

Electronic scientific and methodological journal “Informatics Pedagogy” for teachers in conditions of informatization of education

Viktor Kazachenok
Belarusian State University,
Minsk, The Republic of Belarus
kazachenok@bsu.by
ORCID: 0000-0002-4476-0349, UDK 373.1

Konstantin Vasilevsky
Belarusian State University,
Minsk, The Republic of Belarus
vasilevskyk@bsu.by
ORCID: 0000-0002-4476-0349, UDK 373.

Abstract – The content of the electronic scientific and methodological journal "Pedagogy of Informatics", dedicated to the specifics of computer learning, is analyzed. The main topics of the journal are: global e-learning, artificial intelligence, robotics, media and information literacy, neuroeducation, creative and heuristic technologies in computer learning, issues of professional training and retraining of teachers.

Keywords – teaching, informatization of education, pedagogy, informatics, robotics, methodology.

I. INTRODUCTION

In 2020, the Belarusian State University established an electronic scientific and methodological journal “Pedagogy of Informatics” <http://pcs.bsu.by/>, ISSN 2708-4124), which is of interest to teachers and lecturers in modern conditions of informatization of education, specialists responsible for informatization of educational institutions, other educational workers, graduate students, undergraduates, students. Frequency – 2-3 issues per year. Access to all issues of the journal is free and free [1-3].

Main topics of the journal:

- global e-learning, artificial intelligence, robotics, media and information literacy;
- information educational environment of the educational institution;
- general questions of computer science teaching methodology, neuroeducation, creative and heuristic technologies;
- private questions of methodology for teaching informatics (including methodological development of lessons), didactic materials on informatics;
- the relationship between the methodology of teaching computer science and other private teaching methods (mathematics, physics, etc.);
- methods for solving problems in computer science, Olympiads in computer science;
- ICT in subject areas, primary school and pre-school education;
- issues of professional training and retraining of computer science teachers.

All materials received by the editor undergo mandatory review. Publishing in the journal is free for authors.

II. CONTENTS OF THE JOURNAL ISSUES

The first issue of the journal published the article “*Modern approaches and innovative practices in teaching school computer science*”, author – Lyudmila Leonidovna Bosova, corresponding member of the Russian Academy of Education, Doctor of Pedagogical Sciences, head of the department of theory and methods of teaching mathematics and computer science at Moscow Pedagogical State University, author current basic school textbooks on computer science in the Russian Federation.

Annotation to the article LL Bosova: Computer science as an academic subject has a strong position in the system of Russian general education, occupies a leading position in the world. At the same time, the general public (students and their parents, representatives of IT companies, businesses and universities) are not satisfied with the status and content of the school informatics course, expecting it to be much more in line with the realities of our time, the challenges of the modern world. The purpose of the study is to analyze modern approaches and innovative practices in teaching computer science to schoolchildren and to determine, on this basis, a possible vector for the further development of the subject. The work analyzes changes in the goals, content, means, methods and forms of teaching computer science that are occurring in our time. The further development of the Russian school computer science course is associated with the formation of a methodological system of continuous education in computer science in grades I–XI.

In connection with the wide distribution of electronic educational resources, the journal presents an article accumulating the experience of their design: “*Analysis of the features of the organization of electronic information educational resources in higher education*”, authors – Victoria Yuryevna Nefedova – Candidate of Pedagogical Sciences, Head of the Department of Informatics, Physics and Methods of Teaching Informatics and physics of the Orenburg State Pedagogical University and Oksana Vyacheslavovna Shkonda – senior lecturer at the Department of Information Technology Software at Mogilev State University named after A. A. Kuleshova.

Annotation to the article: The necessity of using an electronic information educational resource in the higher education of the Russian Federation and the Republic of Belarus is formulated, an analysis of the design of university courses on the Moodle platform in the conditions of blended learning of students is given on the example of the experience of the Orenburg State Pedagogical University and Mogilev State University. A. A. Kuleshova.

Today educational organizations are moving towards digital renewal at different paces, so individual schools are at different stages of this process. In this regard an article answering the question to what extent the mass school has begun transformational changes: “*On assessing the maturity of the digital renewal of secondary schools in Russia*”, author – Alexander Yuryevich Uvarov – Doctor of Pedagogical Sciences, chief researcher at the Institute of Educational Sciences Informatics of the Federal Research Center "Informatics and Management" of the Russian Academy of Sciences has been presented in the journal.

Abstract to the article: The digital renewal of the school is a process that began several decades ago to improve its work using digital technologies. The concept of digital renewal is considered as an expansion of the traditional idea of the digital maturity of an organization in relation to general education organizations. It is assumed that educational organizations are moving along the path of digital renewal at different paces and are at different stages of this process. An approach to assessing the maturity of digital renewal is proposed. The results of assessing the maturity of digital renewal of the Russian school, obtained on the basis of this approach, has been presented. To construct the assessment, we used data obtained during the Federal project “Monitoring the digital transformation of general education organizations at the regional and federal levels.”

To help teachers, the journal published an article "*Digital Tools and Services for Teachers*", the authors are employees of the UNESCO Institute for Information Technologies in Education Svetlana Knyazeva, Denis Kapelyushnik, Ekaterina Pushkareva.

Abstract to the article: Most countries of the world were faced with the problems of a full-scale transition to distance and online learning during the period of mass closure of educational institutions due to the Covid-19 pandemic. The main problems were related to the provision of methodological and technical assistance to teachers, the organization of professional training and advanced training of teachers in the field of using information and communication technologies in the educational process. Based on the UNESCO recommendations “Structure of ICT Competence for Teachers”, the UNESCO Institute for Information Technologies in Education has developed an open electronic course “Digital Tools and Services for Teachers” for teachers and educational organizations, which, in addition to current trends and promising directions of informatization of education, covers the basic concepts related to using digital technologies in education and distance learning technologies, legal aspects of the regulation of informatization and digitalization of education in the Russian Federation, as well as practical recommendations for creating digital educational content, using tools and services to support an effective educational process. The online course materials are accompanied by numerous examples and links to special systems, applications and services for creating and using electronic educational resources, graphics and infographics, presentations, video content, web quests, interactive exercises, crosswords and quizzes, time axes, tests, etc.

The following articles has also been published in the journal:

“*Features of teaching information technology to foreign students*”, author T. S. Zhilinskaya.

“*Modern means of creating video lectures*”, author Yu. A. Bykadorov;

“*Visual modeling of the content of teaching mathematics based on infographics*”, author D. I. Prokhorov;

“*Modern technologies of emotional manipulation and the educational process*”, author V. V. Kazachenok;

“*Modeling the structure of knowledge presented in educational texts*”, author M. V. Voronov;

The journal has a section dedicated to working with motivated students. This section presents articles devoted to the activities of various educational and scientific structures, principles, features and effectiveness of their functioning, prospects and development strategies. In particular, these articles:

“*How to become a world champion at the Olympiad in robotics and programming “FIRST GLOBAL CHALLENGE”, using the STEM approach in the preparation process*”, author A. A. Frantskevich;

“*Organization of regional competitions of the student team world championship in programming at BSU*”, authors E. V. Pazyura, V. M. Kotov;

“*On the principles, approaches and criteria for assessing students’ research work*”, authors B.V. Zadvorny, A.A. Buslavsky;

“*Effective forms of work of methodological associations for the purpose of popularizing and developing science and mathematics education*”, authors I. K. Viktosenko, E. L. Azarenko; and many other articles.

III. CONCLUSION

As it can be seen from the contents of the journal, it accumulates best learning experience in modern conditions of informatization of education and is a platform for discussing pressing issues of learning and teaching. In this regard, we invite active teachers and educators to cooperate.

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