

**MOBILE TECHNOLOGIES IN IMPROVING THE DESIGN OF STUDENTS' INDEPENDENT LEARNING ACTIVITIES***Khakimova Mamura Mukhammadievna**Doctoral student of Samarkand State University named after Sharof Rashidov*

*Abstract. There are a number of problems associated with the development of modern technologies for teaching a number of computer science subjects in the block of general professional subjects of the curriculum of an educational institution of a pedagogical university, methods of teaching computer science, among them we can say that education is relatively unmobilized. This article discusses precisely these questions.*

*Keywords: mobile education, information and communication technologies, independent education, digitalization.*

**TALABALARNING MUSTAQIL O'QUV FAOLIYATINI LOYIHALASHTIRISHNI TAKOMILLASHTIRISHDA MOBIL TEXNOLOGIYALAR***Xakimova Ma'mura Muxammadiyevna**Sharof Rashidov nomidagi Samarqand davlat universiteti tayanch doktoranti*

*Annotatsiya. Pedagogika oliy ta'lim muassasasi informatika o'qitish metodikasi ta'lim yo'nalishi o'quv rejasining umumkasbiy fanlarblokidagi informatika turkum fanlarni o'qitishning zamonaviy texnologiyalarini rivojlantirish bo'yicha bir qator muammolar mavjud bo'lib, bular qatorida ta'limning nisbatal mobillashdirilmaganligini aytish mumkin. Mazkur maqolada shu xususida so'z boradi.*

*Kalit so'zlar: mobil ta'lim, axborot-kommunikatsion texnologiyalar, mustaqil ta'lim, raqamlashtirish.*

**МОБИЛЬНЫЕ ТЕХНОЛОГИИ В СОВЕРШЕНСТВОВАНИИ ПРОЕКТИРОВАНИЯ САМОСТОЯТЕЛЬНОЙ УЧЕБНОЙ ДЕЯТЕЛЬНОСТИ СТУДЕНТОВ***Хакимова Маъмура Мухаммадиевна**Докторант Самаркандского государственного университета имени Шарофа Рашидова*

*Аннотация. Существует ряд проблем, связанных с разработкой современных технологий преподавания ряда предметов информатики в блоке общепрофессиональных предметов учебного плана учебного заведения педагогического вуза, методики преподавания информатики, среди них можно сказать, что образование относительно не мобилизовано. В данной статье рассуждаются именно эти вопросы.*

*Ключевые слова: мобильное образование, информационно-коммуникационные технологии, самостоятельное образование, цифровизация.*

Introduction. The rapid development of science and technology requires the active introduction of information and communication technologies in various spheres of human activity. This ensures the transition of society from the post-development stage of development to information. Information is increasingly viewed as a strategic resource of society and the state. Information technologies, which enable the collection, storage, processing and transmission of information, have become an important factor of competitiveness and a means of increasing the efficiency of management of all spheres of public life.

It can be considered that the modern trend of information technology has reduced the size of computing equipment. In particular, the characteristics of modern smartphones are no less than the characteristics of personal computers developed a few years ago, and in most cases even prevail.

**Main Part**

Informing the society and increasing the requirements for graduates of higher education institutions requires qualitative changes in the organization of educational activities. The State Education Standard, which is intended to create a basis for the development of the education system in our country, defines uniform requirements for the structure, conditions and results of the basic education program. The basis of the new standard is the formation of a number of personal characteristics of the graduate [1, 4].

The systematic-active approach based on the state educational standard is aimed at ensuring the following: self-development and formation of readiness for continuous education; designing and creating a social environment for the development of students in the educational system; stimulating active learning activities of students; organization of educational activities taking into account the individual age, psychological and physiological characteristics of students.

According to DTS and qualification requirements, the following three levels of requirements are set for the results of learning of the educational program by students: personal, readiness and ability to study for self-development of students and personal self-determination, including training and targeted information activities, important social and the system of interpersonal relations, activities reflecting personal and civic positions, legal awareness, environmental culture, the ability to set goals and build

life plans, the ability to understand the civil personality in a multicultural society; interdisciplinary, interdisciplinary concepts mastered by students and universal educational actions (regular, cognitive, communicative), the ability to use knowledge and social practice, independence in planning and implementing educational activities and organizing educational cooperation with teachers and peers, the ability to understand the direction of individual education, educational acquisition of research skills, project and social activities; thematic, including the acquisition of skills specific to the subject area, are mastered by students, the activity of acquiring new knowledge of the subject, its modification and application in educational, educational and social planning situations, the formation of a scientific way of thinking, scientific terminology, basic concepts, methods and methods take over.

Today, the number of users of mobile technologies in the world is increasing. Most of the students of higher educational institutions of our country are technically and psychologically ready to use mobile technologies in the educational process. Because, the results of observations and studies show that most students of higher education institutions have mobile phones based on Android or iOS system. Despite the widespread use of mobile devices, their potential is not sufficiently used in the field of education. Effective use of mobile technologies can help solve some of the current problems of education. As the capabilities of mobile devices continue to grow, their widespread use as an educational tool requires solving unique challenges.

Foreign scientists V.A. Kuklev, V.S. Titova, S. Veksler and D. Traxler [7, 8,9,10,13,14,15] have shown the pedagogical features of mobile education in their work. A.V. Kudryavtsev [5], analyzing theoretical developments and practical projects for the implementation of mobile education, noted the following advantages: the availability of education, the educational process is carried out outside the walls of the educational institution; individualization of education allows to take into account the individual characteristics of students and helps to understand the strengths and weaknesses of students; enables active use of visual teaching, interactive and simulation visual aids; enables people with physical disabilities to receive education; does not require the purchase of a personal computer and paper textbooks, that is, it is economically justified; easy users of educational materials provide information exchange using modern wireless technologies (WAP, GPRS, EDGE, Bluetooth, Wi-Fi); by providing information in a multimedia format, it helps to better learn and remember the material and increase interest in the educational process.

In addition to the above-mentioned positive aspects of teaching with the help of mobile education, according to the results of research conducted by Yandex, Obschestvennoe mnenie («Public Opinion») Foundation and TNS Group and WebIndex [6, 10], at the beginning of 2016, every It was found that active Internet users in settlements with 100,000 inhabitants are the main users aged 15-20. About 90% of them connect to the Internet using mobile devices. Thus, the technological basis of mobile education is partially formed by students. Smartphones become an integral part of a person's personal space, always carried with them.

D.V. Pogulyaev [5] analyzes the use of mobile learning technologies in education and shows the following three main models: support of the traditional educational process; full-scale mobile education; blended learning.

According to S.V. Titova [13], «mobile devices enable the implementation of the idea of individualization of education in traditional education, and thus help to modernize foreign language teaching and adapt it to new standards of modern education.» The potential for using mobile learning is high, but its implementation is «slow due to the lack of an underlying pedagogical theory.»

According to I.N. Golitsyna [2]: «despite the fact that the number of mobile phones and communicators is several times higher than the number of personal computers, and even though mobile devices have more powerful parameters than computers, in our country, mobile phones are not systematically used in the educational system.»

E. V. Vulfovich [3] states that «the use of mobile devices in the classroom is limited due to the limited use of mobile devices in many educational institutions. Teachers and students receive them in the form of electronic reference books. In addition, there is a risk that students will use mobile devices in the classroom for entertainment purposes rather than to provide and support the educational process.

The use of mobile devices in education requires the teacher to have the appropriate skills.

Analyzing the experience of teachers in Russia and Norway, S.V. Titova and A.P. Avramenko said that «new generation state education standards require teachers to have a professional level of informational competence, because the introduction of new forms created on the basis of mobile technologies into the traditional form of education, for mobile devices use existing educational applications, interactive support for the educational process, and develop students' skills and competence in working with mobile information» [12].

Considering the trends in the development of educational information and communication technologies, B. E. Starichenko stated that «the content of information communication technologies education should be defined to understand the state of modern information technologies that can be used in the educational process and their development prospects» [11].

Conclusion

From a technological point of view, the global trend of moving from stationary computing devices

to mobile devices is related to the current state of higher education facilities. At the same time, the rapid development of information and communication technologies does not leave the possibility of temporary modernization of computer equipment within the framework of a sufficient budget. Thus, the existing technological limitations lead to the situation where students cannot follow the current trends in the development of information technologies.

We highlight a number of issues related to the development of modern technologies of the teaching of informatics series of subjects in the block of general professional subjects of the educational program of the pedagogical higher educational institution of the computer science teaching methodology:

- Subjects in the curriculum of general professional sciences of informatics at the higher education institution did not fully cover modern information and communication technology;

- The capabilities of mobile software tools and devices that can be introduced into the educational system are not sufficiently explored.

One of the ways to find a solution to these problems is to establish a mobile learning system in the higher education system.

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