ТАЛАБАЛАРНИ КАСБИЙ ТАЙЁРЛАШДА МОБИЛЬ ТАЪЛИМДАН ФОЙДАЛАНИШ

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ИСПОЛЬЗОВАНИЕ МОБИЛЬНОГО ОБРАЗОВАНИЯ В ПРОФЕССИОНАЛЬНОЙ ПОДГОТОВКЕ СТУДЕНТОВ

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USE OF MOBILE EDUCATION IN PROFESSIONAL TRAINING OF STUDENTS

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Abstract: Background. Today, textbooks of the modern educational process in higher education have been replaced by electronic textbooks that are compatible with mobile devices, and mobile devices have become a means of teaching. The main goal of higher education is to train qualified specialists who are able to work effectively in their field and competitive in the labor market. For the application of knowledge and creative activity of students in the educational process, it is important to improve the quality of education, the use of modern educational technologies that make it possible to effectively use the study time by reducing the time.

Methods. In the research were used methods as the analysis of pedagogical, methodological, didactic literature, curricula and computer programs, educational and regulatory documents, comparative analysis and socio-pedagogical (observation, interview, diagnostics).

Results. The article discusses to create mobile applications, 3 applications were considered, each with its own function and with an intuitive interface.

Conclusion. In the conclusion, recommendations are given for improving the effectiveness of training, student progress.

Keywords: Android, mobile app, m-learning, IOS, online platforms.

Introduction. Today, the level of development of the digital economy in our country is characterized by the predominance of information products and creative activities, and the use of information and communication technologies for students in the educational process has become an important condition for the attractiveness of the educational process. process. Specialized computer labs, multimedia equipment and Wi-Fi have become an integral part of all types of classes, and software packages and e-learning environments have significantly reduced the use of paper data by students in the learning process. Also, the textbooks of the modern educational process of higher education have been replaced by electronic textbooks compatible with mobile devices, and mobile devices have become a means of teaching. The main goal of higher education is to train qualified specialists who are able to work effectively in their field and competitive in the labor market. For the application of knowledge and creative activity of students in the educational process, it is important to improve the quality of education, the use of modern educational technologies that make it possible to effectively use the study time by reducing the time.

Materials and methods. In the research were used methods as the analysis of pedagogical, methodological, didactic literature, curricula and computer programs, educational and regulatory documents, comparative analysis and socio-pedagogical (observation, interview, diagnostics).

According to M. Hashemi, M. Azizinejad and others, the growing role of e-learning and mobile devices in everyday life has led to the emergence of a new teaching method called mobile learning (MT). However, mobile applications (MI) are the most important component of mobile education with great potential to improve the quality of teaching and learning [1, p. 2477]. According to the publication of an article in Education Technology Solutions, mobile learning is, first of all, a way to create an unconventional learning environment accessible anytime and anywhere [2, p. 55-56]. N. Hockley defines mobile learning as an approach that combines formal and informal learning in the classroom and outside it, i.e. mobile learning is an approach to learning that is not limited to the educational environment, but is available anywhere, anytime. [3, p. 81].

Typically, mobile learning (mobile learning, mobile learning) is learning using personal electronic devices. Mobile devices have several advantages over traditional computer-assisted teaching of teachers and students. For example, the use of mobile learning leads to an increase in the quality of interaction between students and teachers. Instead of hiding behind computer monitors in the classroom, students interact with teachers and classmates interactively. It is also easier to use mobile devices in the learning process than

computers or laptops. Users can access educational resources from mobile devices, communicate with others, or use educational content both in the classroom and outside it [4, p. 6-8]. It also includes efforts to support broader learning objectives such as improving communication between teachers and students to effectively manage mobile education systems.

Results and discussion.

It should be noted that, despite the existing research on some areas of the use of mobile devices and technologies in teaching various disciplines, a number of problems have been insufficiently studied. For example:

• approaches to the development of a system of teaching methods based on mobile technologies have not been determined;

• there are no mechanisms for teaching students of higher educational institutions on the subject «Information systems and technologies in the economy», formed by integrating information technologies and economic knowledge using mobile devices;

• an approach to the systematic use of mobile devices for teaching the subject «Information systems and technologies in economics» has not been proposed.

Based on the foregoing, the purpose of our study is to organize mobile learning in the professional training of economics students.

Research goals:

1. Analysis of applications for creating mobile applications based on the analysis of scientific literature;

2. Development of a mobile application for professional training of economics students;

3. Develop a methodology for using the created mobile application and make proposals for its use in the educational process.

The scientific novelty of the research lies in the fact that the development and substantiation of teaching students the subject «Information systems and technologies in the economy» on the basis of innovative technologies.

There are several definitions of the concept of «mobile education» in the educational process, which are as follows:

• "Mobile education: a learning tool that organizes e-learning using mobile devices, including textbooks and manuals in electronic form [5, p. 10];

• "Mobile learning (m-learning) means learning and using mobile phones (m-Learning), PDAs (Personal Digital Assistants), mobile phones, laptops and tablets, as well as portable IT devices in education and training [6, p. 241.];

• Mobile learning is a form of organization of the educational process based on the use of mobile devices and wireless communication [7, p. 80].

Thus, a system of mobile teaching methods can be understood as a set of teaching methods that have a single technological basis - mobile and cloud technologies, their didactic functions, lesson content and conditions for achieving pedagogical goals.

Mobile apps can be created by a programmer or with special graphics apps and designers on the internet. Writing mobile apps by hand requires programming knowledge, while design apps allow new users to create even simpler apps. Given the complexity of the process of creating mobile applications by the user, the programmer must first select the correct software shell that exists. The presence of various applications on a mobile device allows us to optimize the operation of the device and solve problems that arise in different areas of life. Applications are divided into business applications, entertainment, social, educational and others in accordance with their functional purpose.

The Eclipse IDE programming language mainly supports Cobol, Java, C, C ++ and has the function of adding C #, PHP, Python programming languages to the user. Eclipse is an application that specializes in developing plugins for Android applications, optimizing them, and improving interfaces.

We compared the capabilities of applications creating mobile applications below in tabular form (Table 1).

Table 1. Capabilities of applications creating mobile applications

Name of programs	Name of platforms	Programming language	Ability to work online	Interface language
Android Studio	Android	Java, C/C++	Available	Multilingual
RAD Studio (Berlin)	Android	Object Pascal, C++	Available	English, German, French, Japanese
Eclipse IDE	Android, IOS, windows phone	Java, C/C++, PHP, Ruby, Python ва б.	Not available	English only

It should be noted that the Android Studio and Eclipse IDE programming languages are free to download on the Internet. You can also create mobile applications on the Internet for users unfamiliar with the programming language. This is done with Appy Pie, Shoutem, Swiftic, GoodBarber, BuildFire, Mobincube and others who build mobile online apps. Of course, knowledge of foreign languages is important when a user creates mobile applications [8].

In the course of the study, a mobile application was created using the Android Studio application for organizing mobile learning as part of the professional training of students of economic universities (Figure 1). Also, this mobile application was developed on the basis of the textbook «Information systems and technologies in the economy» and introduced into the educational process [9].

This mobile application is for students:

study science at any time using a mobile device;

re-study of knowledge that could not be quickly assimilated in the form of text, presentation, glossary of terms;

get acquainted with the regulatory documents in specialties and sciences;

free choice of topics for self-study;

study theoretical information on topics of science

timely implementation of practical, laboratory tasks;

access and use of sites related to specialization and information and communication technologies;

self-assessment by answering test questions;

The state of the profession provides opportunities such as exploring online services and making your own conclusions.

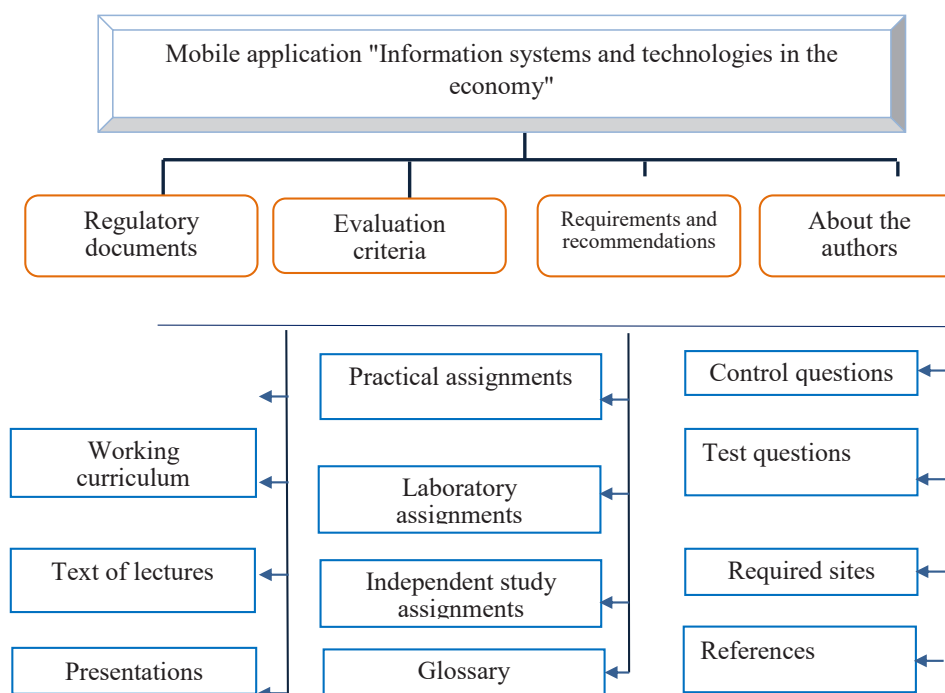The structure of the mobile application is as follows [10]:

Figure 1. The structure of the mobile application called Information Complexes and Technologies in the Economy

For a science teacher:

- receive guidelines for teaching scientific disciplines;
- review theoretical information on topics and use it as needed;
- provides students with opportunities such as hands-on, lab assignments, and self-study topics.

The method of using the created mobile application is as follows:

With the help of the button «Regulations», students get acquainted with the normative documents on information and communication technologies and economics;

Using the "Assessment Criteria" button, students learn assessment criteria and self-assessment;

The button «Requirements and Recommendations» contains requirements for students and teachers of economic specialties, as well as recommendations for the use of electronic information and educational resources;

The "Curriculum" button contains the curriculum approved by the Ministry of Higher and Secondary Specialized Education;

The "Work Curriculum" button contains the work curriculum developed by the science teacher;

The button «Text of lectures» contains theoretical information on the topics indicated in the curriculum of the subject, in the form of texts of lectures in an improved form;

In the button «Practical tasks» practical tasks of the subject are developed in accordance with the specialty and are placed in order;

In the button «Laboratory assignments» laboratory assignments are drawn up and placed according to the specialty;

Using the «Glossary» button, students learn the basic terms of information and communication technologies and economics in the form of an explanatory dictionary;

The "Independent Study Assignment" button allows students to view the Independent Study Assignments and prepare them for standard grade assignments;

With the help of the button «Test questions» students get acquainted with the total number of test questions in the subject and prepare for the intermediate and final tests;

Using the "Test Questions" button, students can run scientific tests and test their knowledge and self-esteem;

With the help of the "Presentations" button, the teacher of information and communication technologies can explain the presentation of each module on the screen during the lesson, and the students can study independently;

Using the button «Required sites», students can get access to the sites of the specialty, learn from them news, learn to work in professional activities;

The «Links» button contains the latest scientific literature.

Conclusion. In the field of economics of higher education, each lesson on the subject «Information systems and technologies in economics» should have the expected results. The fact that during teaching the teacher achieves more than expected leads to an increase in teaching efficiency as well as student learning efficiency.

REFERENCES:

9. Learning? Challenges and Capabilities // Procedia – Social and Behavioral Sciences. 2011. № 40. P. 2477–2481.

10. Kinash S., Kordyban R., Hives L. What mobile learning looks like // Education technology solutions. 2012. № 49. P. 55–56

11.Hockly N. Mobile learning // ELT J.: English Language Teaching J. 2013. № 67 (1). P. 80–84.

12. Suropov B.M. Opportunities to create and use the information-educational environment in higher education. // Modern education.-Tashkent, 2020. №10 (95), pp. 3-10.

13. Resolution of the Agency of Uzstandard dated November 10, 2017 №05-896. Uniform requirements for electronic methodological complexes and other educational resources included in the national system of «e-learning». O'zDSt 36.2030: 2017.

14. Golitsyna I. N., Polovnikova N. L. Mobile learning as a new technology in education // Educational technologies and society. 2011. No. 1, pp. 241–252.

15. Pogulyaev D.V. Possibilities of using mobile technologies in the educational process // Applied Informatics. 2006. No. 5, pp. 80–84.

16. TOP of the best mobile app builders in 2019. https://vc.ru/services/77911-top-luchshih-konstruktorov-mobilnyh-prilozheniy-v-2019-godu.

17. Abdullayeva B.S., Suropov B.M. Information complexes and technologies in the economy. - Tashkent. -2021, 194 p.

18. Suropov B.M., Zaripova Sh.O. Android mobile application on the subject «Information systems and technologies in the economy» for higher education 5230900-Accounting and Auditing. № DGU 10661.