

Analysis of the Textbook of General Science Class vii

Education

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Abstract

The purpose of the study was to analyze the textbooks of General Science for class VII in secondary schools of Balochistan. The scope of the study was limited to subject teachers and the textbooks of General Science. The strategy of research was survey. A tailor made questionnaire was designed and document analysis of textbooks was done. Data were analyzed qualitatively and quantitatively. It was found out that the textbook of General Science taught at public schools lack clear reflection of the content in accordance with the age level of students. In light of the findings concrete recommendations were made.

Keywords: Analysis, Comparison, Textbooks of General Science.

Introduction

For the proper implementation of any school curriculum, textbooks become part and parcel of the education system. Especially, in developing countries, it has been a regular practice to consider textbooks as the major source of the teaching learning process to be undertaken in schools. In most of major parts of the world, and for most of the teachers, a textbook is an authentic material to be presented in the classroom, while for most students it has become a common practice to be burdened with a bag packed with their prescribed

textbooks on their way to school. In Pakistan, the Green Paper on Textbook and Learning Materials of Ministry of Education also admits that, “the textbook is the only available learning material in most schools. Additional materials like teaching aids, supplementary reading materials and school libraries are virtually non-existent” (Govt. of Pakistan, 2006, p.2). Use of textbooks cannot be neglected anyway. The textbook is a source of potential learning as to what students learn from textbooks and the practicality of that learning is mediated by the school context (teacher, peers, instruction, and assignments). Textbooks have many purposes. A textbook is a “powerful media for teaching and learning” (Tanner, 1988, p. 141). It is a “necessary tool for regular students” and “guide for the inexperienced teachers” (Govt. of Pakistan, 2000, p.23).

Sheldon (1988) believes textbooks are heavily utilized by teachers and he identified three main reasons for this: a) developing their own classroom materials is extremely difficult and an arduous process for teachers; b) teachers have limited time in which developing new materials might not be possible; and c) external pressure which restricts many teachers in introducing their own developed materials. Textbooks have an enormous influence on what is taught in primary, elementary and secondary classes and how it is taught. According to John (2001) “majority of teachers use textbooks as their principal curriculum guide and source of lessons”(p.32). Tyson (1997) found “those new and in-experienced teachers, or those who lack in adequate time for lesson planning, may actually teach from the first page of the textbook to the last, skipping little or nothing” (p. 89). In different countries the availability of textbooks in terms of variety is subject to national/regional policy decision. However, increased attention has been paid also to the quality of textbooks. There are many countries in the world where a single textbook is being used across the system, and till the recent past, Pakistan and China were also following this mode. However, in many countries, the use of multiple textbooks is very common. Various competitors including individuals and institutions develop textbooks in the light of guidelines given by the curriculum regulatory body of the country, and schools are free to select from these books for their students. In Pakistan, in the light of the National Education Policies 1998-2010 and 2009, National Textbook and Learning Materials Policy and Plan of Action was notified in 2007 to strengthen the development of multiple textbooks in the country. In view of this, competition among the textbook developers was obvious in the count.

Literature review

Textbooks are as universal as formal schooling and almost as old. They have been used to aid teaching, and in some cases, to be the teacher for centuries. Textbooks are not just teaching and learning objects but are political documents that hold content that reflects the vision of a specific group (Encyclopaedia of Education, 2008a).

Textbooks are at the heart of educational enterprise, as they offer students "a rich array of new and potentially interesting facts, and open the door to a world of fantastic experience" (Chambliss & Calfee, 1998. p.7).

The definition of a textbook given in the Journal of the Textbook Colloquium Paradigm (1990) is the merger of the all elements indentified in the above-mentioned definitions. It states:

"A textbook is any book or a book substitute, including hard-covered or paperback books, workbooks designed to be written in and used up, certain newspapers and news magazines and manuals which a pupil is required to use as a text or a text-substitute in a particular class or programme as a primary source of study material intended to implement major part of a State or local curriculum. (p.4)"

This definition depicts that a book that explicates curriculum, no matter whatever the form or shape, could be called a textbook. It is a book used by the students for a specific course of study in a particular branch of knowledge. The textbook will remain the core of all materials and activities. Better organization of the content and methods in the textbooks could assure better information of basic principles and fundamental relations.

Nogova & Huttova (2006) added two other important aspects of a textbook namely; a) role of textbooks in personality development of the students, and b) their role in developing student motivation and interest to learn.

According to them;

... Textbooks not only serve as the main source of knowledge, they also need to help in developing the student's personality, in respecting his/her individual skills, stimulating interest in learning, and in supporting interactivity. (p.334)

As mentioned earlier, textbooks are important for classroom interaction. They determine the subject-matter and, in many cases, the method of teaching. Textbooks direct both the teachers and the learners by giving them proper direction for what they ought to do during the lesson hours. However, in the light of the recommendation of a meeting held in UNESCO Headquarters in Paris, from 12 to 13 December 2002, textbooks were assigned more value while highlighting their importance. "Textbooks are the most explicit manifestation of national education philosophy and the expression of national political orientation.6"

Blair (1995) pointed out that educational evaluation, when used to evaluate or develop instructional materials, is a linear process. He identified five elements that comprise of the Instructional Systems Design. These include; a) Analysis, b) Design, c) Development, d) Implementation and e) Evaluation. This model could help in understanding various steps involved in textbook development and its use in class. The analysis phase perhaps could also help in identifying stakeholders' needs and decision makers' desires. Another type of study was related to the 'usage' in basic readers. The findings of these studies revealed the real needs of the children and drew the scholars' attention to learning psychology so that organized instructional materials could be developed within the access of child experiences.

Thereafter for about two decades these scales were widely used although other instruments of appraisal were also developed as part of the process of textbook selection. Waterman stressed the importance of an analytical approach to textbook evaluation which Fleming (in Chaudhary, 1977) later followed with classification and analysis of instructional illustrations.

Majority of the researches conducted in Pakistani contexts in regards to textbooks are masters' level researches. These included: Nasir and Hayat (1997); Rehman and Waheed (1998); Shaheen (1998); Haq and Subhani (2000); Akhtar and Mahmood (2001); Hussain and Hussain (2001); Mahmood and Asghar (2001); Zahid (2001); Bashir and Majeed (2002); Zakria and Iqbal (2002); Bux and Mahmood (2003); and Tasneem (2008). These researches did not provide any insight of the textbook development and evaluation processes in Pakistan. On the other hand, these researches have explored different characteristics of textbooks developed in Pakistan. These include; format of textbooks, content presentation, vocabulary, end of chapter assessment, alignment of the objectives & scope of the content given in the curriculum report (booklet) and their coverage in textbooks, comparison of textbooks, bases, etc.

Methodology

The strategy of research was survey. The population of the study comprised of the textbooks of General Science for class VII from public and private sectors, and all subject teachers at secondary schools of Balochistan. The population was diverse. The stratified random sampling design was adopted for selection of a sample for subject teachers of General Science whereas purposive sampling design was used for a sample of textbooks. The over all sample size of the teachers was 30. Questionnaire comprising of 10 items was designed and document analysis of the textbooks was done. The items were drawn from the literature review and in consultation of the experts in the

field. This procedure ensured the content validity of the instrument. Data were collected and analyzed by both using qualitative and quantitative techniques.

The following hypotheses were tested:

Hypothesis No. 1

There is no significant difference in the views of subject teachers of General Science regarding the content to fulfil the needs of the male and female students.

Hypothesis No.2

There is no significant difference in the views of subject teachers of General Science regarding the content to fulfil the needs of students of public and private schools.

Results

Hypothesis No.1

70% of the respondents were in favour that the text books of G.Science are able to develop the individual's skills and concepts and stimulate their interest in learning without the biasness of gender. 30% of the respondents were of the opinion that in some of the G.Science textbooks there is no symmetry in the units of biology, chemistry and physics which affects interest of male and female students.

Hypothesis No.2

80% of the respondents were of the opinion that in textbooks of G.Science, the given content is not suitable according to the age level of students. The textbooks lack quality pages and printing of content and illustrations are also not satisfactory which results low participation of students during teaching and do not fulfil the needs of children particularly in public schools. 20% of the respondents were in favour that the content in textbooks of G.Science fulfils the needs of students.

Conclusion

It is concluded that the emergence of the general science textbooks of the public sector is not attractive and the content is not developed according to the age level of students and classroom experiences, results in low participation level of students during studies. It also lacks cohesion in some units. Pages and printing are substandard and illustrations are not coloured, which does not stimulate students' learning.

The general science textbooks of private sector are attractive having superior quality of pages and printing. Illustrations are clear, coloured and sufficient for learning demand. There is cohesion in content which is helpful in developing students' concepts and skills. The questions given in books encourage students to think deeply and critically.

Recommendations

Textbooks of public sector should be made eye-catching.

Pages and printing quality should be enhanced.

Content must be revised in the light of classroom experiences and according to the age level of students.

Proper cohesion should be present among units for the development of concepts.

Illustrations should be coloured and valid.

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