

An Evaluation of Class X Mbse Science Textbook: Physical Aspect

Vasty Lalthanpuii¹, Elcy S. Lalropeki²

^{1,2}Research Scholars, Department of Education, Mizoram University

Abstract:

Textbook is a guide as well as a source of information for both students and teachers. Textbook enables teachers to follow a certain sequence and pattern in achieving the goals of education. Textbook evaluation on the basis of physical aspect is needed to make the whole process of education relevant because it attracts the learner in first hand. Science textbooks require consistent supervisions from curriculum developers in order to keep the contents and quality updated. This paper evaluates the physical aspects of Secondary Science for Class X prescribed by the Mizoram Board of School Education, Aizawl. The evaluation is done based on seven aspects namely; textbook cover design, quality of the paper used, printing and layout, illustrations, front size, binding and durability and price.

Keywords: Science, textbook, secondary school, quality, Mizoram Board of School Education (MBSE)

INTRODUCTION:

According to the Pocket Oxford English Dictionary, a textbook is a book used as “a standard work for the study of a subject.” Textbooks provide direction, support and specific language based activities aimed at offering classroom practice for students. Hutchinson and Torres (1994) have discussed the importance of textbooks in educational settings and have discussed that textbooks work as a supporter in different aspect of the teaching learning process.

A textbook assists a teacher, giving him the knowledge of what is to be taught within a particular time period. It serves an important role in the evaluation of student’s progress which is necessary for promotion to higher classes. Textbooks are a major source of providing instructions to teachers and students and are often stated as the backbone of every educational system. They help in designing the assessment and evaluation system for the students, shaping the process of classroom teaching and learning (Mahmood, 2011).

Science is a very important subject which requires critical thinking, reasoning ability, logical thinking and positive attitudes towards the subject. So it requires the textbooks to be prepared in those aspects. Textbook plays a vital role in the teaching learning process because it is that book which gives guidance on how to teach the students and the students depend on the textbook in their learning process. Textbook even plays an important role in the lives of the students because the topics in the textbook are mainly prepared in accordance with the daily experience of the students. Textbooks influence both the teachers and students, as they provide pattern to the teachers so that the teachers could teach in a better way and give guidelines to students for better learning.

Rationale:

Science is one of the most important subjects in secondary school. Students find the subject to be boring and difficult. So, it is very important to develop the textbook in such a way that the students will feel interested in studying the subject. Physical aspect of a textbook plays a major role because impression is needed to attract the learners interest. It is very important to develop the textbook in the best quality because it is that book on which the student's learning depends on. The quality of the paper, the font size of the paper, binding, printing quality, line spacing etc. all needs to taken into consideration.

The physical aspect of the textbook says so much about the quality of the textbook as well as the publishers of the textbook. Mizoram is a State in India where the literacy rate is considered to be very high. So, the quality of education depends so much on the physical aspect and not on the content alone.

With the help of this study we are able to find out the quality of the textbook and how the textbook looks like with regards to its physical aspects.

Objective:

To analyze the physical aspect of Class X MBSE science textbook.

Secondary Science Textbook for Class X:

The Secondary Science for Class X is prescribed by the Mizoram Board of School Education, Aizawl. The textbook was published by Arya Publishing Company, New Delhi. The authors of the textbook are RR Mishra, Neetu Singh, Yash Pal and Joginder Singh. The first edition of the textbook was published in 2016 and was reprinted in 2017.

PHYSICAL ASPECTS OF THE TEXTBOOK:

The physical aspects of the textbook is evaluated in terms of the textbook cover design, quality of paper used, printing and layout, font size , binding and durability and the prices of the books.

Textbook Cover Design:

The cover of a book is the first thing that a reader sees which can either motivate or make one lose interest in the particular book. It was found that the cover design of the textbook is colorful consisting of red, green, orange, yellow, cream, black, grey and white colors. The background of the cover consists pictures of different cells, tortoise, and few formulas at the back of the cover, microscope, and symbol of MBSE. It has also been found that prints on the cover is not attractive enough for a Science textbook, looking more like a Mathematics book with the geometrical shapes that seemed to be rectangular, square and triangular in shape. No eye-catching images to attract the readers are seen though the words printed on the covers. Thus, the design does not seem to be informative and attractive enough for a science textbook.

Quality of the Paper Used:

The cover paper quality of the textbook is said to be of medium quality. This is necessary to cut down the price of the books so that it could be affordable to the students. The textbook cover is not laminated so it will not be able to repel water and could even get tear easily so it may not even last for the whole session for some students.

It has also been found that the quality of the papers used in the prescribed textbook is not of the best quality can tear easily if not carefully handled. However, as it has been said before, it is appropriate for students in their Tenth standard as they are now expected to be capable of looking after their books well enough. In terms of the quality of papers as a whole, the paper used is not of good quality. However, keeping in mind the price of the book and the users, it has been found that the paper quality is appropriate for Class X textbook.

Printing and Layout:

The printing and layout of the prescribed textbook as a whole is found to be appropriate for Class X students. There is a clear structure and consistency in appearance throughout the textbooks with each unit following the same basic pattern of presenting the lesson followed by exercises to be solved by the students to help them understand and use their critical thinking skills. This seems to be good for those who like uniformity while it might seem to be boring for those who like a variety in the manner of presenting the lesson and activities and exercises. It was found that the printing quality of the prescribed textbook is clear and no spelling mistake is found in them.

It has been found that there is appropriate use of space and margin for ease reading which makes the text logical and consistent. The layout as a whole is found to be appropriate except for the use of the American style in not making any indent at the start of the paragraphs at each unit. This can more over make the child think that the lesson is not interesting enough as it looks fuller, which at the same time, can make his/her interest wander away, further creating the thought of the lesson being too lengthy for them to study. The meaning and explanation of the different terms are italicized which makes it easier for the students read the italicized sentences. It has been found that the use of more than two different fonts makes the textbooks appear messy and unorganized.

Illustrations:

The illustrations found in the lessons are also found to be appropriate for the readers as they convey the important words and explanation which the lessons meant to depict. They are found to be simple enough and close enough to the text, adding to its meaning rather than detracting from it. However, these pictures and illustrations appear dull as they are only printed in black and white.

Font Size:

It has been found that the size of the fonts used for the titles of the lessons, content matter of the lessons and exercises in the textbook is appropriate. The font used to write the number of the lesson at the top right corner is found to be big and clear for a textbook. The chapter headings are printed in a larger font size and are bolded which makes them stand out. The fonts used for each lesson are smaller than the fonts of the sub topics of the lesson which also makes it easier for learners to distinguish. The line

spacing was found to be rather small and tight which can make the students to be bored when reading. The important words are bolded so that students will be able to know and identify the words easily.

Binding and Durability:

The prescribed textbook Secondary Science has 436 pages. It has been found that the book is not so thin and compact in size. Therefore, it is found to be quite suitable for students as the textbook is not heavy to carry around. Furthermore, it gives students the idea that such books could be completed easily without much burden right from the first impression they get after seeing the book. The binding of the book is quite good and is expected to be suitable for students to use the whole year/session around. It has been found that the paper quality is expected to last throughout the semester. This however greatly depends on the way it is handled and the one using it.

Price:

The price of Secondary Science textbook is 180 Indian Rupees. The price is found to be affordable for students in the major cities and towns. Keeping in mind those students belonging to the BPL class or those of the remote villages, the price is found to be quite high as students not only have to purchase this textbook but also textbooks of various other subjects as well.

SUGGESTIONS:

From the physical analysis of the textbook, the following points are being suggested for the development of the textbook:

1. The cover of the textbook is not so attractive. So, if changes can be made in the cover of the textbooks, it will be more attractive for the students and will be more inviting for the students to study.
2. If the cover of the textbook can be well laminated it will be more durable and water resistant.
3. The line spacing of lessons in the textbook is found to be quite compact and tight. So if changes can be made and increase of the line spacing be done, it will be easier for the students to read and study.
4. Every figure in the textbook are printed in black and white, so if colors can be added to these figures it will help students to gain more interest in their lessons since science needs to be an interesting subject.

CONCLUSION:

The textbook of Secondary Science for Class X is appropriate for the age group of Class X, and is very much understandable for the students studying in class X. The physical aspect of the textbook shows that the textbook is being well planned and developed by experts. The textbook will also be able to help the students understand and have an appreciation of the beauty of science. It also prepares the students in the development of their different skills and help the students see the beauty of science.

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