

Assessment of self-regulated learning and mathematics knowledge in pre-service teachers

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Problem solving skills and mathematical reasoning have important role in contemporary teaching of mathematics, and are considered as significant competences for 21st century. Self-regulated learning appears as a powerful construct in educational theories, and can be considered as a strategy, when applied in education, helps in achieving better learning performances. Recent researches indicate that high level of self-regulated learning skills, enhance problem solving skills and mathematical reasoning and by itself represents important competences which pre-service teachers need in their future work.

In order to enhance these competences of pre-service teachers, we will assess self-regulated learning and mathematics knowledge. The aim of the research presented in this paper is to analyze correlation between pre-service teachers' self-regulation skills and mathematical problem-solving abilities. Research was performed with a sample of 112 pre-service teachers at Faculty of Education in Sombor. For assessment of self-regulated learning skills SRUM [3] questionnaire was used, and mathematical knowledge test was used for testing problem solving abilities. The hypothesis that developed self-regulated learning skills help students, pre-service teachers, in solving mathematical problems is tested. The results of statistical analysis show the level of motivation, self-regulated strategies and problem solving skills in pre-service teachers, correlation between specific components of self-regulation and mathematics achievements, as well as dependence of these components on students' academics achievement. Pedagogic implications of this research include the need for developing pre-service teachers' self-regulation abilities because it contributes to better understanding, solving and interpreting mathematical problem tasks.

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