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FORMING THE TECHNOLOGICAL CONTENT OF THE TEACHER'S INFORMATION-COMMUNICATION COMPETENCE

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Abstract:

The article describes what education and information technologies, teacher's IKT-competence, digital and computer literacy, and the effectiveness of their use in organizing the educational process consist of.

Keywords: information technologies, teacher's ICT competence, computer telecommunications, quality of education, digital literacy, computer literacy.

O‘QITUVCHINING INFORMATSION-KOMMUNIKATSION KOMPETENTLIGINI TEXNOLOGIK MAZMUNINI SHAKLLANTIRISH

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Annotatsiya:
Maqolada ta’lim va informatsion texnologiyalar, o‘qituvchining IKT-kompetentligi, raqamli va kompyuter savodxonligi hamda ulardan ta’lim jarayonini tashkil qilishda foydalanish samaradorligi nimalardan iborat ekanligi bayon qilingan.

Kalit so‘zlar: informatsion texnologiyalar, o‘qituvchining IKT-kompetentligi, kompyuterli telekommunikatsiyalar, ta’lim sifati, raqamli savodxonlik, kompyuter savodxonligi.

Аннотация:
В статье изложена составляющая эффективности исползования в образовательном процессе информационных технологий, ИКТ-компетентности учителя, компьютерных телекоммуникаций, цифровой и компьютерной грамотности учителя.

Ключевые слова: информационные технологии, ИКТ-компетентност учителя, компьютерные телекоммуникации, качество образования, цифровая грамотност, компьютерная грамотност.

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Relevance and necessity of the topic

There is no need to prove the importance of using information technologies in modern education, because computers are used at all levels of the educational system of Uzbekistan - from preschool to post-higher education, as well as in retraining and improving the skills of personnel. , smartphones, various types of gadgets have become an indispensable tool of the educational process, and the Internet has become an important source of information, including educational information.

New pedagogical and informational technologies are being developed and implemented in the educational institutions of our republic, which cannot be implemented without using the mentioned devices and relying on digital educational resources.

Purpose of work

Identifying current problems in forming the technological content of the teacher's information and communication competence.

Research methods

Analysis and generalization of existing scientific and methodical literature, regulatory documents, pedagogical observation, study and generalization of modern experience.

Results and discussion of the study

If we consider what education and information technologies consist of, we refer to the Law of the Republic of Uzbekistan "On Education", which states, "Education is deep theoretical knowledge for learners , it is emphasized that it is a systematic process aimed at imparting qualifications and practical skills, as well as forming their general education and professional knowledge, qualifications and skills, and developing their abilities. Although this definition of education reveals the content of a multifaceted concept, it does not illuminate its structural components. They are generally imagined as in Figure 1.

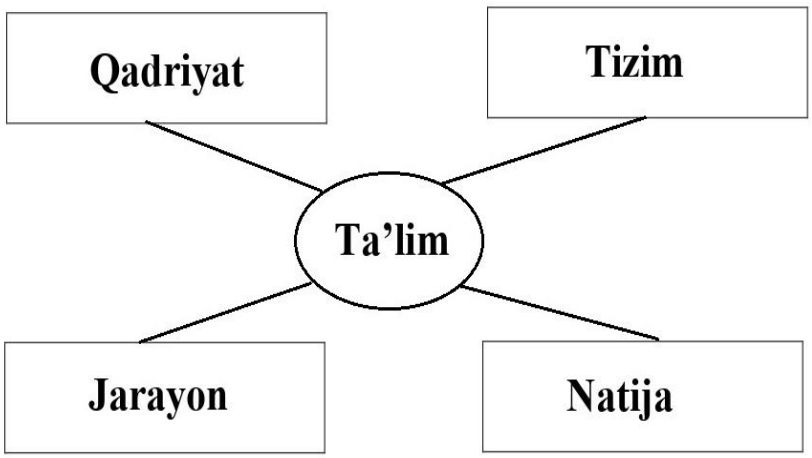

Figure 1. Schematic view of the concept of "education".

If we interpret it from the position of the possibility and importance of the use of information technologies, education - along with the right to life, freedom, medical care, social security, etc., it is the most basic values and social and economic rights. is one of the most important. The level of education received by a person largely determines his economic and social status. Education, as a system, has a very large number of educational institutions, namely general schools, secondary special, vocational educational institutions, higher educational institutions, additional educational institutions and etc. In addition, this system includes educational management bodies of various levels - the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, the Ministry of Preschool and School Education of the Republic of Uzbekistan, and regional administrations. This very large system must function in interaction with its elements. Currently, the effectiveness of its functioning depends on the level of use of modern information technologies (computers and computer telecommunications, databases, data analysis tools, etc.).

Education as a process is, first of all, teaching and upbringing. Teaching needs educational resources - textbooks and other types of educational resources, most of which, today, have been digitized using Internet technologies, and equipment (computers, various gadgets, interactive whiteboards) etc.), need new methodologies based on digital technologies, which transform the educational process, sometimes radically.

Requirements for educational results in the Republic of Uzbekistan are established by the state (if it is formal - general secondary education, higher education) or professional corporations (for example, in professional development systems). . According to the law in action, the results of education are knowledge, competence, skill and competence. Instrumentation is needed to check the level of achievement of these results, which consists of computerized systems that rely on information technology (for example, computer testing, etc.) during the control of knowledge and skills. Controlling the formation of competences remains an increasingly complex task, and software products based on information and communication technologies are currently being developed and used to solve it.

Modern education is increasingly using information and communication technologies and rapidly developing them in the direction of their integration into education, training and management processes. Under the influence of information technologies, the technologies and methods of education are being changed, and mastering educational information technologies, every employee of an educational institution - a teacher, a higher education pedagogue, a methodologist, an educational institution or an educational institution lim remains mandatory for the head of the governing body.

For this reason, the subject "Information technologies in education" remains a part of the teacher's professional training block. The purpose of this is to form the information and communication competence of the future teacher and the technological composition of the elements of information culture. The tasks to be solved in the teaching of this subject will be as follows: familiarization with the modern state of the problem area "Information technologies in education"; getting to know the didactic possibilities of computer information technologies in education; get acquainted with the platforms for placing digital educational resources

according to the training profile, form the skills of searching for such resources; formation of skills to develop simple structured digital educational resources using lesson constructor programs; mastering online services and technologies to support group educational activities; familiarization with the principles and technologies of distance education, network and mixed education.

Educational methodology is connected to a specific educational subject, and educational technologies, as a rule, do not have such a connection. Of course, some information technologies are more useful when teaching a certain group of subjects. For example, when teaching physics, chemistry, biology, computer modeling may be needed more, but this is not a permanent rule. Educational technology (pedagogical technology) has a more subject classification, in which the procedural component is expressed to a greater extent. For example, the technology of searching for educational information on the Internet is almost independent of the nature of the information being sought, the same idea is about the technology of formalizing the results of the work with the help of text editing (text editor) and many other technologies used in education. can also be reported. At the same time, the tasks given for laboratory work (practical training) which play an important role are oriented to the subject area of the future teacher's training. This is to achieve a certain balance between the nature of the subject of this course and the profile (orientation) of the future teacher's training. Teaching this course assumes that students have computer and digital literacy. Computer literacy in the narrow sense includes a set of minimal knowledge and skills to work with a computer. There is also a much broader interpretation of this term, which includes the acquisition of algorithmization and programming elements.

The concept of "Digital Literacy" is the development of the concept of "Computer Literacy". Digital literacy is the ability to use information and communication technologies safely and effectively to search for, evaluate, create, and transmit information that requires cognitive and technical skills.

The presence of computer and digital literacy in a teacher does not guarantee his readiness to use information technologies in the professional activity of a subject teacher. In addition, it is not enough to participate in updating the content, methods and tools of education, to participate in the formation of a new educational environment based on information technology (IT), and to optimize professional activity in general. The quality that ensures the specified preparation is called "information-communication competence" (ICT-competence) in the pedagogical literature. The teacher's IKT-competence is motivated not only by the skills of using information technology tools, but also by using them as an effective pedagogical tool, which is necessary for the formation and development of a new environment oriented to modern educational results in his professional activity. is to form application experience. IKT-competence can be divided into three main aspects:

1) availability of a sufficient level of functional (computer and informational) literacy in the field of information technologies;

2) effective justification of the use of information technologies to solve professional, social and personal tasks in their activities;

3) to understand information technologies as the basis of a new paradigm in education, aimed at developing students as subjects of an information society capable of creating knowledge, who know how to manage information masses to obtain a new intellectual or functional result. The teacher's IKT-competence should ensure the implementation of new goals of education, forms of organization of the educational process, and the content of educational activities. The teacher's ICT competence model is presented in Figure 2.

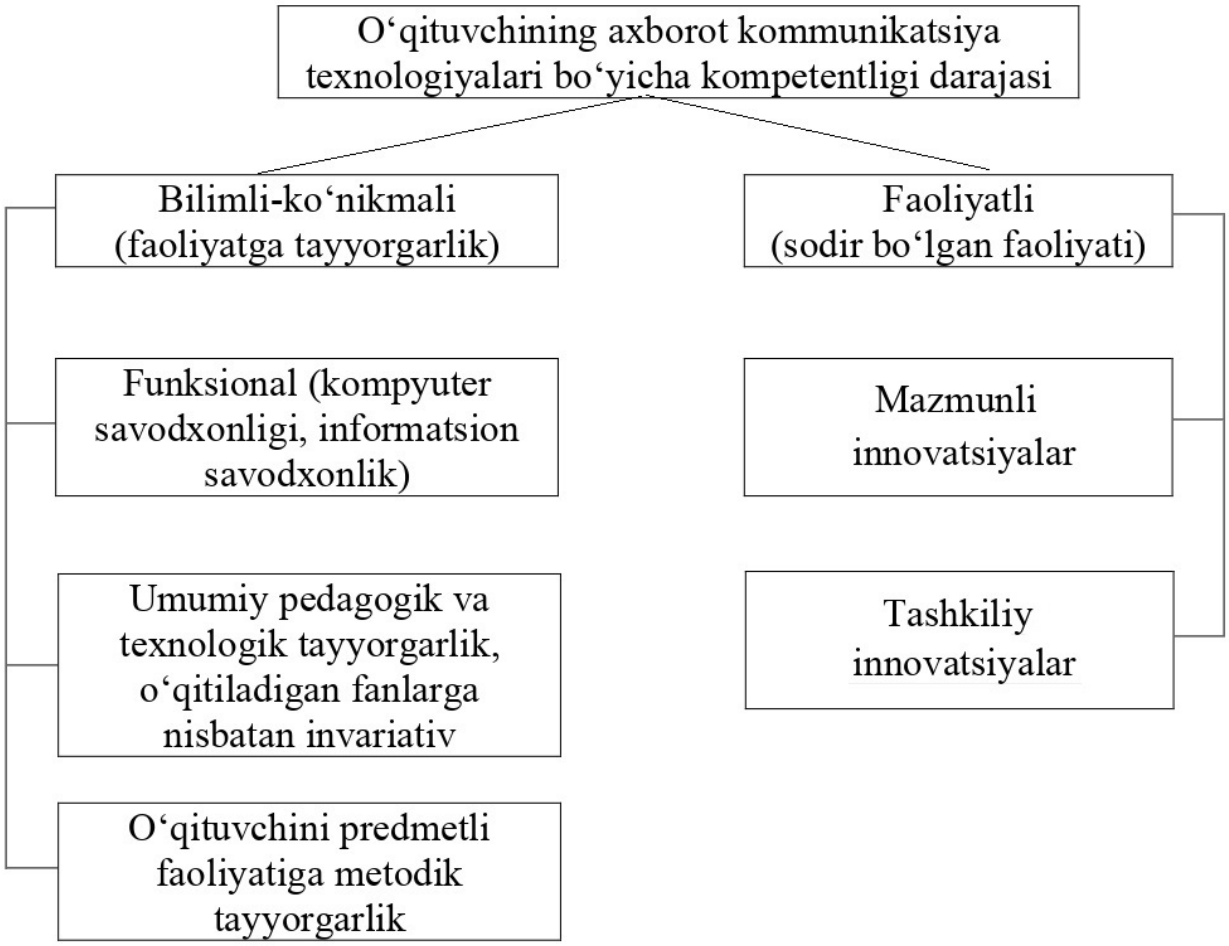

Figure 2. Teacher's ICT competence model

Its main condition is the perception that there are two significant differences in professional ICT competence - the level of preparation and the level of implementation. There are also cases where a teacher who has completed advanced training courses in the field of ICT (sometimes several times) and has sufficient conditions to use ICT in his professional activities at school, does not use it. Such a teacher cannot be said to be an ICT-competent teacher, because his knowledge and skills have not been put into practice. The level of knowledge of ICT competence of the teacher is the level of ICT acquisition. ICT is defined as the teacher having sufficient knowledge, skills and abilities to use ICT equipment, software and resources. In this case, the level of non-specific computer literacy for education workers (including teachers) (it

is determined by the modern state of ICT and the general level of informatization of society) and the professional-oriented level are distinguished. The last one is divided into two levels: 1) general pedagogical knowledge, skills and abilities in the field of using ICT in educational activities; 2) knowledge, skills and abilities specific to the subject area. For example, science teachers need to know how to use computer mathematical models (and, at a much higher level, create such models) of the processes related to their subject.

Activity level - the level of use of ICT. Functional literacy in ICT at this level is effectively and systematically used by the teacher to solve educational tasks. The degree of organizational innovation is manifested in the effective implementation of new organizational and technological functions by the teacher, in particular: in the organization and joint implementation of the educational process in branch forms; in the implementation of distance, day-external, home education; in the organization and joint implementation of education on the basis of individual educational trajectories and individual educational plans of students; in the joint organization of various forms of educational activity - lesson, extracurricular, independent, educational and other forms into a single educational process; in the use of modern technologies in educational monitoring.

Conclusions

The sub-level of substantive innovation is characterized by the systematic, purposeful and effective use of ICT resources and e-learning resources to achieve a new quality in education. It is manifested in the updating of educational content, teaching methods, and quality assessment systems. Content innovations include a set of elements: development and implementation of training courses on the basis of YeOR (elective courses, training practices, professional and profile orientation courses, etc.); implementation of new types of educational activities, which include: problem-based and project-based approaches to teaching students; organization of the educational process on the basis of independent individual and group activities of students to fulfill their personal, educational, social and other needs and interests; organization of mutual cooperation of students while solving problems and tasks on the basis of ICT; use of new diagnostic tools for evaluating the quality of education (including integrated and subject-specific monitoring of the quality of education, rating system of assessment, dynamic system of student achievement assessment, etc.). The technological component of a teacher's ICT competence is present at each of the above-mentioned levels and sub-levels. The teacher's ICT competence can be fully formed during the teaching of all subjects of the pedagogical cycle and subjects of the preparatory profile - mathematics for the future teacher of mathematics, etc., as well as for practical (pedagogical) activities. Due to this, the formation and actualization of the teacher's ICT competence is a process that takes place during his professional career.

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