

## THE IMPORTANCE OF MOBILE TECHNOLOGIES IN INFORMATICS

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**Abstract:** The thesis discusses methods of teaching informatics in institutions based on the use of mobile devices (smartphones, tablets and other portable computers) and cloud technologies that provide information exchange between students and the teacher. Based on the didactic tasks that arise in the learning process, appropriate teaching methods are proposed that are focused on the work of students with different types of information and the development of software products using mobile devices.

**Keywords:** mobile learning; mobile technologies; mobile devices; computer science teaching methodology

### INTRODUCTION

Mobile devices and cloud technologies penetrate into all spheres of human activity. With the help of personal mobile devices, the efficiency of access to information is significantly increased due to the presence of a module for connecting to the Internet, and their functionality sometimes exceeds the capabilities of stationary computers due to built-in photo and video cameras, a microphone, a tilt sensor, geolocation and others. In society, the priority is changing from “it is important to know” to “it is important to have access to information”. However, it is still customary at the institute to “learn to remember”, and not to work with information. At the same time, mobile devices are the most convenient means of accessing information due to their small size and high functionality. Thus, the issue of teaching informatics becomes relevant, taking into account the development trends of information and communication technologies, and in particular, mobile and cloud ones.

### MAIN PART

Game technologies and "gamification" of the learning process finds new ways of development through the use of mobile devices as a technical platform. Scenarios for using this format of learning are characterized by both the involvement of the teacher directly in the game process and the autonomy of the teacher and students. The inclusion of a gaming form of learning using mobile devices can help achieve higher educational results [2] by increasing motivation [1].

To increase the learning motivation of students and organize group research activities, web quests are often used, defining them as:

- needs-oriented activity, when part or all of the information with which students interact comes from the resources of the Internet;
- a problematic task with elements of a role-playing game, for which the information resources of the Internet are used;
- A web project, while part or all of the information a student works with can be located on various websites.

The researchers note that the key element of the quest is a list of links to resources that are necessary to complete the task and are selected by the teacher in advance. According to the duration of work with the quest, short-term and long-term ones are distinguished, and regardless of the type of quest, it has a certain structure [3]:

- Introduction. At this stage, students should understand what they will learn and do in the course of the quest. The teacher proposes a script, story, or problem on a specific topic in a way that will keep students interested.
- Exercise. This is the main stage of any quest. The teacher offers a pre-designed task for work on the topic, including questions and sub-questions. The task should be realistic, feasible and

contribute to the disclosure of the main educational topic. Sub-tasks should be simpler than the main task and deal with its individual aspects.

- **Process.** Students receive instructions to complete the task and complete it according to the proposed stages.
- **Resources.** Students receive addresses of sites on the Internet, which are recommended by the teacher to complete the task on the topic.
- **Performance evaluation.** At this stage, students have the opportunity to evaluate their work results, compare them with the results of the work of classmates. The teacher makes his comments about the students' work.
- **Conclusion.** This stage is necessary for students to compare the result obtained with the goal set at the beginning of the work. Also at this stage, it is necessary for students to realize the possibility of using the acquired knowledge and skills in other areas of activity.

## **CONCLUSION**

Thus, modern information and communication technologies, the widespread use of mobile devices and the Internet expand the available teaching methods, changing their form and offering new ones. A variety of methods and didactic tasks to be solved make it possible to build the learning process in the most effective way, based on the organizational and technological conditions and the content of the subject "Informatics and ICT".

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