

Forming the basics of future mathematics teachers' professionalism by means of multimedia technologies

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Abstract

© Authors. The purpose of this paper is to specify the essence and the specifics of implementation of the pedagogic technology of forming the basics of future mathematics teachers' professionalism using the potential of multimedia in higher education. The major research method is pedagogical experiment (comprising analytical search, ascertaining, forming, and control stages) aimed at verifying the efficiency of the pedagogical technology of forming the basics of future mathematics teachers' professionalism; statistic methods have also been employed for checking efficiency and reliability of the experimental research results. The participants of the pedagogical experiment have been 290 students (150 students of the experimental group and 140 students of the control group) of the training area 44.03.01 "Pedagogical education", skills profile "Mathematics". Theoretical issues on the nature, structure, criteria, indicators and levels of formation of the basics of future mathematics teachers' professionalism have been disclosed; the notion-category apparatus of the theory of the teacher professionalism has been specified; there has been scientifically grounded and developed the pedagogical technology of forming the basics of future mathematics teachers' professionalism that corresponds to the structure of the holistic pedagogical process and includes: target orientations, conceptual bases and regulations, procedural characteristics, program-methodological support, and an appropriate combination of traditional and multimedia tools. The results of the gradual introduction of the pedagogical technology of forming the basics of future mathematics teachers' professionalism by means of multimedia technologies indicate significant positive shifts in the formation of all the components of the basics of students' professionalism, which was reflected in the positive dynamics of the criteria for all indicators and generally indicates the effectiveness of the proposed pedagogical technology. Research materials can be used to further improve the theory and practice of the professional training, in particular, in the training of future mathematics teachers in the process of qualification improvement and personnel retraining, and in the self-educational activity of teachers.

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Keywords

Future mathematics teacher, Multimedia technologies, Pedagogical technology, Professionalism

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