International Journal of Engineering and Technology(UAE), 2018, vol.7, N4, pages 74-77

Application of information technologies to improve the quality of mathematical trainingo teachers of natural-science disciplines

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

Abstract

© 2018 Authors. The actuality of the problem stated in the article is due to the fact that the level of professional competence of future teachers of the natural- science subjects largely depends on the quality of mathematical training, which is largely provided by the use of computer technologies in higher mathematics classes. Information technologies are indispensable for the effective organization of the educational process in the modern conditions of teaching the course of mathematical disciplines. As a result of the study of this problem, the authors used methods that allowed defining the definition of mathematical competences of teachers of natural-science disciplines (theoretical analysis of pedagogical literature) and confirming the effectiveness of using information technologies in higher mathematics classes (pedagogical experiment). The main results of the research consist in the allocation of four levels of mathematical competences (low, medium, high, very high), and in the definition of the system of basic mathematical competencies. The obtained results allow to answer the question how on the basis of computer technologies to develop the mathematical competencies of future teachers of the natural-science disciplines more effectively, and, supplementing the existing theory of higher education, contribute to solving the issues of motivation for teaching higher mathematics.

http://dx.doi.org/10.14419/ijet.v7i4.7.20387

Keywords

Information technologies, Mathematical competences, Mathematical training, Teachers of natural-science disciplines

References

[1] Kozhanova T.M., Karev B.A., Khabibullina G.Z., Ibragimov I.D., Khisamiyeva L.G., Zaytseva N.V., Kulkova M.A. The didactic construct of design technologies in the educational process of modern university / Mediterranean journal of social sciences.-2015.-vol.6.-No 2 S3.-PP. 225-232--http://www.mcser.org/journal/index.php/mjss/issue/view/108

[2] Betz, N. Contributions of self-efficacy theory to carer counseling: a personal perspective / N. Betz // The Career Development Quarterly.-2004.-Vol. 52.-PP. 340-353

[3] Gulnaz Mavletzyanovna GALEEVA, Olga Aleksandrovna AKTASHEVA Forecasting the Dynamics of Foreign Direct Investment in the Russian Economy, Astra Salvensis, Supplement No. 2/2017, p. 137

[4] Kamil Maratovich ARSLANOV, Artur Ilfarovich KHABIROV About the Weak Party of the Loan Contract, Astra Salvensis, Supplement No. 2/2017, p. 323

[5] Malygina O.A. The study of mathematical analysis on the basis of the system-activity approach: a textbook.-Moscow: 2008.-416 p

[6] Kudrin D.A. The conference is communication and exchange of experience // Innovations in Education.-2010--No. 3.-P. 93-98

[7] Shaldybina O.N. Didactic model of development of mathematical competence of students of Secondary Specialized Educational Institution: the author's abstract.-Kazan, 2010.-24p

[8] Hsu, W.K. Determinants of computer self-efficacy-an examination of learning motivations and learning environments / W.K. Hsu, S.S. Huang // Journal of Educational Computing Research.-2006.-35(3).-pp. 245-265

[9] Shatilova L.M., Borisova V.V., Kasatkina O.A. (2018). Representation of the linguistic and cultural concept 'lie' in the French and Russian language picture of the world, 34(85), Pp. 194-212

[10] Bakhyt S., Kalimbetov B., Khabibullayev Z. (2018). Possibilities of Mathematical Problems in Logical Thinking, Development of Secondary Education Pupils, 34(85), P.p. 321-338

[11] Makletsov S.V., Starshinova T.A., Khabibullina G.Z. Fofmation model of information competence of bachelors specializing in mathematics & computer sciences / Journal of organizational culture communications and conflict.-2016.-v. 20, Sp. issue 2-PP. 173-179

[12] Khabibullina G.Z. The main problems of using computer technologies in teaching mathematics in universities / Kazan Pedagogical Journal.-No. 1 (102).-2014.-P.75-80

[13] Khabibullina G.Z., Khayrullina L.E., Fadeeva E.Yu. Application of the Mathematica system in the process of studying the main sections of mathematical disciplines / Kazan Pedagogical Journal.-2015.-No. 2 (109).-P.73-77