

**THE ROLE OF MOBILE TECHNOLOGIES IN TEACHING STUDENTS COMPUTER HARDWARE IN THE E-LEARNING SYSTEM*****Khonimkulov Ulugbek Suyunbayevich***

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**Abstract:** The article considers the role and importance of mobile technology in the process of teaching students computer hardware in the e-learning system. It also considers the role of mobile devices, phones, smartphones and facilitating the educational process, assimilating knowledge on software, hardware and software. The article emphasizes the interactivity, capabilities and quick access to resources of mobile technologies. At the same time, it also supports the problems and issues of effective use of this technology in education. It shows the potential of mobile technologies in the field of security as an important tool for modern education and provides the need for additional research in this area. The article serves as a useful resource for educational support workers and teachers.

**Keywords:** E-learning, mobile technologies, MIT App Inventor software, computer hardware, interactive learning, virtual simulation, smartphones, tablets, distance learning, technical knowledge, learning resources, 3D models, educational process, internet connection, modern education.

In the modern world, the educational process is unimaginable without technological advances. The electronic learning system (e-learning) has raised traditional teaching methods to a new level, allowing students to receive knowledge remotely. At the same time, the development of mobile tablets - smartphones and other portable devices - makes the educational process more convenient and effective. In this article, we will consider the role and importance of mobile technologies in teaching students computer hardware in the electronic learning system and consider the MIT App Inventor program for effective organization of the educational process.

MIT App Inventor (<http://ai2.appinventor.mit.edu/>) is a cloud-based visual application development environment for the Android OS platform that does not require knowledge of the Java programming language and the Android SDK. It is enough to know the basics of algorithms. To work with MIT App Inventor, you need a Google or Google Apps account and it is a programming environment in which applications are built in a visual mode using code blocks. Building applications is done in a visual mode using blocks of program code. App Inventor works in a web environment. A Google account is required to use App Inventor. If you do not have a Google account, then you must create an account and authorize it before starting work. After that, you will be able to work with the App Inventor program and all saved projects on any computer.



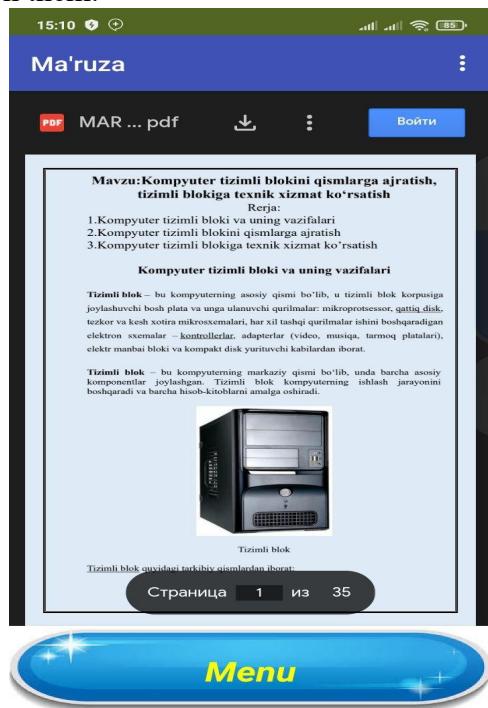
Figure 1. The first page of the mobile application



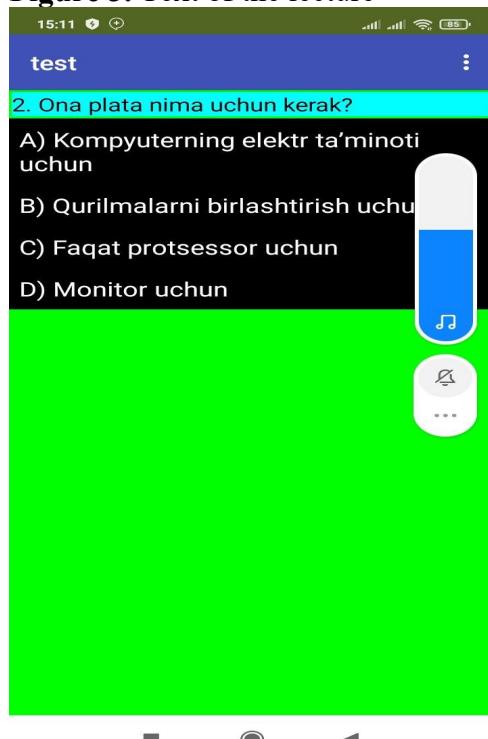
Figure 2. Topic resources

This section is the interface ("appearance") created in the application mode. This mode is used to select and place various program components: lecture text, presentation, test task, video

lesson, crossword and animations, which are displayed on the screen of your device when you launch them.



**Figure 3.** Text of the lecture



**Figure 4.** Test tasks



**Figure 5.** Crossword on the topic

The use of mobile applications in the educational process is one of the ways to increase learning motivation. Mobile applications help to fulfill the basic human needs - communication, education, self-realization. The introduction of mobile applications into the educational process is designed to increase the effectiveness of the lesson, increase the attractiveness of the presentation of the material, differentiate the types of tasks and diversify the forms of feedback.

**Conclusion.** Mobile technologies are finding their place in electronic education systems as an important tool for students to learn computer hardware. They make education convenient, interactive and effective, while modern technology serves to monitor knowledge that meets the requirements. For the use, wider introduction of this technology, it is necessary to improve the infrastructure and ensure equal. In the future, the further development of the role of mobile technology in education and its use in the educational process is an important factor.

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