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Information and communication technologies in modern geological education

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2018, International Multidisciplinary Scientific Geoconference. All rights reserved. Geological education has a number of specific features. Modern geology is a complex of more than a hundred of sciences and scientific disciplines. The objects of study of the geology are distributed both in space and time in the widest ranges: these being planetary and nanometric dimensions, billions of years of geologic history and the nanoseconds of the processes of crystal formation. The cognition of the diversity of the geological phenomena requires the fundamental knowledges of mathematics, physics, chemistry. The interdisciplinary relationships are considered to be the hallmark of modern geological science and education. The primary tool for the realization of such relationships in the modern world appears to be information and communication technologies. The promising direction of cognition of the nature of geological processes using information and communication technology in the geological education is the application of virtual reality technology and 3D modelling. The basic advantage of virtual reality technology is modeling the entity of processes and phenomena in the virtual space while taking into account the processes of feedback. Simultaneously, the peculiarities of geological education makes it necessary to preserve traditional educational technologies, such as conducting training and field practices aimed at development of professional competences.

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Keywords

Competence, Distance learning, Educational electronic resources, Educational standards, Geological education

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