

PORTRAYAL OF SCIENCE KNOWLEDGE IN THE 'CHILDREN'S PAGE' OF TWO URDU NATIONAL DAILIES OF PAKISTAN

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ABSTRACT

This study is the part of a larger study. In which the children's understanding of science concepts have been seen in their cultural context. The sample belonged to elementary schools in that study. The data was collected from multiple sources, one of the sources were the newspapers. Two Urdu national dailies were selected for this purpose. These two national dailies were; 'Jang' and 'Nawa-i-Waqat'. These two papers are widely circulated in the country. The content analysis of these two newspapers was done. The results show that space given to the science knowledge is very limited on the children's pages. The content of the presented knowledge is very small and is not sufficient to the present day needs. No attraction was found for the learning of the children. The results added up that artifacts are not contributing in the understanding of the science knowledge and concepts of the children.

Keywords: learning, newspapers, science knowledge

INTRODUCTION

21st century has unfolded and has witnessed the Third Industrial Revolution that is information technology, which is affecting every field of human activity. The world is clearly divided between those nations on the levels of their scientific and technological progress.

Science and technology has become an integral part of the modern culture and civilization and is the major driving force for economic growth and development. The power of science and technology has transformed the world and impacted every sphere of man's individual and collective activity, whether it is, economic, political, cultural, military, and educational etc.

In Pakistan a lot of emphasis is being laid upon science education, and efforts are being made to improve the quality of science education. We are still unable in creating an environment which triggers off a scientific and technological revolution whereby a broad based self sustained scientific and technological structure is established. Although in the past few years revolutionary steps have been taken to improve the quality and standard of the education in Pakistan. However, still our educational system particularly at lower level lacks many things. Unfortunately our educational system on the whole and specifically science education has failed to play its required role for the development of scientific concepts in students and scientific thinking in the society.

The focus of this study is to see the influence of cultural and other artifacts aspects as the major sources in the understanding of the concepts, particularly science concepts of the children. This research will base upon the findings of analysis of the newspapers.

Constructivism asserts that people do not merely discover knowledge, but that they construct or make it (Vygotsky, 1978). People invent concepts, models, and schemes to make sense of experience (Stahly, Krockover, & Shepardson, 1999). Schwandt's study (as cited in Laura, Gerald, & Danial, 1999) added that these constructions are continually modified and refined as new phenomena are experienced.

Newspapers, as sources of science knowledge were considered for analyses, for these purposes two Urdu national dailies 'Jang' and 'Nawa-I-Waqat', of six months were analyzed from October 2005 to March 2006.

Case study method was used to get the results. When we speak of methods in case study, it means speaking principally of observation, interview, and document review (Stake, 1995). A qualitative method was selected for this study to investigate the newspapers analysis.

RESEARCH QUESTIONS

Review of the literature revealed that regarding the analysis of textbooks, written material, pictures, and trade books etc, involved in shaping and understanding of the scientific phenomena. Nevertheless, no previous study focused on these issues (Tennyson & Park, 1980). Perhaps this study is first study conducted in a Muslim culture. We have analyzed the newspapers, to get a clearer picture of the phenomena under study. To meet these needs, the following research questions guided, analysis, and interpretation were addressed through a qualitative research design.

1. Is there any cultural relevance in the presented science knowledge of the newspapers?
2. Can different dimensions of science concepts be related to a broader framework of educational aspects found in the newspapers?
3. Does science concepts in the forms of stories and narrative, contribute in the process of thinking?
4. What are the distinguishing features of scientific concepts portrayed in the newspapers?

OBJECTIVES

It was the goal of the study two was to examine the text structure and content about the science concepts presented in the newspapers to determine if the text presented in any form is helpful in the children's understanding of the science concepts. The study examined the different modes of representation of the textual material in the newspapers.

More specifically the analysis of the text in the textbooks was done to find out to which extent:

1. The implicit and explicit science concepts are instantiated that help in the better understanding of the science concepts of the children.
2. The space and volume is given to the science concepts in the newspapers.
3. The forms and modalities through which these concepts have been presented.
4. The illustrations and pictures have been used to present the concepts.

METHODS

The review of literature reveals that content analysis can be the best way to examine the text material related with science concepts, presented in the newspapers, regarding the science concepts. One of the major functions of the text material whether it is in the form of books, magazines, newspapers etc, is to present the concepts for the transmission of the knowledge to the children as well as adults. The results of previous studies show that psychological tools such as newspapers, magazine, and books help in the shaping of concepts. Children learn about the concepts particularly science concepts through different sources. These concepts are presented in different style and shapes, may be in the forms of narration, story, examples, illustrations, figures, pictures, diagrams, and analogies etc. This has also been supported by Hill (1957), who gave some reports from the research work of Beeler, which showed trends in the use of analogy in presenting science information to children through books and magazines.

PROCEDURE

The daily 'Jang' and 'Nawa-i-Waqt' are two popular newspapers in Pakistan, which are published in Urdu language. These two national dailies are widely read across all the sections of the society in the entire country. According to a survey around 70 percent of the population is reader of these two national dailies in the country. According to another survey the daily 'Jang' has got the highest circulation in the world among the Urdu dailies.

These two dailies issue the children edition once in a week on regular basis. This children's page has got the popularity among the Pakistani children. This has been observed that school going children take very keen interest in the reading of that page.

So, this was decided to analyze the newspapers containing as sources of science knowledge. Therefore, these two Urdu national dailies 'Jang' and 'Nawa-i-Waqt', of six months, from October 2005 to March 2006, have been analyzed.

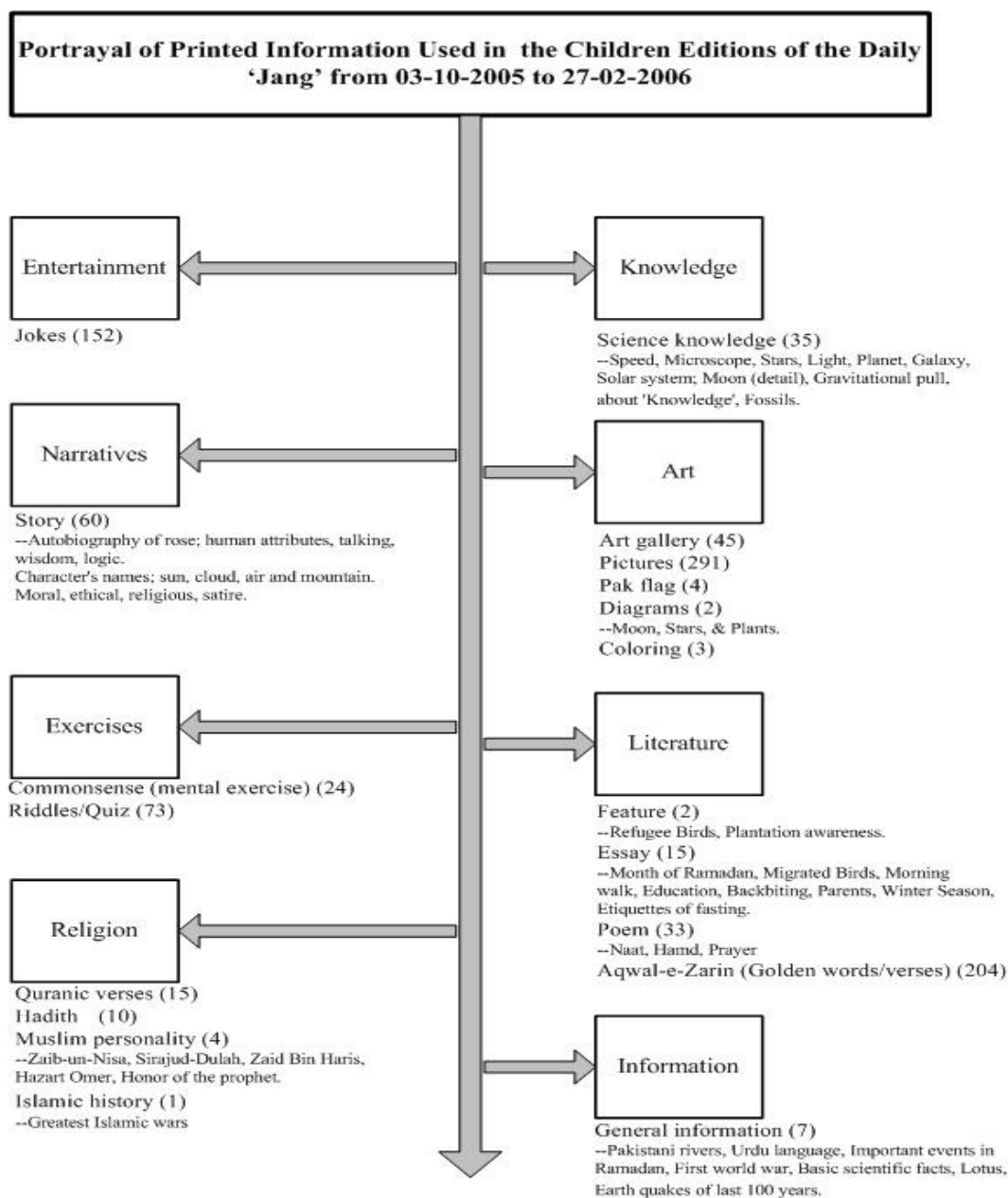
For the analysis of the newspapers, the relevant section of the library of National Institute of Psychology, Quaid-i-Azam University was contacted. The newspapers were collected from the beginning of the first week of the month of October 2005 up till end of March 2006.

After scanning all the pages, the printed information was categorized basically into two frames. One can be called *main frame* (MF). This MF consisted of eight areas of information in the complete page. The other can be called the sub-area of the MF, that having the actual content, substance or material in the BF. This sub-area can be called as *small frame* (SM).

RESULTS

Analysis of the Newspapers

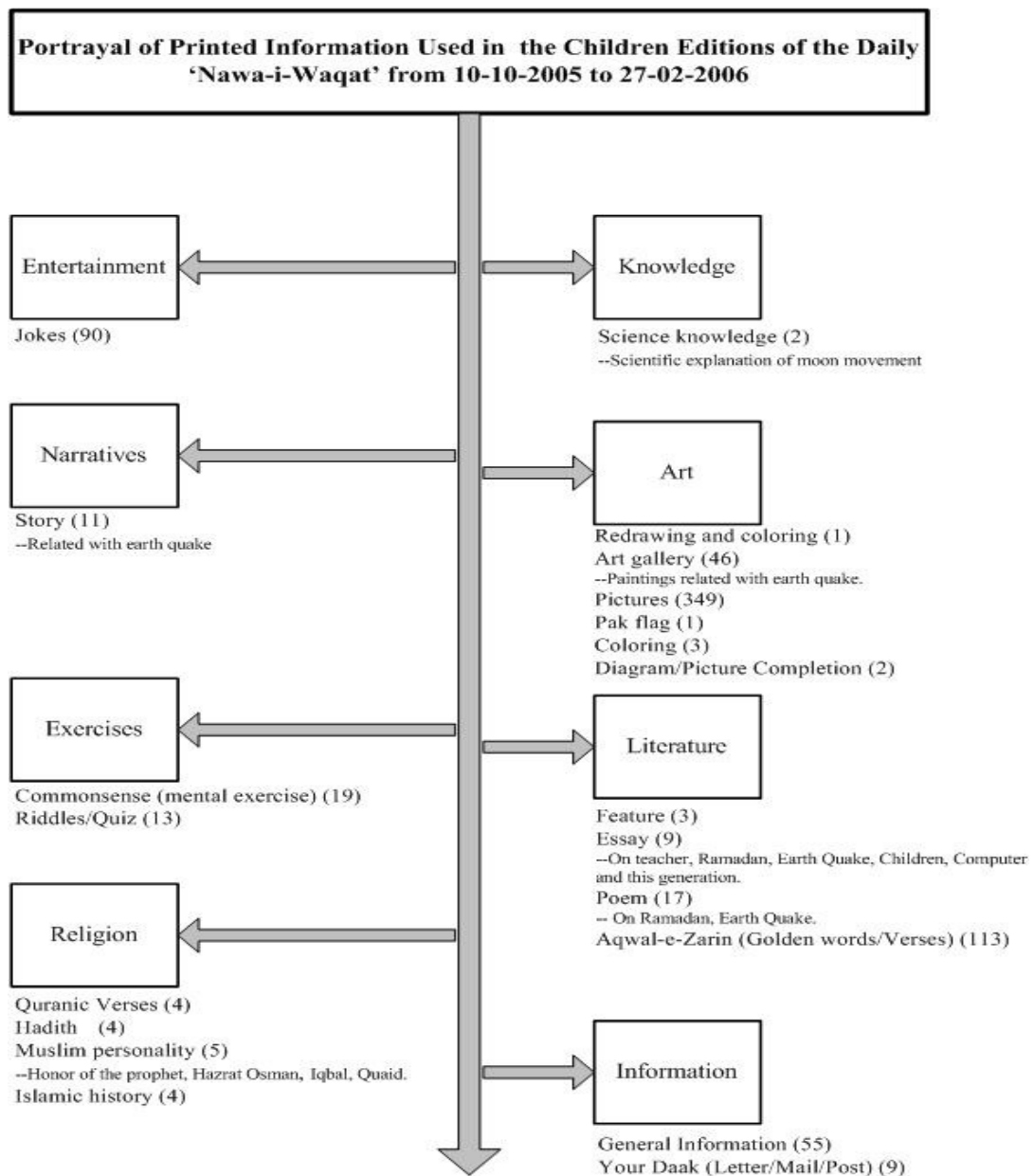
In this section, the analyzed data is presented in the forms of figures.



Number in () represents instances of occurrence within 'Small Frames' of the study.

Figure 1. Types of information or material established as a means for displaying knowledge in the daily 'Jang'.

Figure 1, shows that majority of the space covered in the daily Jang is by the pictures of the children. The other prominent material is golden words. The knowledge or information about the science concepts is very limited. Mostly, the knowledge is of very basic or factual level.



Number in () represents instances of occurrence within 'Small Frames' of the study.

Figure 2. Types of information or material established as a means for displaying knowledge in the daily 'Nawa-i-Waqat'.

Figure 2, shows majority of the space covered is by the pictures of the children. Following the space is covered by the golden words. Space covered by the science concepts is very limited.

DISCUSSION AND CONCLUSIONS

The overall results of the both national dailies; 'Jang' and 'Nawa-i-Waqat' indicated minimal portrayal of science knowledge. The kind and contents of the science knowledge was of factual level. This was indicative of having least contribution in the development and acquisition of science knowledge. Moon concepts are rarely found in the entire editions of both the newspapers. Therefore, it is hard to assume the tangible role of newspapers contextual material in understanding of the moon concepts in the children.

After viewing these results, it seemed justified to rule out further probing of the newspapers textual as well as printed material and its presumed role in the development of the science concepts.

However, it seemed important to focus the direction of the research towards the analysis of the textbooks to find out any textual or printed material related with science concepts, which could have contributed in the understanding the science concepts of the children.

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