

UDC 378.147:004.738.5
DOI: 10.18101/978-5-9793-0754-1-463-464

USING OF CLOUD TECHNOLOGIES FOR STUDENTS TESTING

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Abstract. Possibilities of cloud service platforms based on free Google Form are used to assess the level of preparedness of the test students. Remote access to the data stored in the cloud allows students to carry out the test tasks from anywhere in the world from any device with access to the Internet, including the mobile phone. Questions may be issued to the subject of the order or randomly — each will have an individual test. In addition, to avoid the possibility of unscrupulous response, response rates can be mixed randomly before each issue on the screen. With the help of the service Google + users organized circle, which will be available information on the test only applies to this round. An array of data accumulated in the cloud will allow for the analysis of modern models of testing, develop and implement new models of education for a more objective assessment of student achievement.

Keywords: clouds technologies, education, testing.

Educational institution cannot work effectively without the using of modern electronic educational environment. The new generations of the Federal state educational standards requires the establishment and using the learning environment in education. The content and the development of its own IT-infrastructure at every educational institution require considerable financial costs for the purchase of equipment, software, training and maintenance staff.

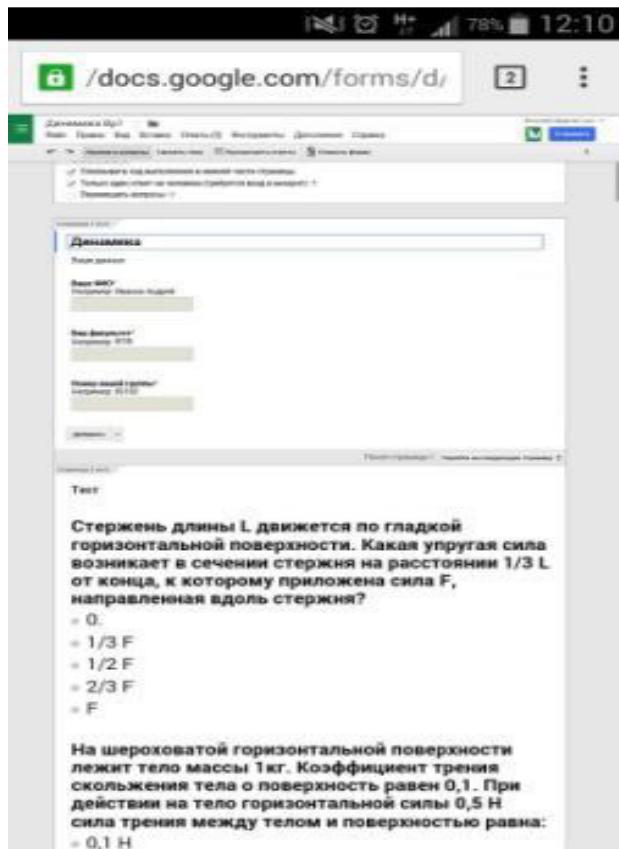
One of the most effective areas which reduce the cost of IT-infrastructure is a productive use of cloud computing technologies. Cloud technology — a new internet service, involves the removal of processing and storage of data on servers of cloud service providers, many of which offer their services to educational institutions free of charge.

Remote access to the data stored in the cloud allows you to work with them from anywhere in the world from any device with access to the Internet, including the mobile phone. At the same time stored in the cloud not only data, but also the related applications that provide support as a means of communication and office applications such as e-mail, spreadsheets, word processing application, and so on [1]. With the "cloud" services, you can access to the information resources of any level and any power division rights of various groups of users in relation to resources.

All of these features of cloud services are already widely used in various fields of education. In this paper we have attempted to harness the power of cloud services in the educational process for a test assessing the level of preparedness of students.

Modern computer testing is increasingly used as an effective means of objective determination of the level of preparedness of students and evaluates the quality of the educational process as a whole, regardless of the specific form of training and controls. However, the development of test items, the method of presentation of tasks to the student, the method of determining its level of knowledge-based processing of test results are the subject of scientific debate testers [2, 3].

Currently, more rarely used the old classic model of testing which do not allow sufficient objectively evaluates knowledge. In this regard, develop and implement new adaptive models that are tuned to particular trainees, including with the use of fuzzy mathematics [4].



To test the various methods of testing of educational achievements at the current, intermediate and final control, you need to collect an array of data, both by the tests, and test results.

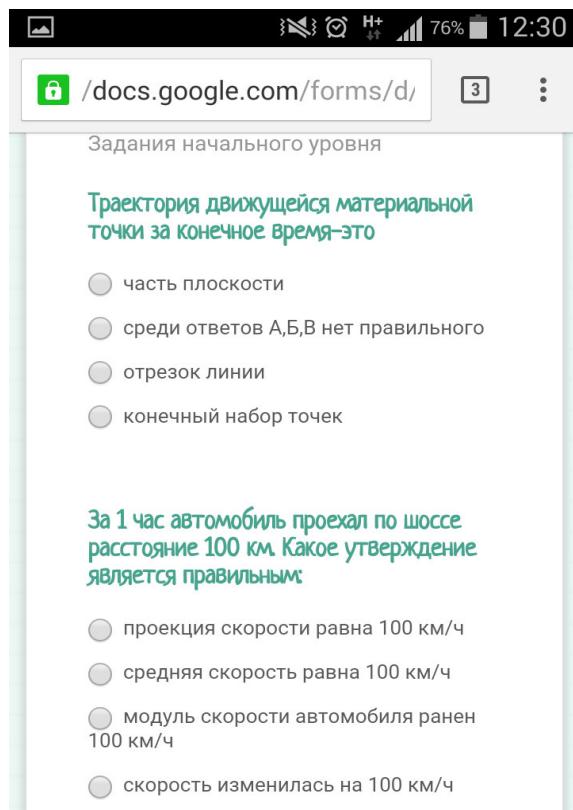
We based on the free platform Google Form created just such a testing system that enables the statistical analysis of the results to calculate the difficulty of tasks on different methods of calculating and ranking students as the right decision overall difficulty of the test tasks.

GoogleForm is intended for all audiences' polls. Here, test items can contain only text type (media inserted separately). Each task provides the ability to specify the type of answers: Select the correct answer from a multiple, choice of two or more

of the suggested correct answers. Answers can be given in the form of text, in the form of a scale, in the form of date. Appearance of the editing window of our tests in the Google Form, obtained from a mobile phone is shown in Figure 1.

In this system, if necessary, the job can be made mandatory, unanswered, to which it will be impossible to complete the testing. Task, which can be selected for each test subject, was out of the bank jobs in order or at random, so that everyone will have a special variant of the test. In addition, to avoid the possibility of an answer to a job using numbers stored response to it, the numbers of responses are randomly shuffled before each delivery of the screen.

To access all Google-services, students must create an account Google. Appearance window for the student during testing is shown in Figure 2.



GoogleForm — service is a powerful tool that is tightly integrated with other services Google, such as — GoogleDisk, GoogleSheets, GoogleDocs, Google + and GooglePhoto. In addition, support services GoogleForm programming language Java, with which, if necessary, you can create a software add-ons to the application.

GoogleSheets, is a spreadsheet similar to MSExcel and has its own programming language. All test results are recorded in the table, which is stored on the service GoogleDisk. This service is the free version of the user allocates 15 GB of disk space is sufficient for storing a large array of test results. All test results are recorded in the form of a matrix where the rows are the answers of subjects, and the columns of the test job numbers. An array of data allows us to calculate on the basis of modern models testologicheskikh difficult test questions, the rating of students, build charts and graphs using the Google-services. For the organization of groups or classes used service Google +, in which users can sort through the circles.

Thus, the paper deals with the possibility of using cloud technology to education.

References

1. Hewwit C. ORGs for Scalable, Robust, Privacy-Friendly Client Cloud Computing. In *IEEE Internet Computing*. Vol. 12, No. 5. NY, USA, Sep. Oct. 2008. doi: 10.1109/MIC.2008.107.
2. Avanesov V.S. The composition of the test tasks. [Kompozitsiya testovykh zadaniy]. Moscow: ADEPT. 1998.
3. Neumann Yu.M., Khlebnikov V.A. Introduction to modeling and parameterization of teaching tests. [Vvedenie v teoriyu modelirovaniya i parametrizatsii pedagogicheskikh testov]. Moscow: 2000.
4. Glova V.I., Anikin I.V., Adzheli M.A. Soft computing and their applications. [Myagkie vychisleniya (SOFT COMPUTING) i ikh prilozheniya]. Kazan. 2000.