



METHODOLOGY FOR THE DEVELOPMENT OF COMPETENCIES OF THE USE OF MODERN INFORMATION TECHNOLOGIES IN THE EDUCATIONAL SYSTEM

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Abstract

The article is devoted to the competence of using modern and virtual distance solutions for the professional growth of a teacher, improving his/her pedagogical skills. The availability of various educational resources for biology teachers to attract new pedagogical tools directly forms a digital educational environment. The features of using distance online platforms to improve the qualifications of teachers and improve the educational process, the possibility of providing tutoring assistance to teachers are considered. Information is provided on the creation of a modern information and educational environment and the use of technologies to improve continuity, consistency, scientific literacy in the field of pedagogical education for general secondary education institutions, the organization and management of the educational process at a high level, and increasing the effectiveness of training biology teachers.

Keywords: Digital educational environment, pedagogical mastery, distance learning, multimedia integration, open information and educational environment, information and communication technologies, pedagogical technologies, interactive technologies, distance learning, didactic, technological and organizational and communicative competencies.



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Introduction

Today, modern information technology is one of the most important factors affecting the development of our society. Modern information technologies are also present at different stages of human development, and the peculiarity of the now informed society is that modern information technologies occupy a leading place among all existing technologies, in particular new ones.

The widespread use of didactic materials, which determines the effectiveness of modern information technology and technical means, is one of the main signs of modern pedagogical technologies. The national program has a special emphasis on this important means of managing the educational process. The level of use of informational means (computer, electronic communication, radio, television) is determined by two factors [3,7]:

- Development of didactic materials on topics that are effective informational tools for the educational process.
- To check the readiness of educators to be able to use technical means and didactic materials methodically correctly in their practical activities.

In order to ensure the sustainable development of the educational system in our republic, it is possible to qualitatively update the content of the continuing education system, as well as to train, retrain and improve professional personnel, introduce modern information and communication technologies (ICT) and innovation projects in the field of public education “[4,5], the adoption of the law” on education “[8] and the It is also a priority to increase the intellectual and spiritual capacity of citizens living in society. In this regard, the pedagogical possibilities of improving the methodology for creating and introducing modern information and educational environments will expand [8].

The basis of current modern information technology is the following three technical achievements:

1. Machine-readable concepts of information: the emergence of an integrated environment (magnets, tapes, Motion Pictures. magnetic discs, etc.k.);
2. The development of communication tools that ensure that information is transmitted to any point in the globe without significant time and distance



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restrictions, the wide coverage of the population with communication tools;
3. The possibility of automated development of information according to the algorithm given by computers (sorting, classification, representation in the desired form, creation, etc.) increase;

Modern Information Technology of teaching is not a student, it is, above all, a teacher's technology. The student does not study modern information technology, but uses its product as a technical means of teaching. The teacher will prepare for the lesson using modern information technology, organize the lesson, control the knowledge of students, and its task will be to bring information technologies of the highest level of informatization into the educational process in order to improve the content of Education [14]. The implementation of modern information technologies in the educational process assumes the availability of the following:

- ❖ It is necessary to ensure the continuity, synthesis of pedagogical and technical knowledge in students in order to improve the quality and efficiency of the teacher's preparation for professional and pedagogical activities, to guarantee the consequentiality.
- ❖ It is necessary to improve the methodology for the development of personal qualities of the future pedagogical teacher.
- ❖ Development of communicativity, speech of the future teacher, in which attention is paid to the formation of pedagogical competence of the teacher.

Modern information technologies can be used not only in the educational process, but also in the information work that provides teachers, scientific and technical and special information operating in the system of continuing education, in the management of the educational system and in the system of training and retraining of pedagogical teachers and personnel.

LITERATURE ANALYSIS AND METHODOLOGY

Research on the development of professional competence of educators in countries of the world is widely carried out. Including foreign scientist, Ozer B.,



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Can T., Duran V. [16] emphasized the importance of individual professional development to improve the professional skills of teachers. Ushtu H, Tash A.M. and Sever B [17] and others have acknowledged that training courses in which teachers participate voluntarily are more effective than training courses organized by institutions. Zabolotska O [18] digital literacy as a set of competencies is the full participation of the teacher personally in the Society of knowledge and the involvement of students, the basis for bringing their talent to the surface. Ovcharuk O, Ivaniuk I, Soroko n, Gritsenchuk O, Kravchyna O, [15] creative use of modern information technology has made it possible to identify the needs of teachers and deficiencies in digital competence. Ovcharuk O et al [15] highlighted the impact and importance of professional development practice as a continuous development strategy to determine teacher training at the school. F.Amiri [19] effective use of modern pedagogical programs in increasing professional competence of teachers, Z.Tatli and A.On the basis that the degree of relevance of the application of electronic applications created by Ayas [20] on the basis of a science module to the educational process is high. Research on the theory and practice of mediation, interactive methods in the teaching of the fields of Science and the use of intellectual game Technologies S.Goodman[5], R.Kozma[6], M.K.Clemence[21], L.Masterman[22], L.Henderson, J.Performed by clemes [23].

Special attention is paid to the issues of improving the methodology of teaching subjects in the category of Biology in the system of continuing education, modernizing, developing the teaching of science on the basis of innovative technologies, developing didactic materials on science and improving the effectiveness of training using their capabilities, developing creativity skills in students [2,3].

ANALYSIS AND RESULTS DISCUSSION

The sharp increase in the information environment requires specialists working in various fields to have theoretical knowledge and practical skills in the formation of competence in the use of information and communication



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technologies. In this regard, in the decree of the president of the Republic of Uzbekistan "on approval of the concept of development of the public education system of the Republic of Uzbekistan until 2030" dated April 29, 2019, PF-5712 "to raise the level of computerization in the educational process, taking into account modern trends in the development of Information and communication technologies; to take measures; priority tasks such as" effective use of computer technology and the internet among young people " are set[1,2]. Therefore, today, the application of computer technologies to the educational process and to all aspects of the functioning of society, based on modern technical means, has become a requirement of the period.

In teaching using the modern information education environment, in the formation of competencies of students from subjects in general secondary schools, the capabilities of information and communication technologies have not been sufficiently studied. In general secondary institutions, it is not enough to fully use the means of informatization and information and communication technologies in the teaching of subjects. In practice, such tools, of course, it is necessary to develop methods for the formation of practical skills in them, providing theoretical knowledge on the ideological base of informatization of education, as well as the use of various electronic programs in educational processes in secondary schools [9,11]. Informatization of the educational and educational process of the General Education Sciences of education, regardless of the direction of its implementation, is a broad and multifaceted field of human activity and is important in the further activities of the student.

General secondary education includes the scientific basis for creating, testing and using an open information and educational environment in the informatization of subjects taught in schools. Unresolved problems still occur in this area. These include the need for an open information and educational environment in accordance with the educational process, to increase the level of scientific, semantic and stylistic culture in its structure, personal educational publications, an interface between resources involved in various areas of schools, technological and Information Communication.



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Therefore, in order to take advantage of the open information and educational environment in the teaching of their subjects in general secondary educational institutions, it is necessary to pay attention to:

ochiq axborot-ta'lim muhitidan foydalanishning ijobiy hamda salbiy tomonlari bilan tanishtirish;

- formation of ideas about areas of effective use of open information-educational environment;
- formation of knowledge about the requirements for the creation and use of an open information and educational environment, the basic principles and methods of assessing their quality;
- teaching strategies for the practical use of an open information and educational environment;
- teaching the methodology of informatization of Education [10].

As a result of the establishment of innovative activities, the introduction of innovations and innovations into the pedagogical process is carried out in 4 stages:

1. Determination of the problem based on analysis;
2. Design of the educational system being designed;
3. Planning changes and innovations;
4. Making changes;

The purpose of preparing future biology teachers for innovative activities is to improve their desire for innovation along with the acquisition of knowledge, the formation of skills and competencies to work on themselves independently, use new pedagogical technologies, interactive methods, and improve the skills of conducting classes, lessons and extracurricular higher education in general educational institutions, as well as conducting classes and It can be seen from this that innovative activities necessarily require finding content in a particular innovative environment [8,14].



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CONCLUSION

Modern information technology is now actively used in education. Insufficient readiness of pedagogical communities for informatization of education, the cost of computer technology tools, the lack of information technology specialists in education. It is necessary to solve these problems, including the use of computer technologies and innovative technologies to increase the level of personal competence of graduates, to plan their educational and cognitive activities, to improve personnel skills and to train specialists. It can be seen from this that the application of modern information technologies in the teaching of specialist subjects related to the field in the higher territories of the OECD has a much better effect.

In place of the conclusion, it should be noted that the formation of methodological, general and educational base competencies in educators is the basis for the formation of competency of an open information and educational environment in them. An open information-educational environment from subjects taught in general Secondary Schools encourages students to independently learn subject-specific study-information. As a result, the student's interest in science increases and his thinking develops.

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