

THE CONTENT STANDARDS IN CHEMISTRY TEXTS OF 8TH GRADE

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Abstract

The main source of the learning process is the textbook. It is the principal teaching activity, because it includes the aim, the content and the assistive devices that affect learning. Nowadays, there are many textbooks (Altextexts) by various authors and publishing houses. The message they transmit is the same, but they differ from the ways of handling concepts; some of them may have overloaded information and in others there may be missing basic information. All these affect the learning process, making it difficult for students and teachers. The teacher selects the text with which they will work, based on Ministry of Education standards. The aim of this paper is the comparative content study of several chapters in the chemistry texts of 8th grade. Five chemistry texts are taken in consideration for the purpose of this study. This research has considered the number of the topics in each chapter, the amount of the words and used concepts, the amount of new concepts as the vocabulary used, the number of figures and illustrative materials, and finally the number of exercises and assignments in each chapter. The data are represented through tables and graphs. In conclusion, this study has estimated the accordance of these chemistry texts with the curricula compiled by the Ministry of Education, as well as with the age of the student, which are thought to learn with these texts. Moreover, Albanian chemistry texts are compared with similar texts from different countries for corresponding student age. Advantages and disadvantages of altextexts use are presented based on the above detailed study of chemistry texts.

Keywords: *content standards, chemistry, teaching methodology, altextexts, new concepts.*

Introduction:

The main source of the learning process is the textbook. It is the principal teaching activity, because it includes the aim, the content and the assistive devices that affect learning.

Nowadays, there are many textbooks (Altextes) by various authors and publishing houses. The message they transmit is the same, but they differ from each other in the way they handle the new concepts; some of them may have overloaded information and in others there may be missing basic information. All these affect the learning process, making it difficult for students and teachers. The teacher selects the text with which they will work, based on Ministry of Education standards.

Aim of study/research:

The aim of this study is the comparative content study of several chapters in the chemistry texts of 8th grade. The comparison of the altextes in use today in Albanian scholar system, it would be possible to select the textbook that fits better with Ministry of Education standards and students' age.

Research topics:

In order to fulfill the above aim, this research has considered:

1. Evaluation of the amount of the words and the concepts used, the amount of new concepts used as vocabulary, the number of figures and illustrative materials, and the number of exercises depending on the age of the students
2. these chemistry texts with the curricula compiled by the Ministry of Education
3. Demonstration of the advantages and disadvantages of altextes
4. Comparison of Albanian chemistry texts with similar texts from different countries that correspond on students' age

Research questions:

The research questions for the study were:

1. Which are the standards that must contain chemistry 8th grade?
2. How do teachers choose their textbook?
3. How are drafted chemistry texts of 8th grade in our country?
4. What is the impact of the altext?

Scientific methods:

For the purpose of the study, five chemistry textbooks of 8th grade were chosen. These texts have different authors and publishers. The textbooks are:

- a) Albas 8th chemistry
- b) Erik 8th chemistry
- c) Extra 8th chemistry
- d) Pergi 8th chemistry
- e) Uegen 8th chemistry

This research has considered:

1. The number of the topics in each chapter
2. The amount of the words and used concepts
3. The amount of new concepts as the vocabulary used
4. The number of figures and illustrative materials
5. The number of exercises and assignments in each chapter.

The data are represented through tables and after this are constructed graphs.

Data analysis:

The data gathered from the detailed study of the textbooks are represented through tables and graphs as follows:

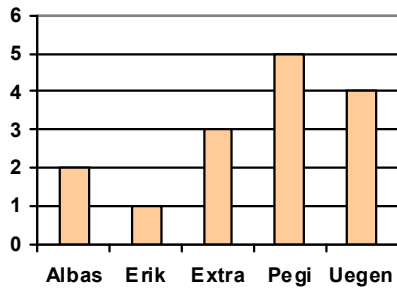


Fig. 1 Ranking of publishers based on the number of topics treated

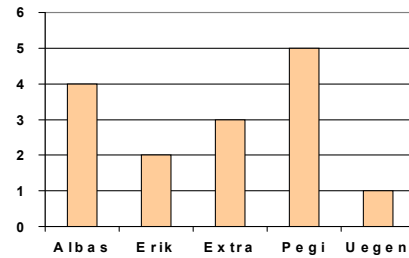


Fig. 2 Ranking of publishers based on the number of words used

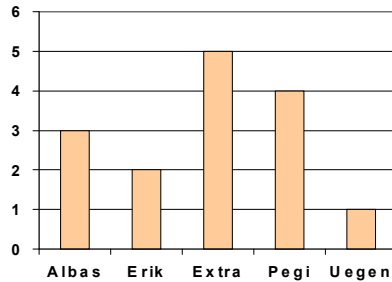


Fig. 3 Ranking of publishers based on the number of concepts used

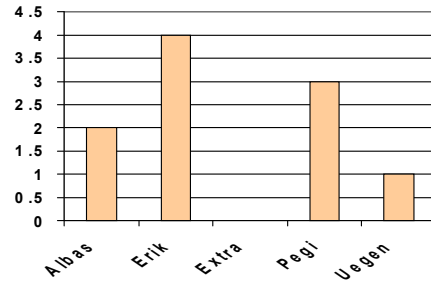


Fig. 4 Ranking of publishers based on the number of new concepts used as vocabulary

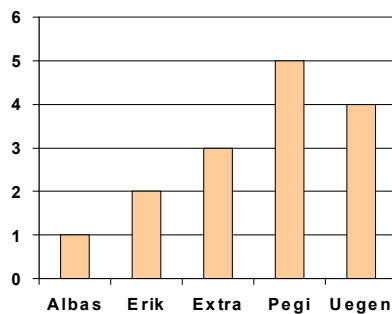


Fig. 5 Ranking of publishers based on the number of figures and illustrative materials

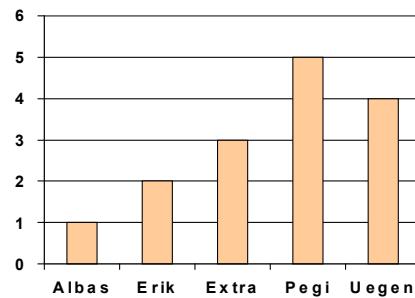


Fig.6 Ranking of publishers based on the number of assignments given

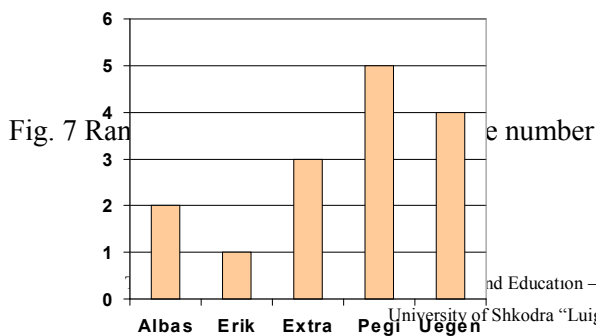


Fig. 7 Ranking of publishers based on the number of exercises

Findings:

Based on the above graphs, it can be noticed that there are clear differences between different publishing houses. Every textbook of chemistry^{8th} complies with Ministry of Education program. Problems identified during the review of the texts are:

1. The publishing house "Pegi" and "Uegen" give the objectives of each chapter. In some other publishers, they are missing
2. Textbooks have different treatment of the content
3. Some textbooks are overloaded with new concepts
4. There is not any balance between the concepts use and the age of students who will be studying these textbooks
5. In In "Extra" publisher textbooks, new concepts used as vocabulary are missing
6. Moreover, the textbooks lack the subject integration of chemistry
7. The publishing house "Albas" and "Extra" have spelling problems. Moreover, in this publisher textbooks, exercises and problems do not belong to three levels
8. The number of figures and illustrative materials is small and they are not attractive
9. In almost all textbooks, the laboratory works are found at the end of chapters
10. Only, "Uegen" texts have a chapter summary at the end of each chapter
11. Supplementary materials are given only in "Pegi" textbooks
12. Almost all textbooks lack the science history in order to understand better new concepts
13. In almost all textbooks the bibliography and references are missing. Therefore, it appears difficult for the students to request more detailed information
14. Moreover, in every text conventional symbols and exercises answers are missing

Conclusions:

- The compilation of textbooks in Albania compared with other countries

One of the main problems of the Albanian education is the textbooks overload, which is evident in the large number of pages, concepts that students should take in a lesson and the level of difficulty dealt with in relation to their age.

The compilation of textbooks in Albania occurred following these stages:

1. Ministry of education compiles annual curriculum
2. Annual curriculum is divided in 5-6 chapters
3. Each chapter is divided in 8-10 lessons
4. Learning is treated in 1-2 pages, which have 2-3 figures or sketches
5. At the end of the lesson there are 2-3 questions and 3-4 exercises, based on Bloom's taxonomy

The compilation of textbooks in other countries is very different because they are based on children's age. So in their textbooks:

1. The amount of concepts and words is small
2. More pictures, sketches and examples are included

3. Exercises are suitable for all levels
4. Scientific discoveries are given as a tall story

In a study cycle, which is 3-year, they only use a book that includes all sciences; chemistry, physics, mathematics and biology. In our country, every science has own book, so in a 3-year cycle they learn 12 textbooks.

Overloading of textbooks in our schools is creating a suffocating learning environment. The students have lost interest in the knowledge, teachers are tired and they don't taste the work.

- Altextexts

Recent years in Albania is practiced a new method in all schools, teachers select the text with which they will work during the academic year. There are many textbooks (Altextexts) by various authors and publishing houses. The message they transmit is the same, but they differ from the ways of handling concepts. Teachers choose the book which:

- a. Is less complex
- b. Has more figures and illustrative material
- c. Questions and exercises belonging to all levels of students
- d. Is easier to work with

This new methodology has advantages and disadvantages as follows:

- a. Advantages
 1. Books are chosen by teachers
 2. The possibility of choice is high
 3. The process of selection is independent, not influenced by anyone
 4. Text price decreases as a result of competition
- b. Disadvantages
 1. The selection time is short
 2. Teachers are not trained for the selection process
 3. Some assignments can not be accomplished, because of the conditions and the time they require
 4. Various schools select different texts. This affects the displacement of children in schools
 5. Lack of experience on the new projects

Recommendations:

All texts chemistry texts of 8th grade, despite the message they give or the authors, focus on better knowledge acquisition by the students. Therefore, they should have a clear methodological structure.

A good textbook is considered the chemistry texts of 8th grade that contains:

1. A preface of the book
2. Tables of contents
3. Clear objectives for each chapter (the three levels of them)
4. Attractive entry for each topic. A lesson which remain unforgettable in the minds of students, usually starts with an unusual opening

5. New concepts illustrated with pictures or sketches
6. Combined contents (linear and concentric order)
7. Inductive teaching method
8. Subject integration of chemistry depending on the topic
9. A diversity of illustrations and examples
10. The remember section at the end of each topic or chapter
11. Questions and exercises suitable to all levels
12. Independent Independent work depending on the topic
13. Supplementary material that accompanies specific topics
14. A content summary at the end of each chapter
15. The laboratory work included at the end of chapter
16. Themes for free hours
17. Literature, exercises results, and conventional symbols at the end of the textbook

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