

ТЕХНИКА ФАНЛАРИ

ТЕХНИЧЕСКИЕ НАУКИ

TECHNICAL SCIENCES

№3 (2019)



TOSHKENT-2019

DOI <http://dx.doi.org/10.26739/2181-9696>
Техника фанлари / Технические науки / Technical sciences
№3 (2019) DOI <http://dx.doi.org/10.26739/2181-9696-2019-3>

Бош муҳаррир
Главный редактор
Chief Editor

Мардонов Ботир - техника фанлари доктори, профессор, "Табий тоаларни дастлабки ишлаш технологияси" кафедра профессори.

Бош муҳаррир ўринбосари
Заместитель главного редактора
Deputy Chief Editor

Хакимов Шеркул Шергозиевич - техника фанлари доктори, доцент, "Технологик машиналар ва жиҳозлар" кафедра доценти

Техника fanlari jurnal tahririy maslahat kengashi
International Editorial Board of the Journal of technical Science
Международный редакционный совет журнала технических наук

05.01.01 - Muhandislik geometriyasi va kompyuter grafikasi. Audio va videotexnologiyalari // Геометрия и компьютерная графика. Аудио и ведиотехнологии // Engineering geometry and computer graphics. Audio and vediotchnologies

Lachashvili Tamaz
Gruziya Respublikasi

05.08.06 - G'ildirakli va gusenitsali mashinalar va ularni ishlatish // Колеса и гусеничный машин и их использование // Wheels and caterpillars and their use

Ismailov Kubaymurod - t.f.d., prof.
Egamov Abdurashid - t.f.n., dosent.
Adilov Oqbuta Karimovich - t.f.n., dosent.

05.09.02 - Asoslar, poydevor va yer osti inshootlari. Ko'prik va transport tonnollari. Yo'llar, metropolitenlar // Фундаментов, Фундаментов г подземных сооружений. Мостов и тоннажа транспортных средств. Дороги пригородные. // Bases, foundation and underground structures. Bridges and traffic tonnages. Roads are suburban

Ismailov Kubaymurod - t.f.d., prof.
Qoraqulov Xolmeli

05.09.05 - Qurilish materiallari va buyumlari // Строительные материалы и изделия // Building materials and articles

Akramov X. - t.f.d., prof.
Bozorov Isroil - t.f.n., dosent.
Berdiyev Obloqul - t.f.n., dosent.

Саҳифаловчи: Хуршид Мирзахмедов

Контакт редакций журналов. www.tadqiqot.uz
ООО Tadqiqot город Ташкент,
улица Амир Темура пр.1, дом-2.
Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz
Тел: (+998-94) 404-0000

Editorial staff of the journals of www.tadqiqot.uz
Tadqiqot LLC The city of Tashkent,
Amir Temur Street pr.1, House 2.
Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz
Phone: (+998-94) 404-0000

ТЕХНИКА ФАНЛАРИ ТЕХНИЧЕСКИЕ НАУКИ TECHNICAL SCIENCES

Shukurova Markhabo Eshonkulovna
Kenjaeva Taxmina
Ruziyeva Madina

Karshi branch TUIT named after Muhammad Al-Khwarizmi

THE CONCEPT OF ICT COMPETENCE OF PERSONNEL. THE IMPORTANCE OF HAVING ICT COMPLEMENT AND INFORMATION CULTURE.



<http://dx.doi.org/10.26739/2181-9696-2019-3-1>

Recommended citation: Shukurova Markhabo, Kenjaeva Taxmina, Ruziyeva Madina. The concept of ICT competence of personnel. The importance of having ICT complement and information culture. Journal of Technical sciences-3-2019-P. 3-9.

ANNOTATION

The article describes the concept of higher education system development until 2030 and the competence of the modern teacher in the educational process, the right and skillful use of technical aids (ICT competence) in the educational process, and the importance of information culture. The importance of the teacher's ICT competence, aspects of the teacher in its structure, the benefits of using cloud technologies in the learning process, the benefits of using Web 2.0 technologies, and their benefits in the learning process.

Keywords: Development Concept, Information and Communication Technologies, Teacher ICT Competence, Cloud Technology, Web 2.0 Technology, Information Culture.

Шукурова Мархабо Эшонкуловна
Кенжаева Таксмина
Рузиева Мадина

Каршинский филиал ТУИТ им. Мухаммеда аль-Хорезми

КОНЦЕПЦИЯ ИКТ КОМПЕТЕНТНОСТИ ПЕРСОНАЛА. ВАЖНОСТЬ НАЛИЧИЯ ИКТ И ИНФОРМАЦИОННОЙ КУЛЬТУРЫ

АННОТАЦИЯ

В статье описывается концепция развития системы высшего образования до 2030 года, компетентность современного учителя в образовательном процессе, правильное и умелое использование технических средств (компетентность в области ИКТ) в образовательном процессе, а также важность информационной культуры. Важность компетентности учителя в области ИКТ, аспекты учителя в его структуре, преимущества использования облачных технологий в процессе обучения, преимущества использования технологий Web 2.0 и их преимущества в процессе обучения.

Ключевые слова: Концепция развития, информационно-коммуникационные технологии, компетенция учителя в области ИКТ, облачные технологии, технология Web 2.0, информационная культура.

Shukurova Markhabo Eshonqulovna

Kenjaeva Taxmina
Ro'zieva Madina

Muhammad al-Xorazmiy nomidagi TATUning Qarshi filiali

KADRLARNING AKT-KOMPETENTLIGI TUSHUNCHASI. AKT KOMPENENTLIGIGA HAMDA AXBOROT MADANIYATIGA EGA BO'LISHNING AHAMIYATI.

ANNOTATSIYA

Maqolada Oliy ta'lim tizimini 2030 yilgacha rivojlantirish konsepsiyasi va zamonaviy o'qituvchining o'quv jarayonidagi kompetensiyasi, ta'lim jarayonida texnik o'quv qurollaridan to'g'ri va mohirona foydalana olish (AKT kompetentligi), axborot madaniyatiga ega bo'lishning ahamiyati, o'qituvchining AKT kompetentligi ta'riflari, uning tuzilmasida o'qituvchining aspektlari, ta'lim jarayonida bulutli texnologiyalar, Web 2.0 texnologiyalardan foydalanishning samarali imkoniyatlari va ularni ta'lim jarayonida qo'llashning afzalliklar haqida ham fikr yuritiladi.

Kalit so'zlar: Rivojlantirish konsepsiyasi, axborot-kommunikatsiya texnologiyalari, o'qituvchilarning AKT kompetentlik, bulutli texnologiyalar, Web 2.0 texnologiyalari, axborot madaniyati.

Today, the President has the intellectual potential, the ability to think independently and reasonably on the basis of modern science, to independently search for the necessary information, to communicate with them, and to apply the knowledge acquired in the educational institution to his life needs. He brought a lot of attention to the education of young people. For this purpose, it is necessary to prepare our students from elementary school. It is necessary to provide basic knowledge of the elementary subjects, to study foreign languages and to develop the necessary skills in information technology. According to the Concept of development of higher education of the Republic of Uzbekistan till 2030, based on the long-term goals, the development of higher education will be based on the following priorities:

- Increasing the coverage of higher education, improving the quality of higher education;
- introduction of digital technologies and modern methods into the educational process;
- Increasing the effectiveness of research activities in higher education institutions, involving young people in research activities, and creating an innovative science infrastructure;
- Increase the proportion of independent learning hours, provide students with independent learning, critical and creative thinking, systematic analysis, entrepreneurial skills, the introduction of techniques and technologies aimed at enhancing their competence in the learning process orientation to the formation of innovations, wide introduction of the educational process in the educational process with the use of advanced educational technologies, curricula and teaching materials based on international educational standards;
- Systematic organization of spiritual and educational work in higher education institutions, increasing the effectiveness of the measures taken, enhancing the intellectual potential, thinking and outlook of young people, strengthening their ideological immunity, and serving the interests of the people. Development and implementation of the concept of development of spiritual and moral awareness of students aimed at upbringing harmoniously developed generation;
- Training young people with professional skills, patriotic, initiative, modern

knowledge and skills, capable of taking responsibility for the important tasks facing the state and society, as professional professionals, which require new approaches. the use of teaching methods;

As you know, we live in the information world now. In our studies, at work, and in our daily activities, we are exposed to computer technology without which we cannot imagine today. Therefore, it is important to teach our students how to use computers and other computers in a proper and reasonable manner.

Students should learn how to search for, find, isolate and use the information they need.

At the same time, they must be able to use the acquired knowledge, skills and abilities to solve problems that arise in their daily lives. In addition, these tasks should be developed in an educational institution so that they can acquire the necessary knowledge, skills and abilities in the course of learning the student's subjects and apply them in their daily lives. To do this, you need to teach competence-based approach.

Competence-based learning is an education designed to build students' competence to apply the acquired knowledge, skills and abilities in their personal, professional and social activities.

Core competencies:

- Communicative competence;
- Competence to work with information;
- Self-development competences;
- Socially active citizenship;
- Cultural competences;
- Knowledge of mathematical literacy, science and technology distribution and use competence.

Information literacy and information competence in the training of personnel is the ability to independently search, analyze and select the necessary information, analyze, change, store and transmit information using audio and video equipment and information technology. This competency ensures that the student learns the basics of the subject on critical information.

One of the most important areas of modernization of education is a competent, individual-centered approach. Education is the basis of the global process of public information. At the same time, it should move faster than other areas of society's activities, because it is precisely the educational process that forms the social, psychological, and social basis of the information society. The new needs of society and the individual define information competence as one of the basic, basic bases.

In addition, competence has the following characteristics:

- Advantage (informational activity in modern specialist occupies a significant share);
- dynamism (in preparing a future graduate it is not enough to just take into account the current state of informatization; it should be focused on information development trends);
- Optimization (in the case of rapid development of the information environment, it is necessary to prepare the graduate for optimal information activity; the competence should be large or small, sufficient to address the professional issues raised).

In the process of informing society and education, certain traditions, stereotypes of informed behavior, important sources of information and ways of information exchange are gradually formed, personal values are reflected in the formation of the modern stage

of information culture.

Information culture is a broad and general concept that covers an important area of scientific and practical information and knowledge. We view information culture as a component of the identity culture structure. The concept of information culture is often compared to the concept of information literacy.

The above makes it possible to determine that the main content of information competence when combining information and technical and information technology components is:

- Good skills in the use of technical devices (from phone to computer network);
- ability to use information and communication technologies in their activities;
- access to information from a variety of sources (periodicals and e-learning resources), providing them with understandable information and use;
- have the basics of analytical processing of information;
- Ability to work with different types of information;
- Know the nature of information flows in their subject area.

While the content of informational competence seems to be the need to shape it to address various problems of daily and professional activities and social life, there are several other features that define it as a core competence.

Information competence requires a variety of qualities such as intellectual development, abstract thinking, algorithmic thinking, self-determination, and more to develop versatile or relevant skills.

The skills needed for different types of actions, such as acting independently, using interactive modes, joining and acting in different social groups. Formation of information competence is one of the goals of education, but it is also a leading tool in the educational process.

Since information competence is fundamental, its development takes place at all stages of education, so the principle of continuity and continuity must be followed. It is important to determine which competencies are formed at each level of education. That is, it is necessary to design basic, interdisciplinary and subject competencies so that we can determine the content of the education through a competent approach.

An analysis of student surveys shows that 50% of them can work online via e-mail, and 20% use keyboards and text documents. In addition, information inequality is even more apparent among students: more than 60% of students have a PC at home and the other students have an average of 2-6 hours per week. From the aforementioned, it can be concluded that designing information competence should be based not on a single scenario but on the initial training of students.

One of the requirements for software development is an intuitive understanding of its use. As a result, the user is obscured by the content of the computer solution of professional activity, which causes the student to erroneously believe that the computer solves them all. Therefore, there is no need to study fundamental concepts and methodological approaches in the study of information technology. The development of these competencies is impossible without knowing the fundamentals of computer science.

It is important to note the role of the teacher in shaping the student's information competence. According to the polls, almost 60% of participants believe that they are not ready to work with information technologies because of the low qualification of teachers of informatics.

Information technology teachers and teachers of special disciplines are "disconnected"

from each other, that is, the teacher of computer science has a poor understanding of the subject matter of the other disciplines, and that the teachers of special disciplines are poorly educated.

The intimacy of teachers is also hampered by the learning process itself, because it is based on the classroom system. In this case, the teacher may be able to provide the student with the necessary knowledge about the subject but will not have to talk about a competent approach.

In order to achieve a professional level of information competence, it is necessary to create conditions for training computer skills. It is well-known that a student must have the skills to work with modern devices and software (appropriate for their work).

It is important to involve students in independent work involving elements of research activities through the active use of information technology capabilities. At the same time, it is necessary to ensure consistency and consistency.

The curriculum includes the choice of information-related disciplines that take into account the student's readiness to carry out individual education.

The information technology used should be based on the principle of technical flexibility, that is, to keep up-to-date technical and software training. Existing information resources should be used effectively and efficiently.

In the act of staffing, that is, in the use of information and communication technologies in education, it is put into the design phase of information education resources, where the systematic, purposeful and meaningful aspects of these training functions are implemented;

- motivation. It continuously reflects the need for the learner to achieve the learning objectives, while education is viewed as a subjective activity;
- difficulty. It directs the teacher to create problem situations using information and communication technologies;
- integrate team learning into an individualized approach to teaching. It provides for the purposeful integration of appropriate educational forms on the basis of information education resources;
- multimedia. It is a development of the traditional principle of the exhibition and is used in two meanings:
 - a) in a narrow sense (in the form of information description);
 - b) in a broad sense (as an aggregate of information content);
- activating the learner's independent activities. The use of information and communication technologies in education is aimed at developing the personality, identifying the trainee's personality as a subject, recognizing his or her subjective experience, and building pedagogical interactions based on that experience;
- training - the relevance of the database to the educational content and the whole didactic system.

Main aspects of ICT competence:

- high level of functional literacy in the ICT field;
- effective use of information and communication technologies to effectively organize the educational process and solve professional problems;
- adoption of information and communication technologies as the basis of a new paradigm in education, as a complete subject of information society.

The competence structure of the teacher is highlighted in 6 aspects:

- Understand the role of ICT in education;

- Designing and evaluating the curriculum;
- Pedagogical practice;
- Knowledge of ICT hardware and software;
- Organization and management of the educational process;
- Professional development.

All these aspects are closely related to the following three stages in the process of informatization of educational institutions:

- ICT application process - be able to teach students how to use information and communication technologies to improve the quality and effectiveness of education.
- Knowledge Acquisition - A teacher's ability to assist students in deeper study of science, and in solving problems that arise in their daily lives using their own knowledge.
- Knowledge Production - This course is designed to help teachers to become more mature professionals, to help them develop new knowledge that will contribute to the development of society and science.

ICT is used not only to solve problems and problems in the education system, but also as part of the education system.

For example, multimedia technology is designed as a simple process, not as a visual tool in teacher lectures. Later, as a result of this process and expanding its scope, new technology was introduced in the educational process.

In general, such technologies are an important means of creating and maintaining a source of information for teachers and students. Cloud technologies allow teachers and students to create information resources and place them in social networks and electronic data storage services.

Cloud technologies have the following advantages:

Mobility - Allows the user to access data stored on any of the devices connected to the Internet at any time and place, without having to hold a specific location for storage, to place it in cloud storage services.

Compatibility - users do not need to buy special computers and software, many cloud services and applications are usually offered free of charge on the Internet.

Reliability - Cloud computing services provide third-party data protection.

However, the new Web 2.0 technology is important for the learning process, and it is mainly a web site, and it is important that online content can be filled by users themselves. As we introduce this system into our educational system, students can become not only users of this network communication, but also active users. Web 2.0 technology means that users of the learning process, especially students, will increase the information on the site.

One of the highlights of Web 2.0 network communication is that it allows users to interact with each other. As we apply this capability to the educational system, students will be able to communicate online or online through a tutorial.

Teacher competence, based on their areas of expertise, helps students to develop the ability to work with information in the implementation of educational projects, to enhance problem-solving and problem-solving skills, and This course includes learning how to use software tools.

In order to carry out educational projects in groups, teachers should work with students, obtain information, and use network resources to communicate with external experts to analyze and solve selected problems.

It is also important for teachers to implement individual and group lesson projects,

to develop and implement curricula, to communicate with professionals and to collaborate with colleagues, to enhance their knowledge, as a whole. It is desirable for them to use ICT effectively.

REFERENCES

1. Yelizarov AA Bazovaya ICT competence as basic Internet-image: International conference RELARN-2004.
2. Lebedeva MB, Shilova O.N. What is ITC competent authority's student pedagogical university? // Informatics and image processing. - 2004. - No. 3. - pp. 95-100.
3. Structure of ICT competence recommend by Yunyesko.R.Ishmuhamedov, M.Mirsolieva. Innovative learning technologies in educational process. -Т.: "Science and Technology", 2014, 60 pages.

МУНДАРИЖА / СОДЕРЖАНИЕ / CONTENT

M.Shukurova, T.Kenjaeva, M.Ruziyeva

THE CONCEPT OF ICT COMPETENCE OF PERSONNEL.
THE IMPORTANCE OF HAVING ICT COMPLEMENT AND
INFORMATION CULTURE.....3

M.Rahimov, Z.Xamidjonov

ISSIQLIK ELEKTR MARKAZI TURBOGENERATORLARI
SAMARADORLIGINI OSHIRISH.....10

N.Rajabova

SOME USEFUL INEQUALITIES FOR TRIANGLES.....14

R.Shukurov

THE FEATURES OF THE PSYCHOLOGICAL PREPARATION
PROCESS OF TURON FIGHTERS TO COMPETITIONS.....18

А.Нугманов, М.Хасанова, Н.Набиев

ИЗУЧЕНИЕ ПРОЦЕССА КРАШЕНИЯ СМЕСЕВЫХ
МАТЕРИАЛОВ СОВМЕЩЕННЫМ РАСТВОРОМ КРАСИТЕЛЕЙ.....22

Р.С.Шукуров, Г.М.Акрамова

ҲАРАКАТЛИ ЎЙИНЛАР ОРҚАЛИ МАКТАБ ЎҚУВЧИЛАРИДА
СОҒЛОМ ТУРМУШ ТАРЗИНИ ШАКЛЛАНТИРИШ
МУҲИМ ОМИЛ СИФАТИДА.....26

У.Газиёв, Т.Шакиров, Б.Матёкубов

ЕНГИЛ БЕТОНЛАР УЧУН ҒОВАКЛИ ТЎЛДИРУВЧИЛАР
ИШЛАБ ЧИҚАРИШДАГИ ЗАМОНАВИЙ ТАСАВВУРЛАР.....32

Ш.М. Музафаров, Л.А.Батырова, А.Г. Бабаев

ЛИЧНОСТНО-ОРИЕНТИРОВАННЫЙ ПОДХОД К
СОВРЕМЕННОМУ ОБУЧЕНИЮ И ВОСПИТАНИЮ КАК
ФАКТОР РАЗВИТИЯ СТУДЕНТОВ.....37



ISSN 2181-9696

Doi Journal 10.26739/2181-9696

ТЕХНИКА ФАНЛАРИ

ТЕХНИЧЕСКИЕ НАУКИ

TECHNICAL SCIENCES

№3 (2019)

Контакт редакций журналов. www.tadqiqot.uz
ООО Tadqiqot город Ташкент,
улица Амир Темура пр.1, дом-2.
Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz
Тел: (+998-94) 404-0000

Editorial staff of the journals of www.tadqiqot.uz
Tadqiqot LLC The city of Tashkent,
Amir Temur Street pr.1, House 2.
Web: <http://www.tadqiqot.uz/>; Email: info@tadqiqot.uz
Phone: (+998-94) 404-0000