A Study on Mathematical Creativity of Middle School Mathematical Gifted Students

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The purpose of this study is to investigate how the mathematical creativity of middle school mathematical gifted students is represented through the process of problem posing activities. For this goal, they were asked to pose real-world problems similar to the tasks which had been solved together in advance. This study demonstrated that just 2 of 15 pupils showed mathematical giftedness as well as mathematical creativity. And selecting mathematically creative and gifted pupils through creative problem-solving test consisting of problem solving tasks should be conducted very carefully to prevent missing excellent candidates. A couple of pupils who have been exerting their efforts in getting private tutoring seemed not overcoming algorithmic fixation and showed negative attitude in finding new problems and divergent approaches or solutions, though they showed excellence in solving typical mathematics problems. Thus, we conclude that it is necessary to incorporate problem posing tasks as well as multiple solution tasks into both screening process of gifted pupils and mathematics gifted classes for effective assessing and fostering mathematical creativity.