SECONDARY SCHOOL MATHEMATICS 2 CONTENT OF THE BOOK DISCIPLINES EMPIRICAL SCIENCES AND MATHEMATICS PHYSICS TO ESTABLISH WHAT TYPE OF CONTENT KNOWLEDGE (FACTS, CONCEPTS, PROCEDURES AND RULES) IN THE LEARNERS' ATTENTION Parastoo Ahmad Poor¹

Dr. FarzaneVasefian²

Dr. Fazollah Yazdani³

Abstract

The study aimed to analyze content of the book of second Intermediate 2 math and science courses in mathematical physics-based model of instructional design Meryl this survey was carried out functional and the nature of the kind of analysis that utilizes a model of the design pattern Merrill and compliance with the existing text of the book was done. The results showed that all subjects of the seven chapters of the book focus on the development of knowledge, facts, concepts are chapters 96%. This method in more seasons (80%) and 57/7 of the season in terms of principles or rules is.

Keywords: Content Analysis, Mathematics Book 2, Merrill pattern, Second Intermediate Period.

2-Assistant Professor, Ardestan Branch, Islamic Azad University, Ardestan, Iran

http://www.ijmra.us

¹-Department of Curriculum development, Meymeh Branch, Islamic Azad University, Meymeh, Iran

³⁻ Faculty Member Department of Curriculum development, Meymeh Branch, Islamic Azad University, Meymeh, Iran

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences

Introduction

Since the world with rapid developments in science and technology and an enormous technological revolution - facing information to those associated with this phenomenon and. Prevent any crises and resolve challenges to the planning and conduct of the study, the talent of existing forces And on the other hand, education is done in particular in the education mission of this institution is very serious and heavy.

In addition in the present, the speed change is to the extent that information useful life to a decade and also does not seem that the mind with information that rapidly dying except wasting time and energy establishes. For the same reason that in the programs of the recent government instead of transmission of knowledge, relying on the production of knowledge has been in this direction the content text books more than the attention they need and that they have been criticized and study the contract and of the weaknesses and shortcomings of the to their reviews and the Reformation. Therefore the Content analysis textbooks except necessities education considered to.

Also today training is that the youngsters of thinking and reasoning set out criticism and study, the occurrence of creativity and organizing a great volume of information, so strengthening the main thought of the goals program textbooks and educational and one of the basic tools of thinking, mathematics, attention in the text books to this series of important and it is necessary that continuously reviews and review and reform are.

This research aims to identify strengths and weaknesses and review or modify the contents of textbooks for the content of science and math courses in high school math book 2 second on Merrill's instructional design models.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

Statement of the problem

Given the country's educational system focused on the main textbook for teaching and the way teachers teach and students' activities are for this reason, according to the textbooks and coordinate them with the mental abilities of students in the efficiency and quality of the education system is very important.

Where the annual textbook sensitivity to experts, planners and authors have spent enormous time and cost of modifying the content of the books are written. Content as a core element of the education and training programs are the philosophers, scholars and teachers of education and educational theorists. This interest is due to the fact that no matter how the goals of higher education and to be precise, without good content there is the possibility of realizing these goals (Mirlohi, 1384, 40).

It can be said that the importance of textbooks or instructional content requires scientific study and analysis. Kind of analysis for curriculum planners, authors and decision makers is essential curriculum content analysis is.

A systematic method for describing the objective and quantitative content analysis of the content of the curriculum and text books and compare the content of the messages and objectives of the curriculum are discussed. (Yarmohammadian, 1390).

According to this definition, content analysis helps to concepts, principles, attitudes, beliefs, and all the components presented in the form of books and practical study aims to compare and evaluate the curriculum.

However, due to the important role of mathematics in understanding the nature of the world, developing thinking, as well as future supply individual and community cultural education, according to the content of essential math books avoidance seems inevitable.

The internal and external research conducted recently that some of them refer

Results Vasefyan and Aqajani (1393), which aimed to assess the skills of citizenship according to the base of the fifth book Social Studies Six elementary school students educable mentally retarded done. Overall, this book shows that the cognitive skills 22/04 percent and 13/62 percent and emotional images of 5/01 per cent and 52/77% of the education sector has been given citizenship.

Vasfeyan and Bakhtiari (1393) the analysis of the content of textbooks (Persian and social studies) during the second period beginning with emphasis on life skillsbased model did William Roman. The results of the studies showed only civics textbooks in geography in the fifth grade components Self-awareness, communication skills, problem solving and critical thinking and focus only on issues of civic consciousness and creative thinking is.

Huang (2004) in a study entitled "Comparative analysis of the mathematics curriculum in South Korea and the United Kingdom focused on the content of Algebra" do the following results: the mathematics curriculum in Korea, most of the content only once offered. But the curriculum in England, for providing each of the content areas, tend to repeat and develop more content seen. For example, in Korea, the curriculum, the content of linear equations in the eighth grade level offered, But the English curriculum, the content of linear equations with integer coefficients in the third grade, fourth grade inaccurate content linear equations with integer coefficients gradually be offered. In addition, the curriculum content Korea the Korean curriculum content presented method has been proposed by Weber emphasized, while the distinctive feature is that the content of the curriculum in England algebra, emphasizing approximate, heuristic methods and the use of calculators is.

Kia's research (2004) on the content analysis of children's books, stories, results showed, in the story books for children, including making and story telling are doing a good fit and can affect their emotions in some the books the illustration is somewhat vague and in need of reform.

Martin (2004) in the TIMSS 2004 survey result shows that the performance of Iranian students in science and mathematics education in elementary schools is not suitable and more students are able to answer questions from, applied of the combined judgmental diminished.

McCormack (2006) in a study Hankot (2007) content analysis of stories about the animals did the results showed that the content of heroes tales written in such a way that the child is able to correct behavior.

In a study by Turner et al. (2008) in relation to teaching life skills such as problem solving and effective communication on adolescents showed that these skills, their abilities to solve problems and make effective use of social supports in them increases.

Kerk Goose (2009), the results of a study to examine the books and teaching English in the fourth grade has shown that the design of textbooks, consistent with the objectives of the Ministry of Education. Moreover, the content of the books of the needs and interests of students is coordinated. After three years of the study

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

<u>ISSN: 2249-5894</u>

was conducted in English textbooks. So it seems that the evaluation of textbooks on a regular basis to increase awareness for reform or curriculum will be designed.

With regard to the question under consideration is what was said

Secondary school mathematics 2 content of the book disciplines empirical sciences and mathematics physics to establish what type of content knowledge (facts, concepts, procedures and rules) in the learners' attention

Research Method

The research method used here is that type of content can be analyzed and applied research group is.

Considering to the nature of the research that analyzes the content of grade 2 math courses and Mathematical Physics is an experimental science, revealing content and messages about it, using the model of instructional design Merrill functional levels (recall, application and explore or invent) and element content (facts, concepts, principles or rules of procedure) to justify the analysis.

The population and sampling method

The population as it is in quantitative research, this study because of its specific nature (content analysis), is proposed this qualitative study to analyze the content of the textbook and study examples of each of the sentences, Themes and goals of science and math courses in high school math book 2 second physics.

Data collection tools

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

JPSS

Volume 5, Issue 4

<u>ISSN: 2249-5894</u>

To gather the data needed, and the major components of the textbook and the results of the classification model Merrill checked. Each of the concepts discussed in textbook content with the major components of the training pattern Merrill studied and evaluated in conformance with the Therefore, based on the criteria set out below will be considered in the study include: content knowledge (facts, concepts, procedures, laws) and levels of student performance (recall, application, discovery or invention) after determine the functional levels and to determine the initial offer consistent level of expected performance in comparison with existing methods and Merrill paid books. To complete the design, another batch of providing educational materials, to provide a secondary review moreover, the method used in the research library of the action is necessary. To further understand the summary of instructional design models Merrill and use it as a tool to be mentioned.

Results

Secondary school mathematics 2 content of the book disciplines empirical sciences and mathematics physics to establish what type of content knowledge (facts, concepts, procedures and rules) in the learners' attention? Based on the findings of the study, all subjects of the seven chapters of the book focus on the development of knowledge, facts, concepts are chapters 96%. This method in more seasons (80%) and 7/57 of the principles or laws of the season was. Results obtained are consistent with some studies.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

Resources

Afamasaga-Fuata'i, Karoline (2009). Enhancing Undergraduate Mathematics Learning Using Concept Maps and Vee Diagrams. In Afamasaga-Fuata'i, Karoline Concept Mapping in Mathematics, (chapter12, pp235-275). Springer.

Ahadi, M) 13, 90). Arrangements Mvzshy.thran technology, publishing and promoting human, 206Sfhh

Asnaashari ,Nafisa) 1381) Biology and laboratory analysis is the content of the

book (1) Grade, Master's Thesis, Faculty of Psychology and Educational Sciences,

Islamic Azad University Vahdkhvrasgan

- Canas, Alberto (2003). A Summary of Literature Pertaining to the Use of Concept Mapping Techniques and Technologies for Education and Performance Support. The Institute for Human and Machine Cognition.
- CobanogluEO,SahinB,Karakaya C(2009).Examination of the biology textbook for grades in high school education and the ideas of the pre-service teachers.Procedia social and Behavioral sciences1: 2054-2512. Available at,www.sciencesdirect.com

creating educational computer games: A case study on mathematics learning during design and computing, Computers & Education, 73(2014)., pp: 26-39.

Fengfeng, Ke.(2014). An implementation of design-based learning through

GorecekM,Kocakulah MS. (2009).Evalution of grade,physics curriculum based on teachers views.Procedia social and Behavioral science1: 1121-1126. Available at,<u>www.sciencesdirect.com</u>.

Helenrose Fives & Nicole DiDonato-Barnes (2013). Classroom Test Construction: The Power of a

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

- Honeycutt.J.D .(2007).Commentary on business-to-business marketing textbook:A Comparative Review;Journal of business-to-business marketing,V. 14,N. 4,PP. 79-83.
- Hwang H J.(2004). A comparative analysis of mathematics curricula in Korea and England domain focusing on the content of the algebra, Chosun University, Korea, Avalibale at:<u>WWW.cimt.plymouth.ac.uk/journal/hwang.pdf</u>.

Joohi Lee, Jill Fox and Amber L. Brown (2011). Content Analysis of Children's Mathematics Proficiency. Education and Urban Society September 2011 vol. 43

no. 5 627-641.

- Kamrul Hasan M.(2004).Alinguistic study of English language curriculum at the secondary level in Bangladesh .http;//www.Anguagein India.com/aug. 2004.Hasan dissertion1.htm/
- Keay.D.(2004).A Content analysis story books.communicationresearch,V. 22,N. 2,PP. 88-90
- Kirkgoz Y.(2009).evaluating the English textbook for young learners of English at Turkish primary education. Procedia social and Behavioral sciences1: 79-83.www.sciencesdirect.com
- Novak, Joseph, Canas, Alberto (2009). The Development and Evolution of the Concept Mapping Tool Leading to a New Model for Mathematics Education. In Karoline, Afamasaga-Fuata'i, Concept Mapping in Mathematics, (chapter1, pp3-16). Springer.

Ozdemir, Ahmet(2005). Analyzing Concept Maps as an Assessment Tool in Teaching Mathematics. Journal of Social Sciences, Vol.1, No.3.,pp141-149.

Schmitta, Jean (2009). Concept Mapping as a Means to Develop and Assess Conceptual Understanding in Secondry Mathematics Tteacher Education. In Karoline, Afamasaga-Fuata'i, Concept Mapping in Mathematics, (chapter7, pp137-147). Springer.

A Monthly Double-Blind Peer Reviewed Refereed Open Access International e-Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage, India as well as in Cabell's Directories of Publishing Opportunities, U.S.A. International Journal of Physical and Social Sciences http://www.ijmra.us

- Shavelson, Richard, Yin, Yue (2004). Application of Generalizability Theory to Concept-Map Assessment Research. *Center for the Study of Evaluation* (*CSE*).
- Stemler, S (2001). An overview of content analysis. Practical Assessment, Research & Evaluation, 437 (17). http://PAREonline.net/
- Swarthout, M.A (2002). The Impact of The Instructional Use of Concept Maps On The Mathematical Achievement, Confidence, Beliefs And Attitudes Of Pre service Elementary Teachers. Doctoral dissertation, The Ohio State University.

 Table of Specifications, Practical Assessment: research and evaluation Volume 18,

 Number 3, February 2013, Page 1-7.

- YING-SHAO HSU, MIAO-HSUAN YEN. WEN-HUA CHANG, CHIA-YU WANG
- Yue, Hong (2008). Concept maps As Assessment Tools in Mathematics, Comparison with Clinical Interviews. doctoral dissertation, Department of Mathematical Sciences, The university of Texas at El paso,