and teaching strategies in order to keep pace with developments in the world of teaching and learning. Obaid and Afana, 2003: 65) (Al-Mustansiriyah University,2005: 11-17), as well as the Sixth Arab Conference on Teaching and Education held on April 13-15, 2006, which was organized by the Science Development Center at Ain Shams University with the International University of Egypt, and one of its recommendations was to expand the application of the systemic approach in the content of different academic subjects and different educational levels to achieve systemic thinking among students, in order to be able to face the challenges of globalization, local crises and regional disasters. Al-Kubaisi,2010: 25)

Therefore, the researchers evaluated the content of the book of geography according to the systemic thinking skills ,because of its importance in being a feature that distinguishes students, and to ensure the extent to which it is included in the content of the book of the basics of geography and its techniques for the fourth grade literary, in addition to the lack of a previous study (to the extent that the researchers know) that dealt with the evaluation of the content of geographical books according to the systemic thinking skills in Iraq, and in light of the above, the researchers developed the idea of the current study and its problem . From the above, the research problem is determined by the following question:

What is the availability of systemic thinking skills in the content of the book of the foundations of geography and its techniques for the fourth grade literary?)

Research importance.

Geography is one of the important social materials in education, as it provides students with information, correct ideas, and the development of a holistic view of them through the realization that the world constitutes an interdependent unit affected by each other, as well as the development of their ability to observe accurately, help them to explore, analyze phenomena, and infer their occurrence, and encourages them to research and investigate, as well as the development of their mental abilities such as analysis, comparison, conclusion and judgment, so they have sufficient knowledge in the natural and human geographical field. (Qatawi, 2007: 23-24)

Therefore, geography is not limited to merely listing information or describing visible phenomena, but also means studying the relationships between these phenomena, and it also means addressing the hidden factors, and these relationships may be between similar phenomena such as between natural phenomena. (Manat and plant) or (terrain and climate) or relationships between various human, economic, temporal and spatial phenomena. The most important types of relationships are those between natural and human phenomena, and the teaching of geography must start with simple examples of relationships that are easy to understand. (Al-Tatti, 2002: 25_26)

The preparatory stage is a stage of development that is influenced by the previous stages and affects the subsequent stages of development, which is a multifaceted and multifaceted stage, and where the student grows physically, it also grows socially, emotionally and mentally, and in which students have reached their maximum mental competence, but the lack of experience if it is irregular leads to the dispersal of their educational experiences, and this limits their knowledge and hinders their ability to use what they know, and we see that innovation appears in the adolescents who are more independent or who have the highest intelligence and the most

ambitious and ambitious, at this stage their ability to acquire, absorb and conclude. (Aldarmdash, 1997: 37)

In view of the importance of thinking about the educational process, it has become prominent in the thinking of educators, experts, and curriculum designers, because of their conviction of its importance, as the learner is facing an increasingly complex future, which requires high skills in decision-making, solving problems, and carrying out various initiatives, and therefore the learner needs academic content that provides him with thinking skills in order to be able to compete effectively, in an era in which success and excellence are linked to the ability to think well. (Al-Obaidi and Al-Shabab, 2016: 14)

Objective of the research: This research aims to evaluate the content of the geographical book of the fourth grade the literary according to the systemic thinking skills , by answering the following question:

What is the availability of systemic thinking skills included in the content of the fourth grade geography book according to the systemic thinking skills ?

Research Limits: The current research is limited to :

- 1- Content of the book Fundamentals of Geography and its Technologies for the fourth grade of literature for the academic year 2021-2022, the formation of a committee from the Ministry of Education, 2018, 11th Edition
- 2- Systemic Thinking Skills

Term Definition :

I. Evaluation : Define

(Hamilton, 1975) That:

“A process by which we can improve or estimate the value of something” (Hamilton, 1975: 20)

The researcher defines it procedurally: It is the process of issuing a judgment by the researcher on the availability of systemic thinking skills prepared by the researcher on the content of the book Fundamentals of Geography and its techniques for the fourth grade literary in Iraq to identify the strengths to strengthen them and weaknesses to avoid them.

2. Systemic Thinking Skills: Defined by (Nazal 2018) as:

- “ A set of mental processes and skills that the individual uses when searching for the answer to a question, a solution to a problem, building meaning, or reaching original products that were not known to him before” (Nazal, 2018 : 25)

The researcher knows it procedurally:

These are higher mental skills that help students to understand and confront the situations and problems facing them, which must be included in the content of the book The Foundations of Geography and its techniques for the fourth grade literary.

3. **Systemic Thinking:** define (Al Saeed and Al-Nimer, 2006) That:

"The student's ability to form mental structure in a way that moves him from thinking in a specific way to comprehensive thinking, which makes him consider many elements that he was dealing with as distant topics, so he sees them common in many aspects, that is, he looks at things from a structural perspective or an evolving perspective." (Al-Said and Al-Nimr, 2006 : 120)

The researcher defines it procedurally as:

One type of higher level thinking, which helps students understand, perceive the relationships between the systems presented to them, and in a way understand all by its parts, which develops their mental abilities .

Chapter Two: Theory Background and Previous Studies :

First : Systemic and Geographical Thinking

Due to the nature of geography and different types of thinking, we find that systemic thinking is one of the closest types of thinking to geography, because it aims, by virtue of the nature of its topics, to develop the learner's thinking skills, help him adapt to his society, and understand the environment in which he lives by studying the relationship between man and his natural environment, and the nature of the

interaction between them and the perceptions of relationships and problems, so this contributes to overcoming them and finding appropriate solutions to them. (El Sayed,2003: 18)

There is no doubt that the nature of geographical phenomena (natural and human) has become more complex and more interrelated, so that it is difficult to perceive and understand them accurately except by addressing and studying them within the framework of a systemic thinking that is consistent with the nature of these geographical phenomena, which includes many natural and human aspects that interact together (internally and externally) within a systemic framework specific to each phenomenon, where systemic thinking helps to identify the relationships between various geographical phenomena and the issues and problems associated with them, as well as the interactions between them clearly and accurately, which makes the learner able to form his holistic and comprehensive images about those geographical phenomena, and through which he builds his geographical knowledge and acquires the targeted skills and values. (Suleiman, 2017: 32)

This can come through the development of the skills of perceiving relationships, analyzing geographical systems and then installing them in each comprehensive, and since geography is the science of vision, the development of the learner's ability to see the relationships between the things themselves leads to improving the in-depth view of things, and thus has the ability to analyze and compose to reach the creativity, which is one of the most important outputs of the educational system. (Al-Kubaisi, 2010: 88)

Second : Previous studies:

- **Al-Maliki Study (2006) (Analysis of the content of the reading book for sixth grade primary students in light of the systemic thinking skills)**

This study was conducted in the Kingdom of Saudi Arabia(Umm Al-Qura University/Faculty of Education in Makkah / Department of Curriculum and Teaching Methods). The study aimed to:

- 1- Determine the systemic thinking skills required for the sixth grade students in reading
- 2- To know the extent to which the reading book trainings of the sixth grade students take into account the systemic thinking skills .

To achieve that, the researcher adopted the descriptive analytical approach, and the researcher designed a questionnaire that included an initial list of the systemic thinking skills needed for the sixth grade primary students, and then converted the skills extracted into an analysis card for reading book training for the sixth grade primary students in light of the systemic thinking skills, and applied the analysis card to the entire study community of(216) training in the scheduled book, as for the statistical methods, the researcher used the statistical program of social sciences (SPSS), repetitions, percentages, and Cooper's equation for the analysis stability, and the results showed that the systemic thinking skills in the training of the textbook came in varying proportions, where the first ranked the skill of the systemic composition and a percentage of (78,44%), followed by the skill of analysis and a percentage of (18,53), then the third ranked the skill of (classification) and a percentage of (2,26%). The skill of relationships came in the last rank (0.54%)

- Minkhi Study (2021)

(content analysis of biology books for the preparatory stage according to the systemic thinking skills and students ownership of it)

This study was conducted in Iraq(Sumer University/Faculty of Basic Education/ Department of Science) and this study aimed to:

- 1- Analysis of the content of biology books for the preparatory stage according to the systemic thinking skills
- 2- Disclosure of the extent to which students in the sixth grade are bioscientific and possess systemic thinking skills

- 3- Detection of the extent to which students in the sixth grade have the skills of systematic thinking according to the gender variable.

To achieve that, the researcher adopted the descriptive analytical approach, and the study sample was represented by the content of the biology books for the preparatory stage, and the students of the sixth scientific stage, consisting of (200) male and female students, the sample of the male students was (115) and the female students (85), and the researcher adopted (Saeed and Al-Nimer classification, 2006) in the analysis process, and the researcher prepared a test to measure the systemic thinking skills in students, as for the statistical methods used by the researcher, repetitions, percentages, and the Holsty equation for the stability of the analysis and the test (t-test) at the level of significance (0.05) and the Pearson correlation coefficient, the equation of the T-test, the discriminatory force, the equation of the Cronbach alpha, and the Kay square, and the results showed that the fifth scientific book obtained the highest percentage of repetitions by (35.7%) and the second grade of the

fourth grade scientific book and by (32.7%), and then the sixth grade scientific book by (31.4%), as well as the results showed weakness in the student's possession of the sixth grade of the skills of thinking skills, and the results indicated the absence of the sixth grade.

Chapter Three: Research Methodology and Procedures:

The researchers used the descriptive analytical approach (content analysis method), as it is one of the most appropriate scientific research methods for this study:

The research community and its sample:

The current research community is in the book Fundamentals of Geography and its techniques for the fourth grade of literature, and it is scheduled to be taught in Iraq for the academic year (2021-2022). As for the research sample, it included all the topics of the community (content) included in the book Fundamentals of Geography and its techniques for the fourth grade of literature, with (128) pages from the original research community of (143) pages, and as shown in Table(1)

Table (1) The research community and its sample

N o.	Chapters	Main Topics	Topics	Tab Pages	Excluded Pages
1	Chapter One	Geographical Thought in Human Civilizations	Spontaneous stage - the ancient stage – the stage of European geographical thought in the Middle Ages - the stage of modern geography - the stage of modern geography	26 March	3
2	Chapter 2	Scientific research in geography	Steps of scientific research in geography - the nature of geography	27:37	2
3	Chapter Three	Geographical data sources and presentation	Geographical data – geographic variables – disaggregation and presentation of data	38-73	3
4	Chapter Four	Geographic maps and techniques	Maps – Remote Sensing Technology – GIS Technology	74- 115	2
5	Chapter 5	Geographic Fields	Natural Geography Fields – Human Geography Fields	116-143	5

Total	-	-	128	15
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Research tool: For lack of a ready and appropriate tool for data collection and analysis, and the objectives and purposes of this research, the researchers prepared a list of systemic thinking skills included in the content of the geographic book of the fourth grade literary in a manner consistent with this research, and in a manner appropriate to the nature of the stage, and the nature of the subject, and for that the researcher followed the following procedures:

1. See the specialized educational literature represented by previous studies that analyzed the content of books, including the study of (Al-Maliki,2006AD), the study of Mankhi (2021AD), the study of Abdul Ridha(2021AD), and the study of Kisworo (2021AD).
2. Using the opinions of arbitrators from specialists and experts, for the purpose of formulating and preparing the research tool for an occasion to achieve the goal of the current research.
3. The researcher presented that the list (in its initial form) that organizes the skills of system thinking and its indicators on a group of experts and specialists in methods of teaching geography, measurement and evaluation, which are (20) experts and arbitrators, to indicate their views on the suitability of these skills for the content of the book of geographical foundations and its techniques and ratios in evaluating the content of the book of geographical foundations and its techniques for the fourth grade literary, as well as to delete inappropriate skills and amend and add what they deem appropriate.

The researcher made the necessary adjustments based on the opinions of the arbitrators and experts with specialization (geographical teaching methods , measurement and evaluation), so that the research tool is ready in its final form to achieve the goal of the current research.

Validity : The researchers presented the tool that they prepared to a group of experts and arbitrators, and through their vision and

observations, the researchers adopted the skills and indicators that get an agreement rate of (80%) as an indicator of their powers, and excluding the indicator that did not get this percentage, and accordingly, the researchers adopted the paragraphs that got a percentage of (80%), and since the number of experts with specialization has reached(20) experts, so the indicators that got the approval of (18) experts were adopted, which represents (80%) of them, and the researchers took all observations, whether related to linguistic reformulation, or deletion and addition in proportion to the research objective.

Tool Application: The current research tool consisted of a list of systemic thinking skills prepared by the two researchers, which means the means adopted by the two researchers to access data and information from the sources concerned with his study. The tool consisted of (5) key skills, and (24) sub-indicators, and the researchers used content analysis to know the systemic thinking skills included in the content of the geographic book of the fourth grade literary.

Analysis stability : In order to objectively analyze the content of the book Fundamentals of Geography and its techniques for the fourth grade of literary and to limit the subjectivity of the analyst, and to obtain acceptable stability, the researcher used two types of stability:

Stability over time: The researchers completed the first analysis on 27/3/2022, while the second analysis was done on 17/4/2022, that is, with a time difference of (21) days, and for the same sample adopted by the researchers for the study by(100%), the coefficient of stability of the analysis over time was (90%), using the Cooper equation.

2.Stability with other analysts: To achieve this stability, the two researchers used another analyst with specialization, and the lists of content analysis and the geographic book for the

fourth grade literary, where a random sample of the total content of (128)pages was chosen, as the percentage of the sample was (24%), i.e. (21) pages of the content of the geographical book for the fourth grade literary, including the third chapter (data sources, geographical data, geographical variables and their presentation, and

the classification and presentation of data), and the stability coefficient between the researcher and the other analyst was (0.88%), as the researchers extracted the stability coefficient between them and the second analyst by using the Cooper equation, and as shown in Table (2) .

Table(2) The stability of the analysis

No.	Type of Agreement	Analysing	Coefficient of agreement
1	Agreement between the researcher and another analyst	between the researcher and the other analyst	88%
2	Agreement over time	Between the researcher (stability over time) and himself by a time difference (21days)	90%

Statistical means:

1.Cooper's equation to calculate the stability of the analysis

Coefficient of stability = number of times of agreement / (number of times of agreement + number of times of disagreement) × 100 (cooper, 1974:p27)

2. Frequencies, percentages (relative importance) and K-square

Chapter Four: Research Results:

This chapter includes a comprehensive presentation and explanation of the researcher's findings, which include the answer to the research question (**What is the availability of systemic thinking skills in the content of the book Fundamentals of Geography and its techniques for the fourth grade literary?**)

To answer the research question, and to judge the skills achieved and not achieved, the researcher will present and interpret the results as follows:

I. Presenting the results: For the purpose of achieving the goal of the research, which is to

evaluate the content of the book of the basics of geography and its techniques for the fourth grade literary according to the systemic thinking skills , the researcher analyzed the content in light of the skills that were previously identified, so the researcher will present the results of the content evaluation, as this research aims to achieve the following question:

- **What is the availability of systemic thinking skills in the content of the book Geographical Foundations and Techniques for the fourth grade literary?**

After the researcher analyzes the content according to the systematic thinking skills of (5) skills,where all the ideas in the content reached (1500) ideas, and (1109) ideas were the suitability of the research tool, and the following is a presentation of this distribution,and Table(3) shows the repetitions and percentages of the main systematic thinking skills in the content of the book of the foundations of geography and its techniques for the fourth grade literary.

(Table 3).

No.	Terminations Skill	Total Chapter 1 Frequencies	Total chapter 2 recurrences	Total Class 3 Frequencies	Total chapter 4 recurrences	Total Class 5 Frequencies	Total Recurrences	Pg. Ct.	New Sequence
1	Classification	52	34	256	253	187	782	70,5%	1
2	Awareness of systemic relationships	24	19	15	15	48	121	10,9...	2
3	Systems analysis	10	5	19	28	5	67	6.04%	5
4	Installation of systems	16	8	7	23	15	69	6:22	4
5	Rectification of systems	16	14	22	10	8	70	6h 31m	3
Total		118	80	319	329	263	1109	100%	

It is clear from the results mentioned above in Table (3) that the book's content achieved (1109) repetitions distributed over five main skills, and the results indicate that the skill (classification) obtained the highest percentage of (782) repetitions and a percentage of (70.5%), followed by the skill (perception of systemic relations) which obtained (121) repetitions and a percentage of (10.9%), then the skill (evaluation of systems) by (70) repetitions and a percentage of (6.31%), followed by the skill (installation of systems) which obtained (69) repetitions and a percentage of (6.22%), and the skill (analysis of systems) obtained the lowest repetitions by (67) repetitions and a percentage of (6.04%).

II. Interpretation of results

After the researcher presented the results of the content analysis for the geographical book of the fourth grade literary, it became clear that the

content of the geographical book achieved all the skills and in varying proportions, and it is clear from Table (3) that the systemic thinking skills included in the content of the geographical book of the fourth grade literary came in different ratios that reached the highest frequency (classification skill) and the lowest skill (analysis of systems). These skills largely coincide with the nature of geography as a science that contains a wide range of facts and data, which requires a logical organization that starts from the tangible and ends with abstractness, as well as its suitability with the age of the stage of study, but the negative indicator on it is that some ratios constitute a very small percentage such as the skill (analysis of systems), which is an important skill and must be included in the geographical content, because the purpose of the presentation of geographical concepts is to reach the level of analysis and to realize the relationships between geographical concepts.

Chapter five: conclusions, recommendations and proposals.

Conclusions: Based on the findings presented in the previous chapter, the researcher reached the following conclusions:

- 1- When analyzing the content of the geography book for the fourth grade according to the systemic thinking skills , it was found that the level of achievement of the systemic thinking skills in the content was provided in different proportions.
- 2- The content of the Fourth Grade Literary Geography Book does not link the student's previous experiences with current experiences.

Recommendations: In light of the research findings, the researcher recommends that the Ministry of Education and the curriculum authors should be invited to take into account the following:

- 1- Utilizing the systemic thinking skills in developing the geography curriculum, in order to keep abreast of developments in the global curricula, which emphasize the need to introduce types of thinking that help students solve the problems and situations they face .
- 2- Paying attention to the indicators of systemic thinking skills that have not been achieved in the content of the geography book for the fourth grade literary, especially the skill index (installation of systems) in a way that achieves integration and interrelationship between the subjects that the student studied in the previous stages of study with what he is studying in the current stage.

Proposals:

- 1- Conducting an evaluation study of the content of social books for the intermediate stage according to the systemic thinking skills .

- 2- Conducting an evaluation study of social books for the primary stage according to the systemic thinking skills .
- 3- Conducting a comparison between the content of geographical books for the preparatory stage in Iraq and the content of geographical books in the Arab countries according to the systemic thinking skills .

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