

# Constructive development and gamification of the mathematic teaching

Aleksandra Pavlovic<sup>1</sup>, Rejhan Nisic<sup>2</sup>, and Edis Mekic<sup>1</sup>

<sup>1</sup>Department of Technical Sciences , State University of Novi Pazar, emekic@np.ac.rs,  
apavlovic@np.ac.rs

<sup>2</sup>Department of Mathematical Sciences, State University of Novi Pazar, rejhann@gmail.com

In the presented paper, students of the Mathematics were introduced with models of preparation of planned curriculum which are already established within engineering course. Constructive approach to development is used to challenge students to methodically prepare games for elementary school children based on the official mathematics curriculum. During development of the educational games programming students were introduced with rules of Software engineering and other programming rules and procedures common for engineering studies. Finally their newly developed products were presented to kids, and opinion of the students on this approach and school kids on the resulting material was examined.

## References

- [1] A. Gero, Students attitudes towards interdisciplinary education: A course on interdisciplinary aspects of science and engineering education, *European Journal of Engineering Education* **42**(3) (2017), 260–270.
- [2] D. Tukaram, S. S. Patil and R. K. Kamat, Learning by simulations: a new and effective pedagogical approach for science, engineering and technology students in a traditional setting, *International Journal of Quality Assurance in Engineering and Technology Education (IJQAETE)* **4**(2) (2015), 13–25.
- [3] M. E. Muuro, P. W. Wagacha and R. Oboko, Enhancing active learning pedagogy through online collaborative learning, *Handb. Res. Act. Learn. Flip. Classr. Model Digit. Age*, (2015).

- [4] K. D. Strang, Constructivism in synchronous and asynchronous virtual learning environments for a research methods course, in: *Virtual Learning Environments: Concepts, Methodologies, Tools and Applications*, IGI Global, 2012, 1466–1480.
- [5] S. K. David, Constructivism in synchronous and asynchronous virtual learning environments for a research methods course, in: *Virtual Learning Environments: Concepts, Methodologies, Tools and Applications*, IGI Global, 2012, 1466–1480.