

IMPLEMENTATION OF DESIGN-BASED RESEARCH METHODOLOGY INTO SCIENCE TEACHERS' TRAINING

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ABSTRACT

Teachers need research-based innovative educational methods for the upgrading of their teaching. The motivation of students and teachers in science education is the core of up to date teaching/learning. A very urgent task for educational research is to find appropriate educational methods and tools which have to be implemented into teachers' training and then in teaching/learning science. Design-based research is a new trend in educational research. The used methodology can be described as a cycle: analysis of a practical problem, development of solutions, iterative testing of solutions, reflection and implementation. This methodology was implemented into pre-service and in-service science teachers' training. An action research, which is close to the design-based research methodology, was presented to teachers for their development of teaching. We present the research outcomes of the implementation of the design-based research methodology into pre-service primary science teachers' training. Used teaching content is a hands-on experimentation with everyday objects.

Keywords: Design-based research, hands-on experimentation, motivation, science teachers' training.