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Review of monograph: Komparatívna analýza primárneho matematického vzdelávania na Slovensku a v zahraničí [Comparative Analysis of the Primary Mathematical Education in Slovakia and Abroad]

Reviewed publication: Scholtzová Iveta (2014) *Komparatívna analýza primárneho matematického vzdelávania na Slovensku a v zahraničí [Comparative Analysis of the Primary Mathematical Education in Slovakia and Abroad]*, Prešov, University of Prešov, Faculty of Education, ISBN 978-80-555-1204-4, total number of pages – 386.

Slovakia is a member country of the IEA Study and participates in the testing of population 1 – ten year-old pupils. The international IEA TIMSS assessment is conducted in four-year cycles and concentrates on collecting detailed information about pupil's numeracy, fundamental mathematical knowledge and problem-solving strategies as well as information about the curriculum implementation, the instructional practices and school resources. TIMSS 2015 is the sixth cycle of the IEA TIMSS study. The results of these measurements are going to be published by December 2016 according to the research schedule. In the period of time of the TIMSS 2015 test administration, a volume was published which is worthy of note for both scientific and professional circles. It can make them think about what and how to modify the Slovak mathematics curriculum and schoolwork to help Slovak pupils show improvement in the mathematics achievement displayed in the international tables. The answer for the question *why are changes in the curriculum and education ap-*

proach in Slovakia necessary is clear – the long-term results reached in international measurements are below the average score reached by other countries of European Union and OECD.

The reviewed monograph *Comparative Analysis of the Primary Mathematical Education in Slovakia and Abroad* is a team effort of the Department of Mathematical Education members at the Faculty of Education, University of Prešov in Prešov. The monograph is an output of the research project VEGA 1/1230/12 *Comparative analysis of selected aspects of mathematics in Slovakia and abroad in a context of curricular transformation of primary education and international researches PISA OECD and IEA TIMSS*. Using the scientific methods of comparative education, the authors present some original information about the mathematics curriculum of primary education in the selected countries, namely Australia, Finland, France, Croatia, Ireland, Japan, Germany and Italy. The mathematical curricula and education recourses of these countries were compared to Slovak, in consideration of the mathematical knowledge level of ten year-old pupils reached in international research IEA TIMSS in recent years in the selected sample of countries.

The publication contains ten chapters. The first and the tenth are focused on a description of the research methodology as well as the summarization of comparative findings relevant to mathematical education in Slovakia. In chapters two to nine, the education of content domains *Numbers, Geometric Shapes and Measure, Data Display* (defined by the TIMSS study) in the selected countries are presented. The reader can obtain a relevant insight into the school system, the structure and the content of the elementary mathematical curriculum, the didactic tools and methods mostly used in the mathematical education of primary school pupils aged 5 to 10 years in the countries of the research sample. The analysis of the pedagogical interpretation, the range of mathematical concepts and problems suitable for younger schoolchildren in the eight selected countries can lead to reflections concerning what can be changed in the Slovak educational system in relation to its geographical, historical, political or social conditions. After consideration of this it is possible to obtain some inspiration from the educational strategies

found abroad for necessary modifications in the implementation of the mathematical curriculum in the local educational context. Some new educational strategies can help Slovakian ten year-old pupils to obtain better results in international statistics tables in further cycles of the TIMMS study.

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