

## Information Technology Use Issues in Russian Historical Education

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**Abstract:** The relevance of the problem under study is caused by the rapid process of information development at all levels of education including the historical one which is one of the most important factors determining the creation of high-quality, innovative and competitive system of education in Russian Federation. Russian researchers are interested in issues of information technology role in the educational process, the trends and prospects of their use, identification of positive and negative aspects related to the implementation of information technologies in educational process. Currently, the identification of problems caused by the use of information technologies in education and the search for their solutions become the most important aspects. The study identified and analyzed several groups of problems arising from the application of information technology in history education on the example of Kazan (Volga region) Federal University. The first group of problems is related to sustaining department and classroom technical equipment according to a corresponding level (timely procurement and the renewal of equipment and software, etc.). The second group is related with the personnel support concerning the software equipment. The third group includes the student problems due to the introduction of information technologies in the educational process.

**Key words:** Information technologies, history education, educational process, information development, information-analytical system, software, computer programs

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### INTRODUCTION

Now in terms of increasing informatization of society, the more relevant and discussed issues are the issues relating to the scope of information technology introduction in education. Information technologies became one of the most important factors determining the development of quality, innovative and competitive system of education in Russia.

The level of informatization is rapidly growing in all aspects of educational activities: the systems and the means of educational institution management are actively implemented, the professional work of teachers is automated, expanded and the range of electronic educational purposes is improved, the remote education is developed, etc. At the moment, the stages of reflection and initial implementation of information technology in educational activities are completed and the issues relating to system-analytical activities, the identification and solution of information technology application problems in education, the choice of optimal technologies for their staff and organizational support.

### MATERIALS AND METHODS

Russian researchers are interested by the informatization of education issues and this confirms the relevance of the chosen research topic once again. In

recent years, a lot of research on this issue was published, among which one may state conditionally the following areas.

General characteristics of education informatization process, the identification of information technology role in the educational process, the trends and prospects of their use (Andreev, 2006; Grinshkun, 2005; Robert, 2010a, b; Kostin, 2010; Sapelkina, 2007; Shaidurov, 2014; Gritsai, 2014; Glushkov, 2013; Alekhin, 2014).

The analysis of positive and negative aspects concerning information technology introduction in the educational process (Ivanushkina, 2010; Shadrikov and Shemet, 2009; Brynin, 2010).

The informatization of historical education devoted has much smaller number of studies. The issues of new trends in the development of historical information science; an interdisciplinary trend, based on the use of computer methods and information technologies in historical research and education were described by Borodkin and Garskova (2011) and Khodin (2011). The experience of distant learning education system using the platform MOODLE with internet services and distance learning programs at the solution of practical problems for the course "The History of the Fatherland" is considered by Gutnov *et al.* (2013). The issues of historical education informatization were described by Ushmaeva (2008) but the main theme of the study was the informatization process history of historical education in Russia. In

general, the perception of information technology use problem in education just begins, it is often touched upon in scientific articles dealing with general issues of higher education informatization.

The leading methods used in writing of this study are the general scientific theoretical methods such as analysis, synthesis, formalization and also specific empirical techniques: classification, comparative analysis and others.

## **RESULTS AND DISCUSSION**

The rapid computerization of almost all fields of knowledge allows to consider information technologies as one of the main components for the fundamental preparation of bachelors and masters and as a popular educational trend.

Information technologies in a broader sense include various devices, mechanisms and algorithms for data processing and the information technology of training involves the use of modern computer technology and specialized software packages. But because of learning process formalization complexity and the rapid development of information technologies the process of their use in educational activity of higher education institutions experiences a number of difficulties, which will be discussed below. The researchers identify three main aspects of information technology use in education:

- As the subject of study
- As a learning tool
- As the tool of training and professional activity automation (Golitsyna, 2005)

All these aspects are applied during the preparation of bachelors and masters at the Institute of International Relations, History and Oriental Studies (IIRHOS) KFU. Here, apart from the general course of "Computer Science", another 13 subjects are studied devoted to the use of information technologies in various fields of historical research ("Historical informatics", "Modern information technologies in the study of history", "Automated archiving systems", "Information technologies in archeology", "Information technologies in the study of culture history", "Information technologies in the study of art and education history", "Information technologies in history and education", "Information technologies in historical study and education", "Information technologies in professional activity", "Information technologies and marketing in tourism", "Modern computer technologies in

archiving", "Electronic databases and the modeling of historical process", "Electronic publications") (Anonymous, 2015).

Personal computers with basic software, the operating system Microsoft Windows XP and Microsoft Office 2010 package applications are used as the means of study; multimedia equipment (interactive stands, projectors, etc.), language laboratories, etc. (Anonymous, 2013). Presently, available means of computer and telecommunication technologies in the field of education at IIRHOS KFU allow to realize the whole cycle of learning from lectures to control measures.

The services of "Student" and "Employee" offices of information-analytical system KFU "Electronic University" (Anonymous, 2008) and electronic educational resources for the above mentioned disciplines allow to organize an automated central register of attendance and an objective monitoring of knowledge; to reduce material and time costs; to organize the storage of materials and test results in an electronic form; to improve information level and the visibility of education and its outcomes.

But nevertheless, there is a number of significant issues that need urgent solution in the field of information technology application for history education.

The conducting of training sessions will not be effective without an appropriate technical equipment of classrooms and computer labs which implies not only the availability of local networks and the access to the Internet at high speed but also the ability to provide student work with specialized programs (Adobe Photoshop, Adobe Acrobat, Statistica, ArcInfo, Autodesk 3ds Max, Agisoft Photo Scan, etc.). As the part of the courses on information technologies taught at IIRHOS KFU, practical tasks are performed by students only in the programs Microsoft Office Word 2010, Microsoft Office Excel and Microsoft Office Access 2010. The purchase of equipment and new licensed programs requires significant investments and open free programs which have to be taught for students tend to give way to license ones by a number of parameters.

Besides, one of the main features of a modern educational environment is, the possibility of students and teachers to refer to teaching materials at any time, from any point of space. At the same time, students are provided with the opportunity to obtain a teacher's advice in off-line, as well as in on-line mode. In the Kazan Federal University, these problems are solved using the information-analytical system "Electronic University".

There is also the problem of software maintenance by staff. Two categories of personnel shall be revealed here: IT professionals engaged in technological and

organizational support for the functioning of a university computer network and the teachers using this computer network in educational process.

The representatives of the first category ensure the efficiency of computer hardware and software operation, their timely updating, information and viral safety. The representatives of the second category, with sufficient skill level to work with information technologies and apply them in educational process, change traditional teaching methods, develop new educational models, etc.

In Kazan Federal University, the sustainable operation and the development of a corporate computer network, the professional training of employees is performed by Communication and IT development Department (Anonymous, 2015). The following training courses for teachers are conducted: "Visualization of information in the planning and implementation of educational process", including the section "Electronic resources as the visualization tools"; "Innovative technologies in education (distance learning on LMS MOODLE basis)", "Distance learning technology: theory and practice" and other courses (Anonymous, 2015). Numerous guides are developed and presented on the portal of Kazan Federal University concerning a user's operation in a corporate network of the University, in a language laboratory (Anonymous, 2008), with interactive classroom equipment (13), the manuals for the development of electronic educational resources (Anonymous, 2007). Thus, all conditions are developed for self-improvement of information technology knowledge and their application in educational activities. This is an important area of the university activity, all the more the modern conditions require the transition of teachers from the category of users ready for multimedia educational products and information resources into the category of multimedia pedagogical software developers.

It is necessary to take into account, the problems encountered by students due to the introduction of information technologies in the educational process. For example, it is the problem of correlation between the volume of electronic information provided in the curriculum, with the possibility of its comprehension and assimilation. Or the problem of orientation among students in the information flow. Their independent search for data on the internet in conjunction with the publications recommended by teachers leads to information overload. Students are often unable to select quickly the main and the secondary elements, true and false in the information flow. All these factors should be considered by teachers during the development of training courses, the drawing up of lecture and seminar plans.

## CONCLUSION

Thus, the use of information technologies in the educational process is a vital requirement of the time. Now the issues of system-analytical work become the main ones, the identification of information technology application issues in education, the search of ways for their solution.

The problems existing in the sphere of information technology application, in the field of history education may be divided into several groups. The first group is the technical equipment of classrooms and departments, including the problems of timely procurement and equipment and software renewal, keeping them in good condition. The problem of financing is closely related to this. The second group includes the problems of program equipment support by staff-ensuring the availability of a sufficient number of IT professionals at the university for technological and organizational support of a computer network operation; the training of teachers using information technology in educational process. The third group includes the problems arising among students due to the introduction of information technologies in educational process.

All the problems selected by us are closely related and require a comprehensive solution using a balanced system approach to development planning and the implementation of new information technology in history education.

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## REFERENCES

- Anonymous 2007. The training materials. Kazan Federal University. <http://kpfu.ru/fpk/uchebno-metodicheskie-materialy>.
- Anonymous, 2008. The information-analytical system "Electronic University". <http://kpfu.ru/dis/informacionno-analiticheskaya-sistema-kfu>.
- Anonymous, 2013. The educational process at the Institute of International Relations, History and Oriental Studies KFU. <http://kpfu.ru/imoiv/uchebnyj-process>.
- Anonymous, 2015. Distant education at Kazan Federal University. <http://edu.kpfu.ru>.
- Alekhin, A.N., 2014. Information in Education: PRO VEL CONTRA. *Universum: The Bulletin of the Herzen University*. 2: 121-123.

- Andreev, S.A., 2006. About the role of information technologies in higher education system. Bulletin KSFEI. Number 1(2): 68-70.
- Brynin, G.E., 2010. Advantages and disadvantages of application concerning information and communication technologies in education. Pedagogical education in the Altai, 1: 137-140.
- Borodkin, L.I. and I.M. Garskova, 2011. Historical information science: Reload? Bulletin of Perm State University, 2(16): 5-11.
- Golitsyna, I.N., 2005. The results of the discussion on "Effective implementation of new information technologies in education". Educational Technology and Society, 8(2): 248.
- Glushkov, E.I., 2013. The use of information technologies in higher education. The actual problems of social, humanitarian, scientific and technological knowledge, 1-2(1): 99-100.
- Gutnov, D.A., M.V. Leonov and A.A., Petrov, 2013. The experience of distant education system integration on the platform MOODLE, settings of the course "History of Fatherland" for artistic universities. Historical Sci., 3: 53-57.
- Grinshkun, V.V., 2005. The features of informatization means application in higher professional education. Bulletin of Moscow City Pedagogical University. Series: Information and informatization of education, 4: 35-40.
- Gritsai, A.A., 2014. The role of information technologies in modern education. Collections of conferences SSC sociosphere, 43: 14-15.
- Ivanushkina, N.V., 2010. Modern information and communication technologies as a factor of education quality improvement at the university. Bulletin of SSU, 1(75): 207-211.
- Khodin, S.N., E.N. Balykina and O.L. Lipnitskaya, *et al.*, 2011. The historical information in the Belarusian State University: the state of problems and perspectives. Bulletin of Perm State University, 2(16): 19-27.
- Kostin, L.Yu., 2010. Modern information technologies in education. Psycho-pedagogical magazine Gaudeamus, 2(16): 110-112.
- Robert, I.V., 2010a. Modern information technologies in education: didactic problems; prospects of application. M.: IIO RAO, pp: 13.
- Robert I.V., 2010b. Modern information technologies in education: didactic problems; prospects of use. M.: IIO RAO, pp: 140.
- Shaidurov, A.A., 2014. Modern aspects of information technology use in education. New Information Technologies in Education. Proceedings of the VII-th International Scientific and Practical Conference. Russian State Vocational Pedagogical University. Ekaterinburg, pp: 152-155.
- Shadrikov, V.D. and I.S. Shemet, 2009. Information technologies in education: pros and cons. Higher education in Russia, 11: 61-65.
- Sapelkina, V.M., 2007. Information technologies in education. Vologdinsky readings, 65: 23-25.
- Ushmaeva, K.A., 2008. Problems of informatization in historical and socio-economic education. Bulletin of Saratov State Socio-Economic University, 1: 90-92.