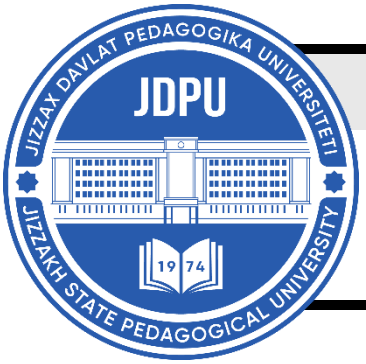
DOI: https://doi.org/10.37547/mesmj-V4-I5-24 Pages: 186-193

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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ASPECTS OF USING MOBILE EDUCATION IN THE EDUCATION SYSTEM

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ABOUT ARTICLE

Key words: lifelong education, mobile education, self-directed education, mobile applications, mobile devices, Internet, social network, computer science and information technology, algebra, electronic learning resources.

Received: 02.10.23
Accepted: 04.10.23
Published: 06.10.23

Abstract: This article presents the role of mobile applications in the educational process in the system of continuing education, aspects of the creation and use of mobile applications in subjects, their significance today, as well as issues of introducing digital technologies into the educational process. Today we can say that in the system of continuing education it is very important to create electronic textbooks, electronic educational resources on subjects and post them on the Internet by creating sites, channels, groups, blocks on social networks, posting publications by creating separate pages, as well as creating mobile applications for mobile learning. In this regard, the use of information technology in the educational process, conducting the educational process through electronic textbooks, electronic teaching aids, introducing digital educational technologies into the educational process, in particular the creation of mobile applications in subjects, serves to increase the level of education of students, to obtain independent education.

INTRODUCTION

No matter how many reforms are implemented in the educational process, the field of information technology is developing very rapidly. Today, the introduction of digital educational technologies into the educational process is of great importance, because digital educational technologies are developing, and the number of their users is increasing very quickly.

The world's population exceeded 8 billion on November 15, 2022, and will reach 8.01 billion as of January 2023, with an annual growth rate of 1%. More than half of the world's population (57%) lives in cities. Today, more than two-thirds of the world's population (68%) use mobile phones, and by the beginning of 2023, the number of mobile users will reach 5.44 billion. The increase since the beginning of last year was 168 million (3%) users [11].

At the beginning of 2023, in January, the number of Internet users worldwide reached 5.16 billion, which means that 64.4% of the world's population is using the Internet, and this means that the number of Internet users has increased by 1.9% over the year. Also, at the beginning of the year, there were 4.76 billion social network users worldwide, which is 60% of the world's population. In the last 12 months, the number of new users of the global social network increased by 3 percent, i.e. by 137 million [11].

It can be seen from this that in the continuous education system, the creation of electronic training manuals, electronic educational resources and their placement on the Internet by creating websites, channels, groups, blocks on social networks, placement by creating separate pages, as well as creating mobile applications is important.

MATERIALS AND METHODS

Through the Decree of the President of the Republic of Uzbekistan No. PF-6079, we can see that our state is paying great attention to the introduction of information technologies in education and increasing the effectiveness of education [16]. Conducting the lesson process using electronic textbooks, electronic study guides using information technologies in the educational process, introducing digital technologies into the educational process, in particular, creating mobile applications for subjects to increase the level of students' knowledge does.

In the context of the formation of an intellectual economy, acquiring knowledge using a variety of mobile technologies is becoming part of the modern education system, based on progressive technologies that provide flexible, accessible, individual learning. The daily use of mobile phones and other devices by students stimulates the further spread of mobile learning technologies in education [12].

Using mobile devices, students can access educational resources, connect with other users, and create content in and out of the classroom. The process of learning through mobile applications can be considered as an independent educational technology and can be used together with other

information and communication technologies. Technologies that enable mobile learning include mobile phones, tablet computers, e-readers, portable audio players, and portable game consoles.

M. Hashimi, M. Azizinejad and others [8, p. 24-77], in the opinion of electronic education (e-learning) and the increasing role of mobile devices in everyday life, caused the emergence of a new learning method called mobile education. Mobile applications are an important component of mobile education and have great potential to improve the quality of teaching and learning.

Mobile learning is a key concept in this article, mobile learning, so it's important to define what it means. According to the article published in Education Technology Solutions magazine [14, p. 55-56], mobility is, first of all, a method of creating a non-traditional learning environment available anytime and anywhere.

Mobile learning involves the use of mobile technologies alone or in combination with other information and communication technologies for learning anytime and anywhere. Learning can take many forms: people can use mobile devices to access learning resources, communicate with others, or create content in and out of the classroom.

Mobile technologies are being introduced and used by society everywhere, starting from everyday life and including all spheres of society: in everyday life, in the economy, in business, in management, in education. The range of applications of mobile technologies is constantly expanding, becoming accessible and easy to use [17].

Analysis of the concept of “mobile learning” from various sources, such as a UNESCO publication [22], we can highlight the general trend of mobile learning - the use of mobile technologies in the learning process. The introduction of mobile technologies into the educational process is called mobile learning or m-Learning, which implies the use of mobile technologies in the educational process, both individually and in combination with other teaching methods and information and communication technologies [22].

N. Hockley [9, p. 81] defines mobile learning as an approach that combines formal and informal learning in the classroom and beyond, that is, mobile learning is an approach to learning in which the learning environment is not limited to the chronology of the educational institution, but exists in any place and at any time. At the same time, interaction between student and teacher can be carried out both within the framework of the classical educational process and virtually, which makes it possible to combine formal learning in the classroom and informal learning outside it. There are both benefits and challenges of using mobile learning that need to be considered before using mobile devices in the classroom.

According to M. Hashemi, M. Azizinejad et al. [8, p. 24-79], mobile devices have a number of advantages for teachers and students compared to traditional teaching using computer technologies. For example, the use of mobile learning leads to an improvement in the quality of interaction between

students and the teacher: the communication format becomes more similar to the traditional one. Participants find themselves engaged in live communication instead of hiding behind computer monitors. Additionally, mobile devices are easier to use and place than computers or laptops.

Mobile devices are less heavy than computers or monitors, making it easier to share assignments and work with other students or the teacher by emailing, cutting, and copying text. In addition, mobile devices can be used in distance learning. On the other hand, teachers and students should consider the problems of using mobile devices in teaching and learning, including small screens, which creates a limitation in the amount of information on it. Additionally, device batteries can pose another challenge. Students must ensure that the battery is fully charged before using the device for educational purposes. However, some mobile devices depend on the Wi-Fi wireless network and cannot be used without the Internet [8, p. 24-79].

Using a mobile device only as a source of entertainment reduces the attractiveness of mobile learning in the educational environment, acting as a factor that distracts students from the educational process. In this case, explanatory work is needed, demonstrating the capabilities of mobile educational resources, their impact on improving the quality of teaching, learning and management of the educational process.

Mobile Applications Despite the problems associated with the use of mobile learning, it has become very popular in education. The prevalence of this approach is primarily associated with mobile applications, since they can be used anywhere and at any time.

A number of dictionaries define the term "application" as a computer program. P. Christensson [3] defines an application as a computer program such as email, games, utilities, etc.

An application is software that performs the main task for which a computer is used. However, when talking about a mobile application (apps), most dictionaries define it as a mobile program. The Oxford Dictionary defines an application as a program that is downloaded from the Internet by a person and installed on a mobile device [5]. According to Dictionary.com, a mobile application is a small program, especially installed on a mobile phone [4]. Before using apps in the classroom or introducing them to students, teachers should have a clear understanding of how different types of apps can be integrated into the learning process.

According to K. Shipman [2, p. 32–33], there are various types of educational mobile applications, content apps, which can add new information to what is being presented; fieldwork apps that help students collect and store information; sound and vision apps, where students can listen to other people speak or record themselves; mapping apps, which provide students with maps and information about places; creative apps where students can create their own images to enhance or add information to their work.

Additionally, apps can be classified into two groups based on the number of functions: single function apps and multiple function apps. For example, the Epocrates mobile application contains information about medicines and medical calculators [7, p. 31-36]. This technology can be used as a new type of instruction or for guidance on a topic. According to the work of F. Haddage and S. Lattenman, there are three parameters for assessing the effectiveness of a mobile application: speed, reliability and simplicity [13, p. 121].

The speed of the mobile application allows students and teachers to work faster and more efficiently, giving them access to applications from different devices; the reliability parameter ensures that people using this mobile application will be able to effectively complete the assigned tasks and, therefore, will feel confident in their abilities to master the material; The simplicity parameter determines how easy a mobile application is to use and effective. When choosing a mobile application as a learning tool, a number of evaluation criteria should be taken into account. D. Nisbet and D. Austin [15, p. 1–7] use the following criteria: 1) practicality; 2) accessibility; 3) ease of use; 4) quality.

RESULTS AND DISCUSSION

Mobile applications can be used in various fields of education, such as medicine, mathematics and geography. mobile applications can be useful in distance learning, as was shown in the study by F. Haddage and S. Lattenman [13, p. 119–128], when 70% of German language learners and 85% of Australian language learners confirmed the effectiveness of using a mobile application in the learning process.

O. Franco and T. Tyrrell (2012) examined the use of a mobile application in medical practice. It turned out that the use of a mobile application contributes to the introduction of new technologies into medical practice. However, the study by Franko and Tirrell [7, p. 3135–3139] does not explain exactly how mobile applications can be used in medical practice. In addition, mobile applications can be used as a tool to demonstrate natural phenomena. For example, K. Shipman [14, p. 32–33] uses mobile applications in geography classes to demonstrate earthquake factors, such as the degree of shaking or the depth of the epicenter. In addition, she uses various forms of assignments and also combines individual, pair and group work. Mobile applications can increase student motivation and make the course more interesting for students.

According to A. Drigas and M. Pappas [6, p. 18–23], mobile applications help improve arithmetic skills, problem-solving skills, and any other skills needed for mathematics, as well as increase student engagement and create a non-traditional learning environment in the mathematics classroom. Moreover, it was found that students use mobile applications to communicate with classmates or teachers to complete tests and tests, to download lesson content. F. Haddage and S. Lattenman [13, p. 119–128] offer a number of mobile applications that can be used in teaching: Kindle can be used to read, download books, etc.; Pages can be used to create and manipulate text; Gmail

and Calendar can be used to communicate and share schedules; Sites is used to create new sites yourself; Mental Note can be used for typing, drawing, adding notes to pictures, etc. When it comes to using a mobile app in language teaching and learning, it is important to note that not enough research has been done in this area.

Some mobile apps can be used to help students with language disorders learn literacy skills such as writing, reading, and speaking. K. Boser and S. Wayland [1, p. 22] reviewed seven apps, including VizZle, Crack the books, AutltsMate, Avaz, Clicker Sentences and Clicker Docs, and Abilipad, that can help students develop productive speaking and writing skills, as well as receptive reading and listening skills. For example, Crack the books is an interactive mobile app that contains book series for all ability levels from first to eighth grade. These books have beautiful photographs, animations, videos, and educational information. Mobile applications can be used in teaching and learning English, especially to increase students' vocabulary.

D. Nisbet and D. Austin [15, p. 1–7] believe that mobile applications, including dictionaries, translators, flashcards, etc., effectively increase students' vocabulary. For example, the Dictionary.com app helps students not only learn the meaning of a word, but also offers pronunciation, idioms, games, and more. Moreover, it is necessary not only to introduce a new mobile application in the classroom, but also to explain and show how students can use this mobile application to improve results and achieve learning goals [15, p. 1–7]. Teachers use different types of technology in the classroom to motivate and encourage students. In recent years, the popularity of mobile learning has been continuously growing [14, p. 55–56; 9, p. 80–84]. For this reason, teachers are beginning to introduce and use mobile applications in areas of education such as mathematics, medicine, geography, to demonstrate, add additional information to the lesson topic, or create a non-traditional format for the educational process.

Creating a new generation of educational literature, that is, creating electronic educational literature, creating mobile applications from subjects are important tasks in this regard. Today, various pedagogical software tools are used to create electronic educational literature, starting with a simple algorithmic programming language. With the help of such programs and using Internet technologies, it is possible to create an electronic textbook on subjects, including "Algebra", "Informatics and information technologies" in secondary schools. To date, multimedia electronic training manuals and electronic educational resources have been created in the subjects of "Algebra", "Informatics and Information Technologies", as well as their Internet versions, and the Internet network iga (www.edarslik.uz website). Electronic training manuals, electronic educational resources in it consist of the following sections: program description; choosing the content of the topic; a training display shell; practical assignments; graphic animation; voting files; text files; control program (test program) [10].

Now, work is underway to create their mobile versions, that is, mobile applications for use on mobile devices in the subjects of the continuing education system, including "Algebra", "Informatics and information technologies". Mobile applications for subjects will also be necessary to implement mobile learning in the educational process. That is why today it is necessary to create educational content on the Internet, place electronic educational resources on web pages, and create mobile applications, taking into account mobile phone users and Internet users around the world. This is a way to introduce digital technologies into the educational process.

CONCLUSION

In conclusion, in mobile education, mobile applications, e-learning resources have a number of possibilities: students can choose an optional lesson topic using the menu of the program and quickly switch to another topic, as well as users can view presentations, learn they will have a number of opportunities, such as quick access to concepts, use of the glossary, crosswords, and self-assessment by solving subject tests. Given the widespread use and unique opportunities for learning, these technologies can become one of the effective forms of obtaining up-to-date information, independent education and self-development. This shows the place of mobile education in the educational system and how important it is to use mobile applications.

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