

UNIVERSITY OF SZEGED
DOCTORAL SCHOOL OF EDUCATION

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**COMPARATIVE ANALYSIS OF SOME EDUCATION SYSTEMS IN
THE CENTRAL-EASTERN EUROPEAN REGION
- IN THE FIELD OF MATHEMATICS EDUCATION**

Extract of the Ph.D Dissertation

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Szeged

2021

This dissertation attempts to provide a comparative analysis of the education systems in the countries of Central and Eastern Europe, including Austria and Croatia, the Czech Republic, Hungary, Poland, Romania, Serbia, Slovakia and Slovenia (Dudok, 2018). The aim of this thesis is to examine education systems as a whole, focusing on the teaching of mathematics (with a further focus on the 8th grade) based on documents, regulations, international measurements and the my own research (Dudok, 2019). The aim of the comparison is to identify differences in the teaching of mathematics and to analyze their impact on educational results (Dudok & Dudok, 2020). The comparative factors I examine include educational policy, educational governance, history, curriculum, mathematics-specific curriculum, methodology, assessment and, achievement factors. In addition to changes in educational systems, the teaching of mathematics has also changed in the course of the reforms in the region under study (Mullis et al., 2016). A country's success and effectiveness in the education of mathematics depends on a number of interrelated national characteristics and choices, international measurements in the field of mathematics provide information for professional development, the curriculum development, and systems development (OECD, 2010, 2016).

This thesis is a comparative educational research study, in which I analyze documentation with the help of comparative factors. In terms of sources, I use primary and secondary sources, thus I examine laws, regulations and other educational studies, which provide essential information for the education systems in the countries in question. I complement the study with a questionnaire based empirical measurement where I analyze the practical implementation of the elements identified in the theoretical analysis. The questionnaire was developed by me and the results were analyzed using statistical methods. The data collection for the empirical study was carried out in several stages via an online interface. First the Hungarian data were collected (N=637) and the questionnaire was translated into the native tongue of the other target countries, followed by taking the international sample (N=443).

The study shows that the effectiveness of education can be influenced by several factors, including the degree of involvement of education policy, teaching materials, the number of math classes and the amount of curriculum material in 8th grade, the structure and levels of primary education, the teacher advocacy and human resources.

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