Beyond Right Answers: Fostering Mathematical Creativity

Aleksandra Mihajlović, PhD, Full Professor
Faculty of Education in Jagodina, University of Kragujevac, Serbia

Abstract. Mathematical creativity is increasingly recognized as an essential component of quality mathematics education. Rather than being reserved for gifted students or advanced mathematics, creative mathematical thinking can be nurtured from the earliest years of schooling through carefully designed learning experiences. One of the most effective ways to support this process is by engaging learners with rich, open-ended mathematical tasks that encourage exploration, multiple solution strategies, problem posing, and mathematical reasoning.

This interactive workshop focuses on practical approaches to fostering mathematical creativity in primary and secondary mathematics classrooms. Through a collection of classroom-tested examples, participants will experience a variety of open-ended tasks that invite multiple solutions, multiple solution methods, multiple possible outcomes, and the creation of new mathematical problems.

The workshop will also illustrate how small modifications of traditional textbook exercises can transform routine activities into opportunities for creative mathematical thinking. Drawing on the author's research and the examples presented in the book *Giftedness, Creativity and Mathematics*, the workshop will combine a concise theoretical framework with extensive hands-on activities and collaborative discussion. Participants will analyze students' potential creative responses, reflect on the characteristics of mathematically rich tasks, and discuss practical strategies for implementing similar activities in their own educational contexts.

Keywords: mathematical creativity, open-ended tasks, rich mathematical tasks, problem posing, primary and secondary mathematics education.