

Assessment of learning in mathematics in lower grades of primary school in Serbia

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Assessment is a component of every teaching process in schools and has an important influence on academic achievements, as well as fulfillment of students' potential. We are interested in which ways teachers in lower grades of primary schools assess achievement in learning mathematics of their pupils. Do they use assessment *for* learning and formative assessment, if they support and develop mathematical thinking and reasoning in young students, and how can assessment of mathematics in general be improved?

This research is focused on finding out if teachers observe *The rule book for an assessment*, a bylaw document which legally regulates certain segments of assessment in primary school [4]. A sample of 302 teachers from primary schools in the Republic of Serbia participated in this research, and data were collected through a questionnaire constructed for the purpose of this research.

The results show that more than 90% teachers observe the bylaws of assessment, but there are segments of assessment, important for teaching and learning mathematics, which are not in compliance with *The rule book for an assessment*. The analysis of the results show that significant number of teachers (28, 74%) omit the first phase of assessment which refers to the estimation of students' previous knowledge, which is an important component of the lesson planning; that the wide range of teachers (86, 42%) give short written tests to their students, but they do not use collected results as assessment for learning, i.e. in order to check if the aim of the particular lesson is achieved or if students mastered particular parts of program contents, as it is provided by *The rule book for an assessment*. The results also show that techniques of the final assessment vary depending on teachers, and that many teachers carry out oral examinations by way of having students do exercises on the blackboard, and it is not clear if teachers insist on the suitable oral expression of mathematical terms, and if they support pupils' mathematical reasoning.

Considering the observation of the bylaws of assessment, there were no variations between teachers working in different teaching environment (i.e. rural vs. urban),

teachers with different levels of education, and kind and length of the working experience, but a difference was observed between male and female teachers.

To obtain better insight into the process of assessment of learning mathematics, it is necessary to conduct a research which would include analysis of tests used by teachers in order to assess the achievements of their students in mathematics, and a more detailed examination of other ways that teachers use in assessment in mathematical classes.

Key-words: assessment, assessment of mathematics, the bylaws of assessment

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