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Research Article

"CANVAS" IN THE DEVELOPMENT OF COMPETENCIES OF WORKING WITH MULTIMEDIA TOOLS OF FUTURE INFORMATICS TEACHERS USING CLOUD TECHNOLOGIES

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ABSTRACT

The modern process of informatization of education serves as a basis for the introduction of information and communication technologies into the educational process, where the trends of introducing cloud technologies to organize access to software implemented in various food activities are very relevant. The article highlights the problem of using one of the ICT tools, the open-source learning management system hosted by Instructure on the Canvas cloud, the advantages of using it in teaching and the tools it contains.

KEYWORDS

Education informatization, ICT, distance education, education management system, cloud education management system.

INTRODUCTION

In the modern world, the process of informatization of education is being observed, which means providing the education sector with the development and optimal use of modern information technologies aimed at the implementation of the pedagogical goals of education and upbringing. Information technologies of society's development play an important role in

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accelerating the processes of obtaining, distributing and using new knowledge by society.

Modern information technologies open up new prospects for improving the efficiency of the educational process and are distinguished by the presence of the Internet worldwide, which creates wide opportunities in education. At the same time, live communication is inseparable from information technologies, therefore, at the current stage of multimedia development, information technologies are called information and communication technologies (ICT).

One of the tools of information and communication technologies that organizes the interaction between teachers and students in the learning process, can be used to create traditional distance learning courses and support full-time and distance education. is an educational management system.

Currently, there are many software products in the global information space, that can be closed source (Blackboard, Coursera, EdX, Desire2Learn, Udacity), where universities can access them only after concluding an appropriate cooperation agreement, and open source (Canvas Instruction, Udemy, Moodle, OpenLearning), where teachers of higher education institutions can host their courses for free.

It is an open-source learning management system for creating the most convenient distance learning courses for teachers, and it creates conditions for ensuring the continuity of the educational process through the technological integration of classroom and extracurricular activities. The organization of access to cloud-based software is becoming a promising way to use the educational management system in the context of higher education.

Information on the use of cloud technologies in educational activities was provided by O. E. Mamarajabov, A. U. Shukurov, O. Yo. Zokirov, M. M. Usanov, O. M. Spirin, T. Y. Vdovychyn and other scientists.

The main part. The ability to organize the educational process using the Internet requires teachers to find new forms, methods and tools that correspond to the functions of the global network: freedom, publicness, openness, individuality, collective development of ideas, content construction, etc. Such tools of the modern educational process are software for creating electronic educational materials, educational management systems, platforms for interactive interaction of participants of the educational process (webinars, forums, chats, social networks). These tools can be individual software products and a share implemented in one of them. Their integration is logical when it takes place around the educational management system presented on the Internet, where the participants of the educational process will have the opportunity to learn "through a single window". These systems are often used for distance learning or distance learning support, and their use in higher education can meet the individual needs, interests, and goals of students.

Educational technology company Instruture Inc. It was created in 2008 by Brian Whitmer and Devlin Daley [0], two graduate students from Brigham Young University (BYU) in Sandy, USA, who developed new software for education based on already popular web technologies. Like Facebook, Twitter, and Google Docs, the learning management system was originally called Instructure,

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but the founders later changed it to Canvas. According to Devlin Daly, one of the developers: "It's about trying to keep things as simple as possible. The teacher or student does not have to be a technologist. They should focus on what the tool is trying to do, not the tool itself. Anyone familiar with web applications knows how to use Instructure (Canvas). Jared Stein, director of Instructional Design Services at the University of Utah, experimented with Canvas and called it "a great new contender in the LMS market."

Built with Canvas, Ruby on Rails, a framework written in the Ruby programming language, features jQuery, HTML5, and CSS3 to provide a modern user interface as the foundation of web applications backed by a PostgreSQL database. Canvas is a software as a service (SaaS software as a service) using Amazon web services in the cloud, a cloud-oriented education management system, and Instructure specializes in such a cloud service. is gaining popularity in practice.

It should be noted that the use of the cloud-based Canvas education management system in the educational activities of higher educational institutions has several advantages: powerful computers are not required; lack of large investments to purchase licenses and expensive equipment; minimal costs at the implementation stage; does not require installation of additional programs on the computer; implementation speed; use the software on legal grounds; provide data loss protection; a large number of users work in the system at the same time; the program is configured for a remote user; the provider is responsible for the operation of the applications; configure, update and modernize the software on the server of the cloud provider without harming the users; the cloud provider's server is responsible for data protection and technical support.

The company's website (https://www.instructure.com/) is a software package for site management or a content management system (Content Manager System - CMS), which provides tools for adding, editing, delete data and helping manage site content without requiring any special knowledge and skills from the user. Canvas enables organizations worldwide to design, deliver, and manage online learning courses, currently serving nearly 2 million students and faculty and 930 institutions worldwide, according to CrunchBase [4]. Instructure focuses on the application of information technology in various aspects of life and has the motto "Learning+Technology=Great".

The developers of Canvas focused on supporting teacher-student interaction and developing the concept of "lossless learning" by recording and providing real-time analysis of what is happening in the classroom.

To use the Canvas learning management system professionally, the teacher must have a computer connected to the Internet, a browser, a Canvas account, and the skills to work with the Internet and web pages. Canvas offers several Web 2.0 features and allows the teacher to:

– request and receive homework electronically, just add the homework to Canvas and you can see who and what has been submitted. In addition, through Canvas, it is possible to direct the checking of students' homework to graduate students;

- creating various tests (practical test, test with assessment, survey with assessment, survey without assessment);

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– take a test (types of test questions: multiple choice; yes/no choice; fill-in-the-blank; multiple-blank; multiple-choice; multiple-choice; matching; numeric response; formula questions; essay questions; questions by loading the text (no questions)), for example, after each lecture, students answer several questions based on the lecture content or create a learning achievement test after completing the module. The system automatically sets grades and scores;

- organization of conferences and discussions where students can openly discuss course issues within a group. The teacher may or may not participate in discussions;

- creating an open or closed course consisting of modules and assignments. The teacher can open the course so that the course materials are open to all Internet users (students' information is closed) or vice versa - close the course materials so that only individual students and groups have access to them;

- working with wiki pages;

- the ability to import ready-made courses from other educational management systems;

- assessment and peer assessment tools;

- analysis of the educational process - for the entire course, separately for each student;

– joint editing of documents in Google Docs;

- Integration with other services such as Facebook, Twitter, Skype, LinkedIn, Diigo, Delicious.

The Canvas education management system provides subjects of the educational process with the following tools: educational materials; means of communication between subjects; accounting and control of student activities; distributed access to educational materials; general activity; and feedback.

Based on the above, it can be said that if a teacher of higher education institutions sets the task of placing his course in any educational management system for free without involving programmers, then the cloud can be recommended. The Canvas education management system has an open, convenient and understandable interface, interactive communication with the teacher is organized using webinars and Google Docs, it is possible to conduct video lectures, and create tests, part of the system is Russianized. With the help of Canvas, you can organize a distance learning process.

CONCLUSION

Thus, the cloud-oriented Canvas management system is designed to build an educational process in higher education, we highlight the main services included in this system: management of educational institutions; management of educational content; content delivery; content navigation management; testing and evaluating students' educational achievements; taking into account student activities and results; save the profile of the subject being studied.

The above services for the implementation of distance education based on a web application form the SCORM standard that supports Canvas, so the system provides the ability to import a course from another learning management system (Moodle, Udemy, etc.) and export the course from Canvas to another learning management system. Many advantages of using Canvas in the educational process are provided by the fact that it is a SaaS model, it is advisable to pay

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attention to and take into account the following features when choosing it:

- reliability in operation;

- security;

- compliance (compliance with standards); ease of use and management;

- modularity;

- access;

- code openness.

In our opinion, due to the tendency to reduce the education budget, foreign educational institutions and higher educational institutions of our country can fully use this education management system.

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