

The extent to which the 6th grade science textbook includes 21st century skills

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Abstract:

The aim of the current research is to know the extent to which the science book for the sixth grade of primary school includes the skills of the twenty-first century, and to achieve the goal of the research, the researchers used the descriptive analytical method, represented by the method of content analysis, as the content of the science book for the sixth grade was analyzed, and the researchers prepared a content analysis tool that was done and it was built in light of the twenty-first century skills, and the research tool was prepared in its initial form, as it included a list of twenty-first century skills, Appendix (2), as it included (60) indicators for these skills distributed into (9) skills, which are critical thinking and problem-solving skills (11) indicators, Communication and cooperation skills (8) indicators, innovation and creativity skills (8) indicators, the culture of computing and information technology (5) indicators, flexibility and adaptation (4) indicators, initiative and self-direction (5) indicators, social skills and multi-cultural understanding (5) indicators Productivity and accountability (7) indicators, leadership and responsibility (7) indicators, and after presenting them to a group of expert referees and specialists in (methods of teaching science, education, psychology, and professors specializing in chemistry, life sciences, physics, and chemistry), finalists are (54) indicators distributed on nine main skills, which are critical thinking skills and problem solving (11) indicators, Communication and cooperation skills (7) indicators and skills of innovation and creativity (7) indicators, the culture of computing and information technology (4) indicators, flexibility and adaptation (4) indicators, initiative and self-direction (5) indicators, social skills and understanding of multiple cultures (4) indicators, Productivity and accountability (6) indicators, leadership and responsibility (6) indicators, the researchers used the frequencies and percentages, and the Holsti equation to find the reliability coefficient as statistical means, and the research reached the following results:

1- The twenty-first century skills that must be available in the science book for the sixth grade of elementary school consist of nine main skills: skills of critical thinking and problem solving, communication and cooperation, innovation and creativity, the culture of computing and information technology, flexibility and adaptation, initiative and self-direction, social skills and cultural understanding Multiplicity, productivity, accountability, leadership and responsibility.

2- The variation in the availability of twenty-first century skills in the science book for the sixth grade of primary school, where the skills of critical thinking and problem solving got the highest rate (33.0%), while the initiative and self-direction skills came in the second highest rate (13.06%), and productivity skills got Accountability is ranked third at a rate (12.84%), the percentage of availability of innovation and creativity skills (11.96%), communication and cooperation skills (11.29%), computing and information technology culture skills (4.4%), flexibility and adaptation skills (3.67%), social skills and understanding Multiculturalism (3.65%), leadership skills and responsibility (5.98%) In light of the research results, the researchers recommend the following:

1- To benefit from the results of the current study in developing science books in the Republic of Iraq in light of the skills of the twenty-first century.

2- Reconsidering the content of science books for all educational levels in terms of their handling of the twenty-first century skills, given their importance in preparing the learner who is able to cope with the challenges and address the problems facing him.

Key Words: Book Inclusion, 21st Century Skills

Chapter One: Definition of Research

First: Research problem:

Realizing the realities of the era in which we live in terms of the rapid development that it is witnessing in various social, economic, industrial and political aspects, the explosion of knowledge and the information revolution, the introduction of advanced technology in various fields of life, and the openness to other cultures, so the world has become one village and the barriers and borders between the

countries of the world and other cultures have disappeared, all of this led to the need for qualified individuals who possess skills to help them cope with and face these developments and prepare them for work and life, and transforming them from graduates looking for work to creative graduates who are productive for work, the components that prevailed in the twentieth century changed in the twenty-first century, and what was appropriate for us in the twentieth century has become unsuitable for our children in this new century, and to keep pace with these recent developments in all their aspects has become imperative, the educational systems and the components and elements they contain should keep pace with these increasing developments. In light of the above, the problem of the current study is determined in answering the main question:

How well does the 6th grade science textbook include 21st century skills? Several sub-questions are divided from this question: What are the twenty-first century skills that are required in the content of the science book for the sixth grade? - To what extent are the twenty-first century skills (critical thinking and problem solving, communication and collaboration, innovation and creativity skills, the culture of computing and information technology, flexibility and adaptation, initiative and self-direction, social skills and multi-cultural understanding, productivity and accountability, leadership and responsibility) in the sixth-grade science book Primary ?

Second: Research importance:

Our current era is witnessing many developments in various fields, including information technology, which calls for preparing individuals and qualifying them according to these variables, and the educational system in general is the official body concerned with this through school curricula in particular by making it keep pace with the scientific and technological developments taking place in our current era, and since the curriculum explains the existing educational philosophy in a society, as it is the basis for achieving the educational goals set and in which the great responsibility rests with the educators who should work to form the citizen that the society seeks as the main goal of education, thus, the curricula must direct their attention to contribute to preparing the individual for life, regardless of his work and his aspirations in the future. (Jabr and El-Arnousi, 2015, p. 58), where the curriculum is a major input from the educational system and a basic axis of the educational process, and the means used by the school to reach the goals that the community believes in. It is the essence of education and the basic element in it, and it is the way to a better future and world, and not only that, but it is of great importance to the teacher and the learner alike, as it helps learners to learn that the educational goals sought to be achieved, and also helps teachers to organize learning and provide the necessary conditions for its success. (Al-Qarni: 5: 2016), and since the curricula are considered the mirror that reflects the philosophy of the educational system and the philosophy of society, and it helps just as the sixth grade is considered one of the important grades of the elementary stage, pupils move from the elementary stage to the intermediate stage, where the student in this stage is able to understand concepts and abstract facts significantly from what It helps them acquire various life skills and adopt positive attitudes towards them (Bahjat, 1996, p.164), from here, the researcher found in the sixth grade of elementary a fertile field for discussing the current topic of study as it is one of the classes in which the process of acquiring pupils' life skills for the twenty-first century can begin, which are commensurate with their needs and level of thinking, and for her experience in teaching science subjects and students of this class, from what has become there is a need to analyze the vocabulary of education, including the science curriculum for the sixth grade, to know the extent to which it includes the skills of the twenty-first century.

This study comes in response to global trends calling for the importance of including twenty-first century skills in educational curricula in general and science curricula in particular.

2- The results of the research may benefit researchers and those interested in analyzing science books in light of the skills of the twenty-first century.

3- The research may provide a tool for analyzing the content of science books to determine the extent to which they include twenty-first century skills.

4- Participation in the analysis of any educational book is considered one of the effective participants in the development process, therefore, the importance of the study appears in benefiting from its results and recommendations and proposals that will contribute to improvement and development.

Third: Research objective:

The research aims to find out: The extent to which the science book for the sixth grade of elementary school includes the skills of the twenty-first century.

Fourth: Defining terms:

Twenty-first century skills: a set of abilities, preparations, tendencies, trends and experiences that are concerned with building the personality of the learner according to the requirements of the twenty-first century, and include learning skills, creativity, information and media skills, life and work skills (Trilling and Fadel, 2013, pp. 47-48).

- **Content analysis:** defined by (Al-Tamimi, 248,2015) as: “a research method for the overall objective, systematic description of the apparent content (the content of the book)”

Chapter two: the theoretical framework and previous studies**The first axis: - twenty-first century skills**

In the past, the basic skills required in the twentieth century were literacy and numeracy skills, which it is important to acquire for individuals in that century and this is called (3RS), which is still the basic skills for the success of the individual in his life, and with the development in the world, which reaches all areas of life in In the twenty-first century, these skills have expanded, so the concept of illiteracy does not apply to individuals who are not proficient in literacy and numeracy, and this concept has become applicable to individuals who are not proficient in the knowledge and skills of applying information and communication technology (Al-Ghamdi, 2015, p.67).

Also, success in life and work requires learning new skills that are compatible with the twenty-first century, including learning skills, creative skills, critical thinking skills, cooperation, and the ability to deal with technology, and many researchers in the field of education have identified twenty-first century skills in four Areas: the way of thinking, the way of working, the tools of work, and dealing with the world (Graffin and Care, 2014) with what the twenty-first century is witnessing of developments and transformations in multiple fields, including knowledge, economics and technology, which greatly affected individuals in terms of capabilities and skills, and there is no doubt that those who possess knowledge, technology and economic components can be distinguished in their scientific and practical life and those who do not possess these ingredients becomes in need of others, so it becomes imperative for individuals to possess the skills of the twenty-first century in order to keep pace with those transformations taking place in our current era and to become individuals qualified for work and life.

The concept of twenty-first century skills:

The twenty-first century skills have been defined as: a set of capabilities, aptitudes, tendencies, attitudes and experiences that are concerned with building personality in accordance with the requirements of the twenty-first century and include learning and creativity skills, information and media skills, life and professional skills (Triling and Fadel, 2013, pp. 47-48).

The readiness of the learners, as stated in the framework proposed by the Partnership for the Skills of the Twenty-First Century, is a set of knowledge, skills, work habits, and personal characteristics, to succeed in the present and future days, especially in group work, contemporary professions and workplaces. (2015, St 21P) that the need for twenty-first century skills in our time came as a result of several forces that cannot be neglected and not shed light on, namely:

- **The changes taking place today in the fields of science and technology.**
- **Economic and social development.**
- **Education development.**

21st Century Skills Criteria:

Standards are the main guide for the teaching and learning process, and in this context, the twenty-first century standards in the field of science should emphasize learners 'understanding of scientific concepts, developing their investigative capabilities, and learning the subject matter in a personal socio-technological investigative framework with an emphasis on the history of the nature of science.

Classifications of twenty-first century skills: In fact, there is no complete agreement about the nature of twenty-first century skills, the need for such skills has led educational specialists, researchers, and

educational and economic organizations to strive to develop frameworks to define the skills of the twenty-first century, which led to the difference in these skills according to the different objectives of their subjects. The following is a review of the most important of these Framework:

First: The framework of the Partnership for the Skills of the Twenty-first Century:

It is an organization that brings together the foundations of 2002 AD in the United States of America, and consists of business leaders, educational leaders and decision-makers, in order to determine the skills necessary to engage in life and work, and educational communities have called for the use of these skills, and to integrate them into educational systems in general and in school curricula in a special manner. (Trilling, & Fadel 2013, pp. 86-45)

The organization divided the skills of the twenty-first century into three main areas (ALECSO, 2014): (The field of advanced thinking skills): It consists of four skills (critical and analytical thinking, problem-solving, creative thinking, and linguistic intelligence), (The field of personal skills): It includes twelve skills (communication, cooperation, decision-making, adaptation, self-management, self-confidence, work ethics, motivation and positivity, appreciation of difference in the work environment). (Information technology field): It includes six skills: technological literacy, typing, using the Internet, using Microsoft Office, and literacy.

The importance of twenty-first century skills:

- 1- The twenty-first century skills work to accomplish many important goals that experts aspire to achieve for students, by helping them in the world of work and life, effective participation in society, and solving its problems in a scientific manner.
- 21st century skills imposed on the learner to become part of thinking skills, awareness and positivity in dealing with others.
- 3- Through the skills of the twenty-first century, the individual becomes able to live in a technical and media environment, and an information revolution, without cultural and geographical barriers.
- 4- Skills of the twenty-first century help learners to understand academic subjects, link them together in order to develop thinking and build new ideas, and to use knowledge and technology tools to continue lifelong learning (Al-Harbi and Jaber, 2016, p. 26)
- 5- Success in life and work requires learning new skills, which are twenty-first century skills, such as learning skills, creative skills, critical thinking skills, the ability to deal with modern technology, and cooperation. (Griffin and care 2014)

The second axis: content analysis

The content analysis process is one of the important research methods that all educators and course makers rely on, especially in the field of school curriculum development. It is a scientific research method based on describing the apparent content in an objective, quantitative and logical description in light of the unit of analysis used, where researchers in the field of curricula analyze systems, laws, administrative topics, outputs and reports from the authorities in order to know what they included in the materials and texts. (Daoud, 22,2011)

The field of education: content analysis is widely used in this field for many purposes, including:

- Identifying the impact of the content of the educational curriculum, providing curriculum developers with what should be done in order to develop the curriculum, revealing the strengths and shortcomings by using content analysis for the purposes of evaluating the curriculum, enriching the curriculum in a way that makes it more effective in achieving the goals through the results that are reached through analysis, helping teachers to reorganize educational materials and provide them with what should be done in order to implement the curriculum at the level of planning, choosing means, and improving performance, Assisting teachers in building achievement tests, choosing appropriate teaching methods, helping book designers to produce them in a way that makes them more attractive to learners, choosing their content and organizing the content.

The third axis: previous studies that dealt with twenty-first century skills:

1	Nour Al-Huda Iyad Al-Nabih	Palestine 2020	(4) Books	Analyzing the science and life books for the lower elementary stage and presenting a proposed vision for their enrichment in light of the twenty-first century skills	Lower Elementary (third and fourth grades)	Science and life
Study Approach		Study tool		Statistical means	Results	
Descriptive analytical method		Content analysis list		Frequencies - Percentages - Holsti Equation for Calculating Reliability - Validity of Arbitrators	The study (Al-Nabih: 2020) found a clear discrepancy in the ratios of the main skills covered by the science and life books for the lower elementary stage on the level of the three fields, where the percentage of learning and innovation skills was (52.52%), the percentage of digital literacy skills availability (3.73%) and the availability Professional and life skills (43.74%)	

2	Nibras Fadel Khudair Al-Zubaidi	Iraq (2020)	Identifying the mathematics department students 'possession of the twenty-first century skills	(200) male and female students	Undergraduate	Maths
Study Approach	Study tool	Statistical means	Results			
Descriptive method	The twenty-first century skills test and the twenty-first century skills list	Statistical means:Statistical analysis of the test items by calculating the difficulty of the test items, the paragraph discrimination coefficient and calculating the effectiveness of alternatives. The apparent validity was verified by presenting the test to a group of arbitrators, and the validity of the construction was verified.	The study (Al-Zubaidi: 2020) found that students of the fourth-stage mathematics department in the Faculties of Education possessed an acceptable level of twenty-first century skills by 54.8%, and that there was a difference between female and male students in their possession of twenty-first century skills for the benefit of students.			

Chapter Three: Research Methodology and Procedures

The researchers adopted the descriptive and analytical method for analyzing the science book for the sixth grade of the primary study, and they used the content analysis method, which is one of the survey methods in the descriptive curriculum because of its importance in revealing the extent of interest in the content of the science book for the phenomenon studied, the descriptive and analytical approach is defined as: "The approach that is based on describing a problem or phenomenon, with the aim of recognizing its reality on the ground, and expressing it qualitatively by describing and clarifying its characteristics, and quantitatively by giving it a numerical description through numbers and tables that show the extent of this phenomenon, its size, or the degree of its connection with other phenomena "(Afaneh and Nishwan, 2018, 187) and the most common definition of content analysis For (Berlson: 1952) as stated in (Al-Assaf, 2006)

that: A research method applied in order to arrive at a quantitative, meaningful and structured description of the content of communication. (Al-Assaf: 235: 2006)

Second: Research Community:

By the research community, it is meant all the individuals, objects, or elements that the researcher wants to study the common feature they have that can be observed. (Abu Allam: 154,2006) The community of this research has been defined by the science book for the sixth grade of elementary school, which is written by the Ministry of Education in the Republic of Iraq and is to be taught for the academic year (2020-2021). Conducting the research, its design, and the efficiency of its results.

Third: Research Sample:

The research sample was determined in the systematic textbook of science for the sixth primary grade, written by the Ministry of Education in the Republic of Iraq, to be taught for the academic year (2020-2021). %) Of the community, as the researcher excluded the introduction of the book and the list of contents from the analysis process.

Table (2): shows the science book specifications for the sixth grade of primary school

Course book	Author of the author	Edition	Class	number of units	The number of seasons	The number of lessons	Number of total pages	Number of pages analyzed
Sciences	Ministry of Education	2020	sixth	6	13	27	252	247

Fourth: Research Tool

In collecting data, the researcher must rely on a classification system that may be prepared and ready for the researcher to choose to fit it with the research problem, or the researcher works to develop his own classification, which we call the research tool, all analysis elements are not overlooked and some of them are not neglected and enable him to follow a unified method in the process of analysis and recording of duplicates, it helps in reducing the time and effort spent in the analysis process and enables him to quantify data. Without it, the analysis process is an improvisational process that neglects many elements and is affected by the subjectivity of the analyst (Attia, 2010: 153), In its study, the two researchers relied on the content analysis tool for the sixth grade science textbook in light of the twenty-first century skills, to achieve the objectives of the study, as the two researchers prepared a tool for content analysis.

Validity Tool:

The true purpose of the tool is the validity of the analysis tool and its paragraphs to accurately represent the content to be analyzed, and the validity of the tool is verified by presenting it to a group of experienced and knowledgeable people to express their observations about the design of the tool and the categories and paragraphs it contains, and this type of honesty is the most common. (Al-Hashemi and Attia 2014: 225-226) therefore, the list of skills of the twenty-first century was presented in its initial form to a group of experts, professors, specialists in the field of (methods of teaching science, education and educational psychology, and professors of life sciences, chemistry, and physics) Appendix (3) Where they expressed their observations about the paragraphs of the tool and delete the invalid paragraph, and add what they deem valid for it or amend it, and their observations were taken, and the researchers relied on 80% of the wrapping between experts to keep the paragraph, delete it or amend it and after making sure of the expert's scientific reference, as indicated by him. (Bloom) contained in (Al-Rikabi: 2015, 69), where the proportion of wraps (75%) or more among the arbitrators is evidence of achieving the apparent validity of the tool. (Bloom, 1971, P: 512)

Analyzing the content of the science book for the sixth grade of primary school

In determining the mechanism for analyzing the content of the science book for the sixth grade, the two researchers relied on the following steps:

1- Limitation the aim of analysis: is to determine the extent to which the science book for the sixth grade of elementary school includes the twenty-first century skills according to the previously prepared tool.

2- Units of analysis: It refers to the units that are used in content analysis and that are analyzed statistically to test hypotheses or answer research questions (Riffe, at. El, 2005: 68)

The researcher used the units of analysis as follows:

2-1- Recording Unit:

It is the smallest part of the content, chosen by the researcher and subjected to the process of counting and measuring, and its appearance, absence, and repetition express a certain significance in the results of the analysis. (Muhammad and Reem: 2011,162-169)

The researchers pointed out that there are several types of recording units that are commonly used, and the researchers used the idea as a unit to analyze that it is a simple sentence or more that confirms a certain concept, and then the analyst quantifies each sentence or more of that concept. (Al-Assaf: 2006,240-241)

2.2- Unit of enumeration: The two researchers used repetition as a unit of counting to calculate each idea contained in the content of the science book for the sixth grade subject to analysis in light of the analysis list and give each idea an equal weight.

3- Analysis steps: The two researchers followed the following steps to analyze the content of the science book for the sixth grade of elementary school, as follows: - Read everything related to the topic in general in order to crystallize the idea in the mind of the analyst so that on its basis the identification of the idea that works within the topic, reading the contents of each page careful reading and determining The idea and writing it in forms in order to record its recurrence, determining the type of idea, explicit or implicit, comparing the idea with the paragraphs of the analysis tool in order to determine the idea's belonging to the main skills and its sub-indicators depending on the match between the content of the idea with the skill content in the tool, the results of the analysis are unloaded into the analysis tables by giving one iteration for each idea, and then Converted into percentages to be interpreted later.

4- Validity Analysis: It means the validity of the measurement method followed by the researcher to measure the phenomena of the content to be measured and to provide the required information in light of the objectives of the analysis (Al-Hashemi and Attia: 2009,191) from the science book for the sixth grade of primary school of (18) pages according to the prepared list and the use of the registration unit (the explicit and implicit idea) and following the analysis steps with an emphasis on adhering to the analysis list and avoiding prejudice, after the two researchers completed the analysis process for Chapter (9), a picture of the analyzed material, a list of twenty-first century skills, and ideas extracted from the content of the analyzed chapter were given and presented to a group of specialized referees^{*1} in the scientific material that was analyzed to ensure the validity of its analysis.

Analysis Reliability:

Stability of the analysis means: the stability of the measurement results if it is re-applied to the same sample (Adas, 1997, 284)

In order for the stability to be more objective and to obtain acceptable stability, the researchers used two methods of calculating reliability:

1- Agreement between analysts: the two researchers sought the assistance of external analysts with experience in the analysis process ^{*2}

2- Agreement over time: means the agreement between the results obtained by the two researchers upon re-analysis 30 days after their first analysis. In order to calculate the two types of stability, a sample was selected from the analyzed material representing a percentage (20%) of the total content of the book of (50) pages out of (252) pages, so chapters (first and second) of the science book for the sixth grade were chosen, statisticians advise in descriptive studies that the minimum sample should be (20%) if the community is small (a few hundred), and this percentage decreases until it reaches (5%) in very large

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societies (tens of thousands). (Odeh and Khalil: 178,1988) By applying Holsti equation, the following stability coefficients were obtained, as shown in the following table:

Agreement between analysts	Between the researcher and the first analyst	0.88
	Between the researcher and the second analyst	0.86
Agreement through time	Between the first analyst and the second analyst	0.83
	Between the researcher and herself after 30 days	0.93

Table (5): the coefficients of the stability of the analysis

Statistical methods:

The researchers used the following statistical methods to process the data, namely:

Arithmetic means: frequencies, percentage.

Holsti equation: To find the ratios of agreement between analysts

Chapter Four: Presentation and interpretation of results

To answer the first question: What are the skills of the twenty-first century that are necessary in the content of the science book for the sixth grade?

The researchers answered this question in the third chapter.

To answer the second question: To what extent does the science book for the sixth grade of elementary school include twenty-first century skills?

To find out the extent to which the twenty-first century skills are included in the content of the sixth-grade science book, the researchers used the content analysis tool after presenting it to a group of arbitrators and making some adjustments to it, in analyzing the content of the science book to judge the extent to which it included the twenty-first century skills, the content of the science book for all skills, and then presenting the results of the book analysis for each skill separately, and the results were analyzing the science book for the sixth grade of primary school in light of the twenty-first century skills as follows:

The science book for the sixth grade of elementary school achieved (903 iterations) distributed into (9) domains, as the field of critical thinking and problem solving skills got (298 iterations), the field of initiative and self-direction skills (118 iterations), productivity and accountability skills (116), and innovation and creativity skills on (108 repetitions), and communication and cooperation skills (102 repetitions), which is the highest percentage as follows (33.0%), (13.06%), (12.84%), (11.96%), (11.29%), and, respectively, while the areas of social skills and multicultural understanding got (33 iterations), flexibility and adaptation skills (34 iterations), computing and information technology skills on (40 iterations), leadership and responsibility skills on (54 iterations), which represents the lowest percentage, which is (3.65). %), (3.76%), (4.42%), (5.98%) respectively.

These results can be interpreted as follows:

The two researchers attribute the highest percentage of critical thinking skills and problem solving (33.0%) to several reasons, including: The science curriculum predominates in its content activities and this enhances thinking and problem solving, it also corresponds to the general objectives of the content of the science book for the sixth grade of primary school that require deep and sound thinking about the situations that are raised through the activities provided by the content and that take into account asking questions to reach scientific knowledge, the initiative and self-direction skills came in the second highest percentage, reaching (13.06%), while the productivity and accountability skills came in the third place, as their percentage in the science textbook for the sixth grade of primary school was (12.84%).

Innovation and creativity skills came in fourth place with a rate of (11.96%), this is due to the diversity of content in activities that help learners to work positively and to exploit the various sources of project work, and the presence of content activities that help learners produce information.

The rest of the skills also came at very weak rates that did not exceed (4%), despite the importance of these skills in integrating the learner into society to be effective and productive in work and life.

The fourth unit of the science book for the sixth grade of elementary school (strength and energy) has the highest frequency, which is 308 repetitions, at a rate of (34.10%), while the third unit (material and its interactions) has the lowest frequency among the units, which is (121) iterations where the skills of the century are available. The twenty-first in this unit (13.39%).

The two researchers attribute the difference in rates to the failure to build the content of the science book according to clear scientific standards, including the skills of the twenty-first century. In light of these findings, the researchers recommend the following:

Recommendations: In light of the findings of the researchers in the current study, each of them recommends the following: To benefit from the results of the current study in developing science books in the Republic of Iraq in light of the twenty-first century skills, the importance of using the content analysis tool that was prepared in the light of twenty-first century skills. In analyzing science books for other educational stages, The necessity of including the science book for the sixth grade of primary school scientific activities that help in developing the skill of using modern technologies among the learners, reviewing the content of science books for all educational stages in terms of their approach to the skills of the twenty-first century, given their importance in preparing the learner who is able to cope with the challenges and address the problems facing him. Establishing standards for building science curricula at the primary stage to include the twenty-first century skills in a systematic, intentional manner that achieves integration and continuity.

Proposals: Conduct a similar study to analyze science books for the elementary grades of primary school in the light of twenty-first century skills, conduct a similar study to analyze science books for middle school in the light of twenty-first century skills, conduct a study to develop a proposed conception to include twenty-first century skills in science books for the elementary stage.

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