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Н. О. Ветлугина, С. Радлински

N. O. Vetlugina, S. Radlinski

ФГАОУ ВО «Российский государственный профессионально-педагогический университет», Екатеринбург

Коннектикутский колледж, Нью-Лондон, Коннектикут, США

Russian state vocational pedagogical university, Ekaterinburg

Connecticut College, New London, Connecticut, USA

vetlugina_no@rambler.ru

МОБИЛЬНОЕ ОБУЧЕНИЕ: СОВРЕМЕННЫЙ ВЗГЛЯД

НА ИСТОКИ И ПРАКТИКУ

MOBILE LEARNING: A MODERN LOOK

AT THE ORIGINS AND PRACTICE

Аннотация. Современные технологии позволяют расширить поле учебной аудиторной и самостоятельной деятельности студентов в условиях вовлечения в процесс обучения информационно-телекоммуникационных компьютерных технологий, формирующих навыки самоорганизации и самообучения. В статье рассматриваются мобильные технологии как новое направление в образовании. Выделен ряд проблем, связанных с широким внедрением мобильных устройств в образование, и не решены актуальные вопросы, связанные с мобильным обучением.

Abstract. Modern technologies allow to expand the field of educational classroom and independent activity of students in the conditions of involvement in the process of learning information and telecommunications computer technologies that form the skills of self-organization and self-learning. Mobile technologies as a new trend in education are described in the article. A number of problems related to the widespread introduction of mobile devices in education are highlighted, and current issues related to mobile learning are not resolved.

Ключевые слова: инновационные технологии и подходы в обучении, профессиональное образование, мобильные технологии, мобильное обучение, информационно-коммуникационные технологии.

Keywords: innovative technologies and approaches in training, vocational education, mobile technologies, mobile training, information and communication technologies.

The origin of the idea of mobile learning is associated with the first portable computer Dynabook, invented by Alan Kay and Xerox PARC in 1972. The first portable computer became a prototype of modern laptops and tablet computers (devices that are most convenient for educational purposes). If the appearance of Dynabook in technology marked the first step towards the transition from desktop computers to mobile devices, then this event marked the beginning of a new direction for the methodology of applying technology in teaching - mobile learning.

Mobile learning is part of a new picture of education created by technologies that support flexible, affordable, personalized learning. The daily use of mobile phones and other devices by students, such as tablets, which can also be used for educational purposes, is currently the main incentive for the mass distribution of mobile learning around the world. It is important to note that mobile technologies can help provide quality education for the development of children, youth and adults around the world.

Let's turn to the terminological units used in the English-language tradition to denote the concept of "using a mobile phone in training": mobile assisted learning, mobile learning, m-learning; "using a mobile phone in language training": mobile assisted language learning, acronym MALL, formed by analogy with the acronym CALL (computer assisted language learning, language learning using a computer). Common acronyms testifies, first, of a sufficiently high level of formation of concepts, and second, the ability of an acronym to serve as the element of formation of new terms (e.g., MALL research is the study of mobile phone use in language learning, MALL environment environment mobile phone use in language learning, etc.). As for the Russian language, the conventional special unit for the concept of "language learning via mobile phone" [6].

In fact, there are a huge number of definitions for the concept of "mobile learning". The most frequently used ones contain the following components:

"Mobile learning is learning that is not tied to a specific location and uses the educational capabilities of mobile (portable) technologies" [5]

"Mobile learning is the use of portable technologies, wireless and mobile networks to facilitate, support, improve and expand the boundaries of teaching and learning" [7].

The most commonly used definitions of mobile learning are: situational, portable, online, accessible to everyone, fast, round-the-clock, convenient, technocratic, flexible, remote, accessible on the go, student-focused, personalized.

Previously, definitions of "mobile learning" focused only on the use of technologies or the portability of these technologies, but now the term "mobile learning" implies a larger number of components:

Technocentricity-defines mobile learning as learning using mobile devices (a similar definition previously prevailed in the scientific literature on this topic).

Computer-based learning (e-learning) – mobile learning is an extension of computer-based learning or a mix of educational practices using computer-based learning with mobile devices.

Expanding the boundaries of education-mobile learning is seen as an opportunity to bring something new to the standard "student-teacher"paradigm [1, 2, 3, 4].

Student orientation-mobile learning involves not only the mobility of technology, but also the mobility of the student, which means that the student can now independently choose the most convenient plan and rhythm of classes and get the maximum amount of knowledge.

So, mobile education is primarily distinguished from other teaching methods by the use of mobile devices. "Mobile devices" refers to a range of gadgets. These are mobile phones, tablets, PDAs, audio players, netbooks, laptops, game consoles, etc. There is a classification of mobile devices by their type:

Type 1: Portable and personal. This type includes the most common devices: mobile phones, tablets, game consoles, laptops and netbooks, PDAs. They are intended for communication and receiving information. They belong to a single person who can use them to easily receive or distribute information.

Type 2: Stationary and personal. This type of technology is stationary, meaning it is only used in a specific location, but it still involves learning through personal interaction, since it is small and requires only one user. These are, for example, classroom response systems.

Type 3: Portable and public. These technologies can provide information to any user. The devices themselves are not portable, but they can be used by anyone passing by. They are initially designed for many users. These include information kiosks and interactive screens.

Type 4: Stationary and public. These technologies are very rarely referred to as mobile, but, nevertheless, they are considered as such. They include large

devices that involve interacting with multiple users at once. Here you can name interactive whiteboards and video conference rooms.

In our study, we only consider the first type of devices, since they are most widely used in Russia and are most often used in mobile learning. The fact is that you can't name all the devices. There are already many types of mobile devices, and new ones are constantly appearing. To avoid confusion in terminology, UNESCO suggested using the broadest definition. According to the Organization, the definition of "mobile device" includes any device that meets a number of criteria: it must be digital, portable, and must perform several tasks, including communication, data storage, video and audio recording, and a geolocation system. What exactly makes mobile devices so attractive for the learning process? Here are the main reasons for their growing popularity in education:

Portability. The small size and weight of most mobile devices suggests that they can be used everywhere. People can now easily study outside the traditional educational environment, at any time and in any place.

Network connection. Students can not only access educational content using their mobile device, but also be able to connect with other participants in the educational process in the same network.

Interactivity. Mobile devices initially have a social orientation, which allows them to be used for cooperation between students and their actions in the educational environment. In this context, mobile learning can be considered as a platform for students to get rich experiences of cooperation and collaboration. In addition, mobile devices offer the opportunity to create a base for mass, universal education, and not just education in a group.

Sensitivity to the surrounding situation. Mobile devices are able to provide the information required at the moment in a particular situation and place.

Continuity. Mobile content can evolve endlessly. Learning with it does not have to be linear and time-bound.

Individuality. Everyone can choose the most convenient device and a pleasant interface.

By the way, UNESCO, with the support of Nokia and Intel, developed the "Education for all" program back in 1990, which is now part of the development of affordable mobile education. The goal of this program is to eliminate the illiteracy of the world's population, and to make education accessible regardless of gender, social or ethnic background. By the end of this year, UNESCO plans to achieve a 50% increase in literacy. 164 countries participate in the program. The organization has created several projects aimed at increasing the use of mobile

technologies not only for entertainment, but also for gaining knowledge around the world. For example, "1:1" programs (One-to-One programs) are aimed at providing each student with the necessary gadgets and creating technologies that are accessible to everyone. Tablet computers are most often used. The 1: 1 program has been particularly developed in Latin America, the United States, and the United Kingdom, but the program is often criticized as "utopian" for good reason. Another project that is actively supported by UNESCO (but it was created by Intel in 2009) is byod (Bring Your Own Device). It consists in the fact that each student uses their own gadget in the classroom at the educational institution. This would reduce the cost of computer classes, textbooks, and other expensive equipment. In addition, BYOD involves the creation of a unified communication network within each educational institution or enterprise, access to educational (including UMK) or commercial resources that can be accessed by everyone on the campus or company from their mobile device. Of course, the content of the BYOD software varies depending on the institution. Each organization creates its own access points and posts information that is only accessible to its members (employees or students). In Russia, BYOD is still widely used only in the field of business and IT technologies (it is used by 75% of enterprises), but abroad, especially in Europe and the United States, this program is already being actively introduced in some educational institutions. Yet BYOD still offers a wide field for debate and discussion about its effectiveness and reasonableness of use.

The use of mobile technologies in education is intensively studied by various universities, for example, the world's leading online education Cyber University in Korea (Cyber University of Korea), similar to it in Japan, China, Holland, England, America, and other countries. Large organizations such as Google and Apple, among other services, offer services for the development of educational applications. For example, the services "Google Apps for educational institutions" and "Microsoft Live@edu" provide the user with a huge range of tools that can meet any needs and personalize the learning process.

Mobile education technology is also becoming more and more widespread in the Russian Federation. Among the mobile services supported by the world's leading universities are the presence of a mobile website of an educational institution, the organization of access from mobile devices to training courses and class schedules, to the resources of the University's electronic library; the presence of a geolocation service on the campus; the use of a notification service, etc. For example, Kazan Federal University is developing mobile applications

for the educational process on Android and iOS platforms. Access to some corporate information resources via mobile devices is provided at the Siberian Federal University (SFU) and the Northern (Arctic) Federal University named after M. V. Lomonosov (NARFU). In Ekaterinburg, the Ural Federal University (URFU) uses educational and methodological complexes (developed abroad), which include not only textbooks, workbooks and other standard components, but also mobile applications that allow you to perform exercises directly on your tablet, smartphone or any other mobile device. An entire educational environment is being developed.

Also, the Drofa publishing house is developing the m-learning project, which is based on the development of educational materials for studying various disciplines, as well as preparing for the unified state exam using special programs for mobile phones. The training program is also available via the Web interface. Currently, a methodology for teaching foreign languages has been developed. The system provides vocabulary learning through texts that are selected individually depending on the starting level of foreign language proficiency and individual language development schedule. When learning a new text, the student creates a dictionary of new words, information about previously learned words is stored on the server, and the Mobile phone provides the opportunity to learn at any time, anywhere, if there are no paper media at hand. After connecting to the server, the student receives a new piece of information, which does not need to be connected to the network to study. You only need to connect to the server to get new information and transmit statistics. This approach provides a low cost of using the program (the amount of information transmitted and received is significantly reduced).

Many educational projects are implemented using various forms of mobile learning, including, for example, the NMC Horizon Project (NMC Horizon Report). It is a joint project of the New Media Consortium and the EDUCAUSE Learning Initiative. This project involves the use of mobile computer systems connected to a network that are already used by students and installed on many campuses [3, 5]. Washington University, Yale University, Harvard University, and more than a hundred other universities and schools have already joined the project.

We have proven that mobile learning is a popular, developing and widely used technology. The most important thing is that whether we want it or not, mobile technologies have already penetrated the audience. Each student is paired with at least a mobile phone, and some have tablets and laptops. Increa-

singly, students prefer to use electronic versions of textbooks on their computers or read reports directly from the screens of their mobile devices. It makes no sense for teachers to resist progress, it is much more logical and pleasant to use progress for their own purposes and let students understand that their mobile gadgets can be used not only for entertainment and correspondence in social networks, but also for learning, both in the classroom and outside. That is why we suggest using mobile learning in English lessons at a non-linguistic University. Of course, there are certain features of using mobile technologies in these classes.

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