

ESTONIAN, FINNISH, GERMAN AND RUSSIAN MATH TEXTBOOKS IN COMPARISON

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As a predominant source in mathematics classrooms, textbooks have a unique status. They often determine what school mathematics is and also how it should be taught.

Research on textbooks suggests that:

- Mathematical topics in the textbooks are most likely presented by the teachers and topics not represented in the textbooks are most likely not presented by the teachers;
 - Teachers' pedagogical strategies are influenced by the instructional approach of the textbook.
- This way textbook can be regarded as both important educational tool and also obstacles for the development of mathematics education.

Mathematics is considered to be as one of the most international school subjects. At the same time, the content, the structure and pedagogy of mathematics textbooks is strongly influenced by educational culture and tradition of specific country. This makes it extremely interesting to study comparatively mathematics textbooks from different countries.

The aim of this presentation is to describe the comparative analysis of mathematics textbooks for grade 9 from four countries: Estonia, Finland, Germany and Russia.

Content analysis carried out in our study focused to the following aspects of the textbooks.

- The presence or absence of mathematical topics, what kind of mathematics is emphasized in the book: subject matter content and performance expectations. The textbooks' underlying beliefs of what mathematics is were compared.
- The instructional approach of the textbook, the way how the content was introduced and whom the textbook seems to consider as its target - group (the teacher or the students), were analyzed. The textbooks' underlying beliefs of how mathematics can be learned were compared.
- Examination of tasks in the textbooks: their nature, amount, sequencing and complexity.
- Attention was paid also to the visualization aspects of the books. How textbooks use visual images, what kind of images (photos, tables, graphs etc) are used and what functions carry those images?

Our presentation includes results from analysis, brings forward similarities and differences between textbooks of four countries. Hopefully the results of the study can also be helpful for the development and improvement of textbooks.