METHODOLOGICAL APPROACH TO THE FORMATION OF PROFESSIONAL TEACHERS TO CREATE MOBILE APPLICATIONS IN EDUCATION

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В статье отражен методический подход к формированию готовности преподавателей профессиональных колледжей к созданию мобильных приложений. На основе проанализированных педагогических аспектов разработаны и обоснованы уровни подготовки профессиональной деятельности учителей.

The article reflects the methodological approach to shaping the readiness of teachers of professional colleges to create mobile applications. On the basis of the analyzed pedagogical aspects, the levels of training of teachers' professional activity were developed and substantiated.

Keywords: mobile applications, e-learning, professional activity, pedagogical approach, reflexive activity, motivation, reproductive, content of educational resources, competence, modernization.

Ключевые слова: мобильные приложения, электронное обучение, профессиональная деятельность, педагогический подход, рефлексивная деятельность, мотивация, репродуктивная, содержание образовательных ресурсов, компетенция, модернизация.

Introduction.

In accordance with the "Strategy of Action for the Development of Uzbekistan" approved by the President of the Republic of Uzbekistan on February 7, 2017, attention was paid to the formation and improvement of all cells of the social sphere, including the education and training system.

In this regard, we can say that the main tasks of improving teacher education today include:

- continuous improvement of professional opportunities and skills of teachers for the organization of the continuity of professional pedagogical education and research activities;
- strive to ensure that backup, information and logistics of educational institutions keep up with the level of modern requirements;
- train teachers in the use of information and communication technologies to achieve new learning outcomes in the educational process.

Methodology. Modernization of the education system in our country requires a search for new approaches to the organization of the educational process. Informatization requires a new qualitative stage in the education system through the effective use of mobile applications for learning.

In this case, the teacher's ability to create mobile applications for learning and their application in education is an important component of his competence in the field of information and communication technologies. For a future computer science teacher, it will be important to learn how to search for and select mobile learning applications in accordance with educational orders, determine the appropriateness of their inclusion in various types and stages of lessons, and assess student performance using mobile learning applications. [1]

Today, updating the content (content, structure) and interface of modern mobile applications is not always determined by the constantly changing requirements for educational tools. As a result, not only prepares the future teacher for the use of the didactic potential of educational resources, but also the problem of their creation and adaptation to certain types of education arises. Teaching information technology teachers for one purpose is to ensure their willingness to create and use mobile applications as an important and necessary component of their professional and pedagogical competence.

An analysis of regulatory documents and curricula of pedagogical vocational schools showed that the creation and preparation for the use of mobile applications for teaching computer science is a general mathematical and natural science (“Informatics” and “The use of modern information and communication technologies in education”) and general education. "Methods of teaching computer science and information technology" is limited to the study of individual sections of the subject. At the same time, the content of these subjects often does not have a single block, which negatively affects the professional training of future teachers of informatics, since the content of these subjects does not take into account the involvement of students in the learning process. creation of mobile educational applications. won't be enough for.

Methods. Analysis of modern requirements for information technologies for the training of a competent teacher of computer science, as well as the study of literature and research results in this area show that there are contradictions between:

- increased demand for information and technological training of future teachers and the fact that the higher education system is not sufficiently focused on their implementation;
- the didactic potential of mobile educational applications and the conditions for their use in the educational process are insufficiently substantiated;

•the need to form the information technology competence of the future computer science teacher and insufficient focus on the educational process in a pedagogical university, the involvement of students in the process of creating mobile applications and their use in future careers.

The contradictions listed above highlight the research tasks of informatics teachers, which consist in creating mobile educational applications and substantiating the pedagogical conditions for their application in their professional activities.

In this regard, the role of the educational process increases, which creates conditions for the teacher's continuous work on himself. Today, the strategic task of the development of higher education is to update its content, teaching methods and achieve new educational results. The peculiarity of the current stage of development of Uzbekistan is that the socio-economic changes taking place in the country over time coincide with the world traditions of the transition of the world from an industrial to an informed society, which makes new demands on the training of specialists. [3]

However, experience shows that the system of teacher training in our country in some cases continues to live in the social period of the last century, as a result of which there is a high level of instrumental competencies (communication, research, information, organization and planning of educational activities). activities, decision-making and capable of solving professional problems), have sufficient qualifications and responsibility to improve the modern education system, and are also ready to solve the leading problems of the industry development.

Thus, in our opinion, the didactic goals of teacher training in the context of the development of the educational process are:

•improving self-study skills;

•preparation of teachers for the creation of a new educational environment (including on the basis of information and communication technologies);

continue to shape professional thinking to achieve new learning outcomes.

Analysis of the current stage of informatization of education allows us to highlight the following aspects (aspects) of this process:

1) development of motivation to use information and communication technologies in teaching and upbringing;

2) Training of teachers in the use of ICT;

3) informing about the activities of administrative structures;

4) informatization of subject areas.

Let us consider in more detail the second aspect of informatization of education - teaching teachers to use ICT.

In order to develop the main directions for improving the target, content and methodological components of the methodological system for training teachers for the creation and use of mobile educational applications, we define the essence of the

concept of "training a qualified teacher." Analysis of the state of the problem in the pedagogical literature has made it possible to single out three different approaches in the study of the issue of qualified teacher training.

Results. Today, an advanced approach to the creation and use of mobile applications in education is mainly aimed at increasing the efficiency of the traditional methodological teaching system.

Analysis of the effectiveness of this approach in a number of studies shows very clearly that in education offered by many, mobile applications have retained their adherence to the model of learning knowledge, traditional for the modern education system. This model focuses on the processing of reproductive skills, the analysis of the concept of “innovation” by the authors of mobile applications in education did not touch upon modifications of existing teaching methods (innovations). The authors believed in its "progressive evolution" through the use of more ICT tools.

Attempts to integrate ICT tools into the traditional education system do not lead to radical changes in the educational environment, either in terms of technology or in terms of results. New information and communication technologies will have a radical impact on the educational process only if these technologies are introduced into a new learning model (corresponding to their capabilities).

Discussion. Thus, the existing mobile applications in education, in their mass, cannot provide the necessary solution to the problems of modernization (improvement) of education, the transition to innovative educational technologies. This raises the question of empowering the teacher to develop mobile applications in education. In particular, the authorship is focused on one goal of the development of educational technologies, namely, the development of mobile applications in education, similar in essence and characteristics of these technologies. Consequently, the issue of preparing teachers for the creation of mobile applications in education and their effective use in the learning process is seriously relevant.

- Based on the foregoing, we believe that the issue of qualified teacher training in the field of creating mobile applications in education should be aimed primarily at the use of these tools in all aspects of the educational process from a methodological point of view, these aspects include:
- Motivational growth teacher qualifications and the growth of student interest in learning and motivation for learning activities, creating convenience for the user;
- Goal - understanding of the goals, tasks set by the teacher, and the results obtained from the use of mobile applications in education in the educational process;
- Вдумчивый - to create the content of the subject area, taking into account the learning objectives of students, their interests and the expected results of new learning outcomes;

•Operational mastery methods and techniques of teaching using mobile applications in education, studying the subject area using ICT tools;

•Control - control and self-monitoring of educational activities using mobile applications in education, aimed at obtaining new learning outcomes;

•Reflective - introspection, self-assessment, introspection, self-assessment of activities on the use of mobile applications in education in the educational process.

To determine how the environment for preparing teachers to create mobile apps in education should change, it is necessary to look at the "readiness" category and, as a result of student learning, at its creators.

Based on the analysis of the educational research of the organizers, the categories of education can be divided into:

•Motivational policy, requires a wide interest in learning, independent motives for learning, understanding the importance of preparing for the creation of mobile applications in education, as well as the need to create mobile applications in education (stable professional orientation, demand for teaching activities and confidence in the need to use ICT tools in their professional activities) includes self-provision of professional training for the acquisition of knowledge and skills, the formation of skills;

•professional and methodological analysis, it is characterized by the following indicators: the formation of a complex of psychological and pedagogical skills for creating mobile applications in personal learning, methodological skills, technological diversity, ensuring the effectiveness of creating mobile applications in education;

•Cognitive technique, provides for the enrichment of teachers with psychological and pedagogical knowledge, the essence of creating mobile applications in education, their structural organizers, information about the diversity and various forms of mobile applications in education used in professional activities;

•Operational technique, describes the ways of mastering the system of creating and using mobile applications in education. In this training, mobile applications are assessed on the basis of their ability to transfer acquired knowledge and methods of work in various professional situations, aimed at mastering the skills and abilities necessary to create and use mobile applications in practice;

•Evaluative and reflective analysis, includes diagnostic skills, self-esteem, professional reflection, the desire to understand the effectiveness of the results of the work performed, the ability to change oneself to achieve success in creating mobile applications in education (analysis and adjustment of the relationship between goals, content and results of their professional activities).

We view the willingness of teachers to create mobile applications in education as interdependent private teaching that manifests itself as a holistic system. This system includes motivational-value, professional-methodological, cognitive, operational-value, evaluative-reflexive organizers, the formation of which allows the teacher to effectively create mobile applications in education and use them in solving professional problems. [6]

Based on the aforementioned organizers of teacher readiness to create mobile applications in education, we determine the following levels of teacher readiness for the described activity:

1) basic – describes the availability of basic knowledge related to the lowest level of skill in creating mobile applications in education. At a lower level of mastery, the student cannot independently demonstrate the knowledge gained, but only under the same conditions. The main methods of working on a computer: the basics of working with text and graphic information, the most general ideas about the object of study, its most common aspects, as well as the basic use of computer tools for creating mobile applications in education, organizes the formation of skills and abilities;

2) general - characterized by the presence of basic knowledge on the creation and use of relevant mobile applications in education. The student can independently replicate this knowledge and apply the acquired knowledge and methods of activity in new conditions. This level of knowledge allows the teacher to apply the information received to use ICT in their professional activities, in addition, this level takes into account the formation of skills in the design and development of appropriate mobile applications in education. This level of readiness demonstrates the emergence of partial independence in the creation of the ETZ.

3) professional – He is characterized by wide and deep knowledge of the creation and use of mobile applications in education, the ability to use pedagogical design technologies, which allows the teacher to create mobile applications in personal learning and use his abilities to solve professional problems. The activity of the listener at this level is creative and active, which is reflected not only in the design and development of mobile applications, but also in the development of methods for using mobile applications in education to solve professional problems.

- To identify common approaches to building a methodological base for teaching teachers to create relevant mobile applications in education, it is necessary to analyze the methodological systems of training and advanced training in this area. Such research is closely related to the concept of the pedagogical system.

- The pedagogical system is a collection of interrelated tools, methods and processes. This set is necessary to create an organizational, purposeful and pre-thought out pedagogical influence on the formation of a personality with given quality indicators. This statement defines the content of the pedagogical system as follows:

- students; educational goals (general and specific);
- content of education; educational processes (private training and internship);
- teachers (teaching aids);

Organizational forms of educational work.

In pedagogical research, the methodological system is defined as an integral model of pedagogical activity, which is then determined in the project of this activity (V.V. Kraevsky). In this case, if we are talking about training, the methodological system includes a training program for specific subjects and materials (textbooks, task sets, textbooks, visual aids, teaching aids, etc.), which the program finds its application.

Conclusion. Let's list the characteristic features of the methodological training of teachers in the creation and use of relevant mobile applications in education, which, in our opinion, are excellent and consist of:

• defining the goals of teaching a specific subject using appropriate educational applications aimed at obtaining new learning outcomes;

• analysis and selection of the content of the subject based on determining the appropriateness of using relevant mobile applications in education when studying a particular topic;

• the choice of forms and methods of teaching the subject, which are aimed at developing the skills of independent acquisition of knowledge, the ability to quickly adapt to changing socio-economic conditions;

• ability to read;

• the ability to act independently and adapt to non-standard situations in order to solve urgent problems for them in cases of uncertainty.

As a result, the following main conclusions can be drawn: It is advisable to develop an information and communication learning environment based on ICT tools within the framework of a student-centered learning model aimed at achieving learning outcomes. This model corresponds to modern ideas about the goals and assessments of education (the formation of a system of cognitive requirements, evaluative relationships and life aspirations, mastery of universal methods of activity, the predominant formation of research and project skills and abilities in students).

Only in this way will mobile applications related to education be able to demonstrate their unique didactic properties as an important tool in such an educational environment and, thus, radically change the educational activities they introduce (on a targeted and final basis).

References:

1. Technologies for creating mobile applications and their capabilities. Yu.Eshnazarova.- Candidate of pedagogical sciences, associate professor of NamDU. Scientific Journal Impact Factor (SJIF) 2020: 4.804

2. Новые педагогические и информационные технологии в системе образования / Под ред. Е.С. Полат. – М.: Изд. центр «Академия», 2013.

3. Попова Н.Г. Информатизация учебного процесса // Начальная школа. – 2015. – №11. – С. 71-73.

4. Chen, S.J., Hsu, C.L. and Caropreso, E.J. (2016), “Cross-cultural collaborative online learning: when the west meets the east”, International Journal of Technology in Teaching and Learning, Vol. 2 No. 1, pp. 17-35.

5. Cochrane, T. (2013), “M-learning as a subfield of open and distance education”, in Berge, Z.L. and Muilenburg, L.Y. (Eds), Handbook of Mobile Learning, Routledge and Taylor and Francis Group, New York, NY, pp. 15-24.

6. Xudayberdiyev Sh. K. “Improving methodology of using mobile technologies to improve the quality of education” Education and innovative research 2021. № 6. pp 334-339 https://interscience.uz/index.php/home/issue/view

7. Crompton, H. (2017), “A historical overview of m-learning: toward learner-centered education”, in Berge, Z.L. and Muilenburg, L.Y. (Eds), Handbook of Mobile Learning, Routledge and Taylor and Francis Group, New York, NY, pp. 3-15.

8. Frohberg, D. (2003), “Communities – the MOBIlearn perspective”, Workshop on Ubiquitous and Mobile Computing for Educational Communities: Enriching and Enlarging Community Spaces, International Conference on Communities and Technologies, Amsterdam, September 19, available at: www.researchgate.net/publication/241258253_Communities_-_The_MOBIlearn_perspective (accessed February 5, 2018).

9. Krull, G. and Duart, J.M. (2017), “Research trends in mobile learning in higher education: a systematic review of articles (2011-2015)”, International Review of Research in Open and Distributed Learning, Vol. 18 No. 7, pp. 1-23.