



# Cloud Technology as a New Approach for Effective Education

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**Abstract:** *One of the tasks of the education system in modern society is to provide each person with free and open access to education throughout his life, taking into account his interests, abilities and needs. The article considers the possibilities of using cloud technologies in education, and also presents the main examples of modern services built on the basis of cloud computing technology for education.*

**Key words:** *cloud technologies, cloud services, types of cloud technologies, capabilities of cloud technologies, efficiency of the educational process.*

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## 1. Introduction

In the modern education system, the use of cloud technologies, as a tool that increases the efficiency of the educational process. At the same time, modern information technologies are widely used to support the traditional education system.

Cloud technologies have become so firmly established in education that it is no longer necessary to convince anyone of the necessity, much less the benefits of their use. The main thing is timely information about new products and further development of methods for using new technologies. New equipment requires a new method of use.

Nowadays, education and learning can be seen as a unique type of communication: with a common goal and with a teacher who helps participants achieve their goals. Cloud technologies can serve as a wonderful assistant in this.

Cloud technologies are data processing in which computer resources and capacities are provided to the user as an Internet service. The essence of cloud technologies is to provide hosting users with remote access to services, computing resources and applications via the Internet. Compared to the traditional approach, cloud services allow you to manage larger infrastructures, serve different groups of users within the same cloud, and also mean complete dependence on the cloud service provider [1].

The possibility of using modern cloud technologies in the education system provides a number of advantages over traditional methods:

- ✓ efficiency of information: only information technology allows you to quickly get complete and new information;
- ✓ dynamic storage and transmission of information: the use of information technology allows you to accumulate and preserve the didactic base, solve the problem of visualization of education;
- ✓ allows you to change the traditional education system;
- ✓ allows you to save time in the lesson;
- ✓ teacher - only organizes and directs the cognitive activity of students.

The main types of cloud technologies include:

- ✓ software as a service (SaaS).
- ✓ platform as a service (PaaS).
- ✓ Infrastructure as a Service (IaaS).

One of the new information technologies that modern teachers need to get acquainted with and actively use in the educational process is Web 2.0 technology (or cloud technology).

It is Web 2.0 services - cloud services that have recently taken a leading position in Internet technologies and make it possible to make lessons more effective, attractive and memorable for students, and, consequently, increase interest in learning.

With their help, modern schoolchildren can realize themselves socially much more effectively, work individually, each at their own pace, and teachers can apply creative approaches to learning, make the lesson truly productive, make the learning process interesting, and implement a differentiated approach to learning.

The choice of using cloud technologies in the educational process, namely, in informatics lessons, is justified:

- expanding the possibility of presenting educational information;
- the possibility of group work with the created document both in the classroom and outside it;
- you can work in the cloud from anywhere where there is access to the Internet;
- To work in the cloud, no special software is required on the computer.

General-purpose cloud services can be used as a tool for data exchange, a repository of educational content, and an auxiliary pedagogical resource.

In the education system, you can use Google cloud services - this is one of the options for Web 2.0 services, because they are easy to use and provide a wide range of options for both students and teachers.

Among the popular "cloud" services, consider a web application for creating and demonstrating Google Docs presentations from the Google search engine in relation to a group of students working on a project. This service allows:

- ✓ create presentations on the Internet, and then view, edit and export the created presentations to your computer;
- ✓ provide general access and the ability to work together in real time (changes are immediately visible to everyone who is granted access, you can see who and what is currently changing - the object being changed is highlighted in the color of the corresponding user). While working on a presentation in the right panel, you can see who is currently working on the presentation, chat with them. The teacher can give advice, control, view the progress of work at a convenient time;
- ✓ continue work on the presentation by students or a group of students as homework
- ✓ upload ready-made files from your computer and place them in the Google Documents repository;
- ✓ post presentations on your blog.

In the education system, it is advisable to use the following features of the Google Docs service:

- Google Document is intended for writing collaborative text works, conducting test papers, working on joint creative projects, creating a school newspaper, etc.,
- Google Presentation makes it possible to prepare a presentation for your speech, in the classroom - creating a collective presentation on a specific topic, where each student can draw up a specific slide, answering a specific question;
- Google Sheets are designed to create crossword puzzles or conduct research in the classroom, create a summary sheet of student work results, etc.;
- Google Form can be used to create tests to test knowledge, questionnaires; it is possible to collect student responses to assignments, which allows the teacher to check assignments at a convenient time for him; in addition, the teacher can track the date of entry to the resource of any student, see the changes that he made, analyze the activity of students;
- Google Sites - creation of collective Internet pages, Internet sites.
- Google Drive - free file storage server, file sharing, unlimited storage time.

The GoogleApps server occupies a special place in the education system. For educational purposes, Google Apps Education Edition has been developed - a free package for educational institutions that includes all the features of a professional package.

The main advantages of using GoogleApps Education Edition in education from the user's point of view:

- ✓ minimum hardware requirements;
- ✓ cloud technologies do not require the cost of purchasing and maintaining special software;
- ✓ GoogleApps supports all operating systems and client programs used by students and educational institutions;
- ✓ work with documents is possible with the help of any mobile device that supports work on the Internet;
- ✓ all Google Apps Education Edition tools are free [5].

Google Apps is supported by a wide variety of devices, from personal laptops to school computers and cell phones. Using any of these devices, you can have access to mail, calendar and chat at any time, receive SMS notifications about calendar events.

- ✓ The main package of Google Apps for educational institutions includes the following components:
  - ✓ Gmail: email storage and search tools to help students quickly search for information and send instant messages from personal accounts;
  - ✓ Google Calendar: students can create their own schedule and share calendars and events;
  - ✓ Google Talk: Students can contact their teacher or classmates via audio link and send instant messages to them for free anytime from anywhere
  - ✓ peace;
  - ✓ Google Docs: share documents, spreadsheets and presentations, work within a group or the entire school in real time. In addition, the final versions of documents can be published to users from all over the world;
  - ✓ Google Sites: Collaborate and centrally store related documents, Web content, and other information on one site.
  - ✓ Google Video for Education: This is a video hosting and sharing solution that allows schools and other organizations to use video as an effective means of internal communication and collaboration [6].

In the education system, you can use mail servers to create e-mail and introduce workflow: <https://mail.google.com>, <https://mail.md/>, <http://mail.ru/>, <http://hotmail.com/>, <https://www.yahoo.com/>, Most email servers are free, and as mentioned above, writing to the cloud requires an email account.

In addition to all these applications, the following products are available in the cloud: Prevx 3.0

is a paid antivirus containing a virus detection module; Panda Cloud (<http://www.cloudantivirus.com/>); Immundet Protect (<http://www.immunet.com>) fully complies with the requirements for working on a computer.

In conclusion, i would like to note that the use of "cloud" technologies is considered as a new approach for the effectiveness of the educational process. The teacher masters new services, develops lesson notes, brings them to life and receives high results from his work. Students show an increased interest, they like to communicate, use computer technology that is connected to the Internet. By combining the requirements, needs of teachers and students, we get a modern lesson that uses the latest developments in the field of cloud technology.

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