

Analysis of the Science Book for the Sixth Grade Primary In Light Of the Quality Standards of the Textbook

By

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Abstract

The current research aims to identify "the extent to which textbook quality standards are provided in the science book for the sixth grade primary" The research community and its sample consisted of the science book for the sixth grade primary, the researcher (analytical method) used a methodology to study it, and the tool (resolution) to achieve the goal of the study, the researcher used (alone the explicit idea) the unit of analysis, and the frequency was calculated, then the percentage and the researcher used the Cooper equation, to extract the stability of the analysis, the results of the analysis showed that there is a very clear focus in some criteria, if the axis (goals) and the axis (content) get the highest percentages in the science book for the sixth grade primary The axes (educational activities, the process of implementing the assessment, sources of knowledge) got a lower percentage in the science book for the sixth grade primary and the axis (teaching methods) did not get any percentage

After verifying the authenticity of the tool, stability was reached by:

- 1- Stability over time: The researcher analyzed with a time difference of two weeks.
- 2- Stability of analysis across individuals: between two external analysts between the researcher and the first analyst and between the first and second analyst

The researcher came up with a set of conclusions:

- 1- The science book for the sixth grade did not provide quality standards in the axes (educational activities, sources of knowledge, implementation of evaluation) at the acceptable level.
- 2- The science book was developed for the sixth grade of primary without preparation and prior planning, which made the themes of the book vary from one book to another, planning is important in achieving the desired results.

Keywords :Analysis - Textbook - Quality Standards

Search problem

The current era is witnessing many radical changes in the curriculum and ways of developing them. Since the curriculum is the key to building society, the individual and the cultural renaissance, since the individual is the fundamental pillar of the formation of societies, the curriculum in the eyes of many of the world's educational systems is the basic educational means. For this reason, educational systems are called upon to develop the integral personality of all individuals without exception. And their acquisition of skills that enable them to achieve

their lifelong self-learning, This can only be done through the building of modern approaches in line with the era of globalization and accelerated technological and knowledge explosion. (Gray, and Resourcefulness, 2016:12)

Educators emphasize that school textbooks must be set with the best results that make them a tool capable of achieving the curriculum's objectives and realizing the student's real benefit by examining, analysing and evaluating textbooks to judge their validity (Al-Lakani et al., 1990:81). This is confirmed by many scientific studies and conferences that the curricula adopted in educational institutions include the study of Hamoud. (2020), and the study of Mohsen (2016), this is also confirmed by conferences and symposiums on the need to develop the school curricula held at Ibn Rushd College of Education for Humanities (Fourth International Conference, 24-25 April 2016) (f) Fifth International Conference held from 3 to 4 May 2017) The Seventh International Conference, held in 15/4/2019, has therefore become necessary to analyze and prepare science books for the elementary stage in a way that contributes to achieving the desired goals.

It is necessary to conduct a study of the science book's analysis of the sixth grade of primary school in the light of the quality standards of the textbook for the purpose of identifying strengths and weaknesses in the science book and identifying the extent to which they meet a number of standards to be adopted in the textbook. This was reinforced by the survey of a group of teachers studying science and by an open-ended questionnaire in a supplement (3) containing a set of questions. The survey showed that most members of the sample confirmed that the science book had not achieved the desired goals and that it lacked the quality standards of the textbook.

In light of the above, the problem of research can be identified by answering the following question:

The availability of textbook quality standards in the science book for the sixth grade elementary?

The importance of research

Education is a process of development of the student's personality in all aspects pupils ", they meet the needs of pupils, develop their tendencies, meet their needs and satisfy their interests, In-school education is a complementary process to what's going on outside of it. If life teaches the individual what it means to take responsibility, cooperate, trust and love work, In-school education refines these trends so that they are acceptable to the individual and society. (Sabri, 2015: 45) The curriculum has been associated with education and its philosophy as the philosophy of education has evolved throughout the ages. The curriculum's perception of the curriculum has evolved, and the curriculum has been an element of educational work, and the curriculum has been confined to the curriculum. Curricula are seen as a means of meeting a learner's needs and are consistent with the nature of the stage, which he goes through in a way that is not exposed to the philosophy of society and his perception of life, and curricula like other educational processes are characterized by change and development. (Job, 2015:116) In view of the importance of educational curricula promised by one of the basic resistance to the educational process. Therefore, it requires a continuous review of the policy, system and content of education, its development, evaluation, renewal and quality. Educational systems have become responsible for the overall development of the human person and his future (Abu Sa 'ud, 2001:254).

The importance of research can be summarized as follows:

- ❖ The importance of the primary level because it is the fundamental rule in the education cycle, especially the sixth primary level.
- ❖ The importance of the science book, which is the main focus of the educational process.
- ❖ Analysis of the science book as one of the recent books and no prior analysis.

Objective of the research

This research aims to recognize (the extent to which the quality standards of the textbook are provided in the science book for the sixth grade primary)

Research limits

Current research is limited to the 6th Science Primary Book/4th Edition/2019.

Definition of terminology

Analysis

Definition of analysis as: "A research method designed to qualitatively, objectively and systematically describe the apparent content of a course according to predetermined criteria" (Samara and Al-Adili, 2008:53)

Procedural definition

It is a method that aims to describe and dismantle the scientific material to its components and parts to know its characteristics on the basis and rules of methodology in accordance with the scientific procedures of analysis of the science book for the sixth grade primary according to the quality standards of the textbook

Science Book

Definition of the book "Science" as a study material arranged according to a special format for the purpose of utilizing it at a specific educational level used as an essential source of information (Alafa and Fatma, 2012:231)

Standards

To define the criteria as "a phrase describing the knowledge, skills and values to be reached by a learner as a result of studying the content of each field" (Mina, 2006:84)

Procedural definition

A set of conditions and specifications that must define what the science book of the sixth grade of primary school must contain, from the standards adopted by the Ministry of Education and presented to university professors for their judgment.

Quality

Quality is defined as "working properly according to a set of educational standards or specifications necessary to raise the quality of the educational product alone at the lowest effort and cost" (Abdul Hay, 2008:210)

Chapter II

The researcher in this chapter addresses analysis, textbook and quality standards as a theoretical background for this research.

Analysis and textbook

Concept of analysis

Analysis is one of the most important procedural processes to be undertaken by a teacher. The aim is to plan learning attitudes and prepare materials, activities and facilities for their implementation. A teacher's success at all levels of education may depend predominantly on the extent to which they possess content analysis skills, and how to use it for the content proposed in the school textbooks and the ideas and content contained therein. (Al Khazaleh, 2011:53)

Analysis of content is a modern and aromatic technique in the field of scientific research with a wide scope in various spheres of life as a scientific tool and a systematic approach to analysis. It can be said that the needs of curriculum development have led some researchers to develop this method of gathering and analysing information according to various forms and patterns (Korl, 1981:9).

Analytical Characteristics

- The analysis is characterized by objectivity, viewing the subject itself as it is and moving away from subjectivity, and the objectivity is consistent and truthful in measurement.
- Depends on quantitative assessment and prepares it as the basis for judging the prevalence of the phenomenon or toxicity and its prevalence.
- The form and content of the article shall be examined. It shall examine the form in which the article or facts, concepts, ideas and values are transmitted to the recipient, as well as the content and components of the article.
- helps solve certain problems (Abdelrahman and Adnan, 2007:192)
- it aims to study the phenomena of content and is concerned with the development of laws to interpret them, and to reveal their relationships.
- describing the express and implied content of the scientific material to be analysed.
- Regulator, because it requires a structured plan in which the steps under which the analysis is conducted are clear. (Hashemi and Muhsin, 2014:181)

Improved textbook

The teacher with his experience and knowledge can enhance the scientific textbook to include effective educational activities and interesting information without waiting for publishing houses or authors to do this job. It is possible to provide timely reinforcements that correspond to students' interest and abilities, and there are other ways in which the book can be used for constructive consideration. So you can:

- ❖ Integration of the best elements taken from the published curriculum
- ❖ Identification of local sources.
- ❖ Contact with the school's directorate of education.
- ❖ Revision of supplementary materials for appropriate reading level.
- ❖ Selection of calendar methods reflecting preferred results.
- ❖ Attending professional conferences. (Al-khatabiya, 2005: 207-208)

Quality Standards

Quality concept: The concept of quality is not limited to industrial goods and products, but is transformed into an educational term. This is due to its limitations. The cadres and those involved in educational work have achieved quality because of its necessity and the need of

the educational field. The society is living with a range of changes. This has made it obligatory for general education to develop to keep pace with developments by various means, including quality in education through the improvement of the overall educational system and work to improve the inputs of the educational process to improve outputs and achieve quality. (Earnings, 2008: 20-22)

What has given quality its importance is that it comes from being a holistic approach to change beyond being a system of codified methods of approaching, adhering to and applying decisions and procedures by any organization or institution that is capable of changing the behaviour of its members towards the concept and requirements of quality. In view of its activities as a whole, which constitute the ultimate outcome of workers' efforts and cooperation, They develop a team spirit and a sense of pride and pride as a result of this institution's improved reputation. (Al-Azawi, 2005:55) The concept of quality today is one of the hallmarks of the present era, so the present time can be described as the age of quality because the term is widely used, in many aspects of contemporary life there is virtually no founder, production or service company, which does not seek to employ or use this concept (Al-Bakr, 2001, 84).

Quality and Education

Quality education provides integrated tools and methods that help educational institutions to achieve the desired results, indicating the characteristics and specifications expected in the educational service and in the activities and processes through which these specifications are achieved and referring to a set of procedures and standards whose implementation aims to improve the curriculum. (Orthan, 2006:5) The concept of quality has been extended to all educational systems. Quality has become a necessary requirement for most educational institutions to pursue. This concept refers to the set of standards with the aim of adopting and implementing them to achieve the maximum of the objectives envisaged by the institution and the continuous improvement in performance and output according to the desired purposes and specifications in the best possible ways and costs. (Diab, 2006:6)

Movement of standards

The movement of standards in the United States of America escalated in the early 1970s and spread to the countries of the developed world, if the 1970s became characterized by the age of standards, (Belawi et al., 2006:216). The challenges facing education are one of the various changes in the local, regional, international and scientific contemporary technologies to which educational institutions are exposed. This calls for a review of educational realities in various countries of the world in order to modernize and develop education and improve the educational process (Agent and Mahmoud, 2005:303).

Indicators and their relationship to standards

Indicators are the most specific level of criteria and enable us to judge how much standards are achieved. Indicators are quantitative expressions that determine the overall state of the thing we experience with accuracy. There are two types of indicators: -

- ❖ This type of indicator is more appropriate to the nature of education and is specific phrases that reflect the state of the system and enable us to make qualitative judgements using a graded scale
- ❖ Quantitative indicators: - in proportions or figures that significantly reduce the complexity of the educational phenomenon (Mujahid, 2008:15) The process of benchmarking has gradual levels of specificity and generality and begins with the identification of the phenomenon or areas constituting the system and then the second

level, which is the formulation of the criteria associated with each area. The third level is the identification of indicators expressing each criterion.

Previous studies

Study (Al Haar 2013)

Objective of the study: To know the extent to which quality standards are provided in the history book for the first grade average, sample study: Teachers who teach history for the first grade in middle and high schools in the governorate of Najaf al-Ashraf, place of study: Iraq, study curriculum: analytical descriptive curriculum, statistical means: Box Kai - Statistical Packages SpSS - Middle Reference - Centennial Weight, Study Results: Achieving quality standards in the history book for the first grade average (83.82%), which is higher than the test adopted for the calendar (0.80%), indicating that the book is of good quality.

Study (Chiappetta and others 1991 Chiappetta)

Objective of the study

Analysis of high school chemistry books in light of scientific culture, sample research: The study community is made up of seven secondary chemistry books and the study sample is selected in a random manner, the place of study: This study was conducted in the United States of America, the study curriculum: Analytical descriptive curriculum, study tool: the study compiled its data with a tool consisting of four criteria for scientific culture, the most important findings of the study: Most of these books focus on the investigative nature of science and the interaction between science and technology and society and then science as a way of thinking

Research methodology and procedures

This chapter prepared by the researcher addresses a general description of the research curriculum and the society and its designation, as well as the research tool used and the process of preparing it and ensuring its honesty, consistency and statistical means used. The researcher relied on the analytical descriptive curriculum to analyze the content of the science book for the sixth grade. (vi) Which seeks to determine the status quo of a particular phenomenon and then describe it based on the study of the phenomenon as it actually is and accurately describe it.

The research community and its appointment

Research society

The research community consists of the Science Principles Book for the sixth grade primary.

Research sample

The research sample consisted of the Science Principles Book for the sixth grade primary in Iraq for the academic year 2021/2022 which constitutes a statistical society as shown in the table.

Table (1) Science Book and Details

N.O of analysed pages	N.O of total pages	Year of printing	Edition	Class	Book title	T
165	252	2021	Fifth	sixth grade	Science	1
165	252			Total		

Research tool

Research requires a classification tool whereby science books are analysed in light of the quality standards of the textbook (Bank, 1971). Analysis is an objective, systematic and quantitative method in which an instrument, analysis units, census units and explicit and clear rules for the method of analysis are required (Bank, 1971, 95).

Authenticity of the instrument

Honesty in its general sense is the tool's ability to measure what it is designed for and the poison to be measured (Abdul Rahman and Adnan, 2007:69) To achieve this, the researcher adopted the apparent honesty that is one aspect of the authenticity of the content by presenting the list of standards in its preliminary form to a group of experts and arbitrators to judge its competence to measure what it was designed for. (Eble) to the effect that the best way to confirm the apparent truthfulness is to show a group of arbitrators, (experts) the extent to which the paragraphs represent the adjective to be measured Eble, 1972: 667)

Analytical Steps

The objective of the analysis is to determine the extent to which the Science Book of the sixth grade of primary school includes the quality standards of the textbook in accordance with the pre-prepared tool.

Sole analysis: - The unit of analysis relies on the objective of research, and the material that the research aims to subject to analysis (Al-Kubaisi, 2010:254), the researcher relied on the explicit idea as a unit for the analysis of experimented books

Sincerity of analysis

Honesty is one of the conditions to be met in the instrument, on which any study and sincerity (analytical tool) means its competence to measure what it has been designed to measure, and its validity to provide the information required in light of the objectives of the analysis and to make the analysis process, in order to accurately and faithfully translate the phenomena contained in the content. (Berlson, 1959, 155)) The sincerity of the analysis is inferred by the sincerity of the instrument, which was inferred by the sincerity of specialists, (Ashkel, Promises, 2007:854)

Persistence of the Analysis

It is intended to be the same results, so what has been reanalysed again even if the analyst and time differ (Tiger, 2008:77) The consistency in the analysis of content is influenced by the analyst's expertise, analysis skill, data clarity to be analyzed and classification aspects, as well as the type of analysis module used and the clarity of its rules (Kerilnger, 1975:129)

In order to ensure the objectivity of the classification of the analysis of the book of science, two types of stability were relied upon: -

Persistence over time

In order to reach the same results when the analytical rules apply to the same analyzed content at different times, the researcher re-analyzed by a time difference of

(30) days between the first analysis and the second analysis of the same sample of (165) sheets, and the constant factor between the two analyses (89%). Table 6 shows its values as a good constant.

Persistence through another analyst

It is a re-analysis by another analyst or analysts and the same substance and sample and the analysis is compared, (Hashemi 2009:204) the researcher hired another analyst and agreed on the basis and procedures of the analysis, where the analysis included books and adults. (165) Paper The researcher analyzed the book science, between her and the first analyst, and between her and the second analyst, after the same analytical rules and procedures were followed and the Cooper formula was used to find a constant factor, as shown in table (2) as follows: -

Table (2) Stability coefficient values

%97	Between the researcher and himself after 30 days	Agreement over time
%92	between researcher and analyst	Agreement among analysts
%84	Between the researcher and the second analyst	

The transactions obtained by the researcher when calculating the stability of the analysis are all to ensure confidence in the stability of the analysis. The Cooper,1974 indicated that if the agreement's ratio falls below (70%), this indicates a lower level of stability, and if the agreement reaches (80%) and more, this indicates a higher level of stability, (Cooper,1974:76)

Statistical means

Used for a researcher in the processing of research data on the following statistical means

Cooper equation to calculate the stability of the analysis.

$$\text{Percentage of Affiliation} = \frac{\text{N.O of times of agreemebts}}{\text{N.O of times of agreements} \times \text{N.O of times of disagreements}} \times 100$$

(Cooper,1974: 27)

$$\text{- Percentage Law} = \frac{\text{Repeat the criterion}}{\text{Total iterations of the criterion}} \times 100$$

(Sarantacos, 2003:592)

Interpretation of the results of the sixth grade science book analysis at the primary level

Science Book for Sixth Grade Primary

After analyzing the science book for the sixth grade of primary school according to the quality standards of the textbook, the total number of repeats (distributed to all units of the book, the table shows the distribution of repetitions and proportions to the quality standards of the textbook

Total repetitions and ratios		Sixth unit		Fifth unit		Forth unit		Third unit		Second unit		the first unit		Standards and Indicators Objectives	T
Percentage	Iteration	Percentage	Iteration	Percentage	Iteration	Percentage	Iteration	Percentage	Iteration	Percentage	Iteration	Percentage	Iteration		
%40.03	3138	%15.86	498	16.13 %	513	%17.78	558	%16.34	513	%17.30	543	%16.34	513	Content	1
%34.85	2732	%15.73	430	%16.28	445	%18.00	492	%16.28	445	%16.77	475	%16.28	445	Teaching methods	2
														educational activities	3
%12.12	950	%14	133	%15.57	148	%20.52	195	%15.57	148	%18.73	178	%15.57	148	Sources of knowledge	4
%5.99	470	%11.27	53	%14.46	68	%24.46	115	%14.46	68	%20.85	98	%14.46	68	Implementation of the calendar	5
%6.99	548	%12,04	66	%14.78	81	%23.35	128	%14.78	81	%20,25	111	%14.78	81	Standards and Indicators	6
%100	7838	%15.05	1180	%16.01	1255	%18.98	1488	%16.01	1255	%17.92	1405	%16.01	1255		Total

Table of distribution of repetitions and ratios according to the quality standards of the book for the sixth grade

Conclusions

The researcher's findings indicate that

- ❖ Attention of the Ministry's Committee on the Number of Curricula (Objectives and Content) in the Science Book for the Sixth Grade Primary
- ❖ The Science Book was developed for the primary stage without preparation and planning in advance, making the book's axes varied from book to book. Planning is important in achieving the desired results.

Recommendations

- ❖ Equilibrium in the lines of the Science Book for the sixth grade of primary school, so that it does not cover the axis on the rest of the axes
- ❖ Review of Science Book for Primary Level to Focus on (Teaching Methods) Textbook by the Ministry's Committee on Curriculum Numbers
- ❖ Build on the study's findings in curriculum development.

Proposals

- ❖ Preparing a study to analyze science books for the elementary stage according to criteria other than the textbook as standards of scientific culture.
- ❖ Assessment of Science Books' Questions for Higher Grades at Primary Level in Light of Technology Standards.

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