ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING

KHOREZMSCIENCE.UZ

CONTENTS

UDC: 37.015.32

PAHLAVON MAHMUD AND HIS SPIRITUAL HERITAGE

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Annotatsiya: Ushbu maqolada tasavvuf ilmining yorqin namoyondalaridan biri bo'lgan Pahlavon Mahmudning ma'naviy-axloqiy merosi masalasi ko'rib chiqiladi.

Kalit so'zlar: so'fiylik, pedagogika, javonmardlik, Kubroviya, ma'naviyat, ruboiy, meros.

Аннотация: В этой статье рассматривается духовно-нравственное наследие Пахлавана Махмуда, являющегося одним из ярких представителей суфийского учения.

Ключевые слова: суфизм, педагогика, храбрость, Кубравия, духовность, рубаи, наследие.

Abstract: The following article discusses spiritual and moral heritage of Pakhlavon Mahmud who was one of the spiritual leaders and eminent persons in Sufi philisophy.

Keywords: Sufism, pedagogy, Javanmardi, Kubrawiya, spirituality, rubai, heritage.

Introduction. Sufism has served to enrich the spirituality of our people for many centuries. The spiritual and moral purification of man and his ascension with divine love are the basic ideas of this doctrine. Therefore, Sufism, mixed with deep humanitarian ideas, has found its way into the hearts of those who seek the truth, expressing people's ideals of purity, eternal life, freedom of the soul. Our people, out of respect for the Sufi dervishes, expressed their belief in Allah, His glorifying power and grace. The prophecies, words, and image of their inner world were accepted as an example of high morality and divine holiness. The Sufi sheikhs, the spiritual leaders of the people, came to the fore as spiritual leaders, determined to continue the activities of the prophets. Khorezm is also considered as the land that inhabited a range of outstanding figures in Sufi pedagogy and it is vital to conduct comprehensive study to reveal the role our ancestors in the development of Sufism in our region.

Literature review. It is known that warriors were more contenders for Javanmardi. In this sense, Pahlavon Mahmud was not only a teacher who educated the warriors but also a Pir who taught the etiquette of Javanmardi. He was the leader of the Futuwwah people, the leader of the Javanmardi community in Khiva. "The legends about the Pahlavon's adventures, which are full of miracles and heroism, reinforce this view. It is not a coincidence that the name of Pahlavon is still revered by Iranian warriors as a Pir, and his ruba'is are constantly recited among wrestlers."[1] The requirements and rules of the Futuwwah doctrine that a person should have good

morals, acquire all religious and secular knowledge, learn a profession, earn his livelihood honestly, alleviate the burdens of the people, and always be ready to serve the people attracted not only the attention of the general public but also the literary and artistic intelligentsia in terms of its guidance to spiritual and moral maturity, respect for honest livelihood, ensuring the unity and peace of the people, and, most importantly, its applicability to real and everyday life. Poets and writers began to write works inspired by the noble ideas of Javanmardi, such as humanitarianism, enlightenment, and justice. In particular, it is impossible to separate the study of Uzbek literature from the 12th century to the beginning of the 20th century from the influence of the doctrine of Javanmardi. Because the ideas of Futuwwah are ingrained in the essence of the works created during this period. The poems and epics that we interpret as the works of our classical poets in the spirit of exhortation are often poetic expressions of the requirements of Sufism and the pillars of Javanmardi. In particular, the work of Pahlavon Mahmud is essentially devoted to the promotion of the ideas of Javanmardi. In these ruba'is, the theoretical ideas of Sufism and the practical rules of the order of Javanmardi are interpreted in harmony. Mainly because he composed in the ruba'i genre, T. Jalolov wrote about Pahlavon Mahmud, "He is the Khayyam of Khorezm in terms of his intelligence and talent, his power in observation." In Eastern literature, it has become customary to call deeply meaningful, elegant, and playful ruba'is "khayyamona." Judging by this logic, all of Pahlavon Mahmud's artistic rubai's are khayyamona. When these ruba'is stand side by side, it is difficult to distinguish which ones belong to Khayyam and which ones to Pahlavon Mahmud." The works that became popular among the people and brought fame to Pahlavon Mahmud as a poet are his ruba'is. The total number of Pahlavon's ruba'is is not clear because no ancient manuscript containing the poet's ruba'is has been found so far. Almost all of the manuscripts composed of Pahlavon Mahmud's ruba'is (as far as we know, of course) were copied in the 19th century and included many Persian ruba'is of other poets. Therefore, distinguishing the poems of Pahlavon among them requires a lot of research." It is considered that Pahlavon Mahmud came from a family of craftsmen and was also engaged in fur and silk weaving [1]. Sources do not say anything about his profession. In "Majalis al-'ushshaq", it is acknowledged that he was engaged in wrestling in Khorezm, and at the end of the chapter, it is recalled that he was with his students in his wrestling hall. In Manaqib, it is said that he was generous and distributed bread to the people, mentioning the following, “But he did not eat and drink himself from the distributed food, he made a living and bought bread from some profession. He used to give half as a charity and half as use sustenance,” but it is not clear what his profession was.

Methodology. The following paper attempts to reveal the role of Pakhlavan Mahmud in Sufism ideology in Khorezm. In order to do this, variety kinds of works such as folk books, scientific articles, and ancient handwritings have been studied and analyzed.

Analysis and results. It is known that the Pirs of the tarika were engaged in some profession and earned halal food. In one of the folk books, Risalai Bofandalik, it is stated: It is narrated in a hadith that Qola-nabiyyu alayhissalam: Al-kasibu habibullah. If they ask, "Who was engaged in kulohboflig? ", The answer is, "Prophet

Doniyol." Question: "Who was engaged in shonaboflig? " The answer is: "Asadullahi gholib". Question: "Who was engaged in naqshboflig?", "Khoja Bahauddin" ... Question: "Who was engaged in naqshboflig?", Answer: "Najmiddin Kubro..." [2]. In this treatise on weaving, information about the jobs of the Prophet Doniyol (s.a.w), Asadullahi gholib (Hazrat Ali (s.a.w)), Bahauddin Naqshband (s.a.w) and Najmiddin Kubro, etc was presented. Just as it is obligatory for all holy people and prophets to earn a living by practicing a noble profession, here we learn what kind of profession the famous individuals had.

According to the information, Doniyol s.a.w was engaged in sewing a kuloh, Asadullahi gholib earned a living by weaving shona, a scarf intended for the shoulders, Khodja Naqshband was famous for weaving patterns on the cloth, and Hazrat Najmiddin Kubro for weaving small rugs, which are now called "alacha" among the common people. The word mentioned as “gulocha” in the text originally means a small carpet. Golichabofs woven such small carpets from wool or cotton, and among the people, these carpets were called as "olacha". All in all, it is clear from this source that Najmiddin Kubro's profession was carpet weaving, and Hazrat Ali (s.a.w.) was engaged in shonaboflig. At this point, it is important to analyze the word shonabof. Shona originally comes in two different meanings in the dictionary. The first is the shoulder, which means the place where the hand joins the body, and the second is the comb. Shonabof - means the person who is the weaver of shona. If we pay attention to the first meaning of the word, then it means a weaver of a cloth, a scarf, which is worn on the shoulder. It is known that in the past, Pahlavons and Sufis wore a thick woolen cloth on their shoulders. (This is probably why Sufis are called pashminaposh, which means, covered with a woolen cloth. The protagonist Pahlavon in “The Knight in the Panther’s Skin” by Shota Rustaveli, also usually wore leather on his shoulders). This means that the shonabofs woven a scarf made of thick wool, which they carried on their shoulders, and this profession was inherited from them by Asadullahi gholib, that is, Hazrat Ali (s.a.w.). The second meaning of the word is focused on the shape of the knitting machine. That is, weaving equipment, usually carpet weaving machines, uses a comb-like device, i.e., comb-like equipment that serves to insert horizontal and vertical yarns into each other. So, in both senses, shonabof is a word that refers to the profession of “scarf weaver”, which weaves a scarf of thick fabric, wool, worn on the shoulders.

Based on this, it is possible to say that Pahlavon Mahmud, a spiritual student of Najmiddin Kubro, who saw his life on the basis of the hadiths of the Prophet, was also engaged in sewing a coat and a kuloh. Also, the comment “Pakkayor is the son of a butcher” that Navoi and Muhammad Baqir mentioned in their tazkiras, the notes “he used the profession of sewing a coat ..." in the narrations indicate that Pahlavon Mahmud was a sewer of a coat and a cap. So, in addition to wrestling, Pahlavon Mahmud was also engaged in sewing a coat and a cap.

It is well known that the issue of the leader teacher and discipleship is important in the tarika. After all, no spiritual leader cannot attain greatness without a certain tarika and piri murshid. It is difficult for a murid to reach maturity, especially if he is not brought up well by the murshid. While addressing this issue related to the tarika, it is necessary to mention the teachers of Pahlavon Mahmud. We will refer to the sources

again in order to clarify who Hazrat Pahlavon's teacher was and which tarika he represented. We have already mentioned that A. Zarrinkub, who was informed that the name of Pahlavon Mahmud was mentioned in the tazkira of Abdurahman Jami, said that Pahlavon Mahmud was a student of Sheikh Muhammad Khilwati. We can conclude from that Pahlavon Mahmud belonged to the Khilwati tarika, but the conversation with the sheikh alone did not determine the tarika of the individual. The fact that Pahlavon Mahmud was unmarried for a lifetime may have been influenced by the tarika of Khilwati. According to the information, one of the requirements of this order is to be in solitude and alone. This is probably why “Latayif ut-Tawaif”’s zikr begins with "az mujarradoni and munfarradoni ruzgor bud" (he was one of the lonely and alone people of his time).

Also, A. Zarrinkub says in this book that Pahlavon Mahmud participated in the Sufi gatherings: “The information about the situation and prophecies of Sayyid Ali Hamadoni in Jafar Badakhshi's “Khulasat ul-manaqib” states that Pahlavon Mahmud was one of the people of Malomatiya tarika. He sometimes even went to ruin, where he would say taibona (repentance) and weep with the people of Xarobot tarika, and the people of this tarika would weep together because of his words, and on that day they would be cleansed of all their great and small sins, and would leave badness [3]. These considerations were also repeated by the Sufism scholar Muhammadkozim Yusufpur. Only he mistakenly calls Badakhshi's abovementioned work "Khulasat ul-maqamat."[4] Thus, such conversations show that Pahlavon Mahmud may have been a representative of the Malomatiya. “In the Islamic world, the tarikas and their branches that are close to it were built on or under the influence of Malomatiya. The Kubraviya founded by Najmiddin Kubro was one of them,” wrote the Sufism scholar Ibrahim Haqqul.[4] Thus, Pahlavon Mahmud's belonging to the Malomatiya increased due to his connection with Kubraviya.

Conclusion. It is clear that Pahlavon Mahmud has a special place in the history of our spirituality with his exemplary life, multifaceted activity, artistically harmonious ruba'is. Therefore, the search for the restoration of the perfect biography of our great compatriot, the search for his works, translations and their deliverance to our people, their comprehensive and in-depth study based on Sufi pedagogy and classical poetry should not stop for a moment.

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UDC: 378:33

THE ROLE OF DIGITAL INNOVATION TECHNOLOGIES IN ONLINE DISTANCE LEARNING AND THE DIGITAL ECONOMY IN HIGHER EDUCATION ORGANIZED IN THE CONDITIONS OF PANDEMICS IN UZBEKISTAN

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Anotatsiya: maqolada bugungi pandemiya sharoitida innovatsion raqamli texnologiyalarni joriy etish va raqamli iqtisodiyotni shakllantirish, axborot-kommunikatsiya texnologiyalari mohiyati va ta'lim tizimi tarmoqlarining ta'sirini o'rganish sharoitida oliy ta'lim tizimi sohasida ro'y berayotgan o'zgarishlar tahlil qilingan. Bundan tashqari, maqolada talabalarning ta'lim jarayoniga raqamli texnologiyalarni joriy etish yo'llarining ta'siri ko'rib chiqiladi; Masofaviy ta'lim natijalari majmui va uni amalga oshirish atroflicha yoritilib, ta'lim jarayonida talabalarning axborot-kommunikatsiya texnologiyalarini qo'llashga bo'lgan munosabatini oydinlashtirish maqsadida o'tkazilgan sotsiologik so'rovimiz natijalari muhokama qilinadi.

Kalit so'zlar: raqamli iqtisodiyot, axborot texnologiyalari, tarmoq, ta'lim, ta'lim tizimi, pedagogik jarayon, o'qituvchi, talaba, raqamli texnologiyalar

Аннотация: В статье анализируются изменения, происходящие в сфере системы высшего образования в условиях внедрения инновационных цифровых технологий и формирования цифровой экономики в условиях современной пандемии, исследуется сущность информационно-коммуникационных технологий и влияние отраслей системы образования. Кроме того, в статье будут рассмотрены эффекты от способов внедрения цифровых технологий в образовательный процесс студентов; Подробно освещается совокупность результатов дистанционного обучения и его реализации, а также обсуждаются результаты нашего социологического опроса, проведенного с целью выяснения отношения студентов к применению информационно-коммуникационных технологий в образовательном процессе.

Ключевые слова: цифровая экономика, Информационные технологии, Сеть, образование, образовательная система, педагогический процесс, преподаватель, студент, цифровые технологии

Abstract: the article analyzes the changes taking place in the field of higher education system in the conditions of the introduction of innovative digital technologies and the formation of digital economy in the conditions of today's pandemic, the study of the essence of information and communication technologies and the impact of the sectors of the educational system. In addition, the article will consider the effects of the ways of introducing digital technologies into the educational process of students; The set of results of distance learning and its implementation is

covered in detail and the results of our sociological survey conducted in order to clarify the attitude of students towards the application of information and communication technologies in the educational process will be discussed.

Keywords: digital economy, Information Technology, Network, education, educational system, pedagogical process, teacher, student, digital technology

Introduction. The beginning of the XXI century is characterized by the development of digital technologies, the acceleration of the globalizing processes of information and economy, the complexity of social structures and relations, modern digital technologies are becoming more and more, which leads to the exponential growth of flows, data, emphasizing the need to form a new type of economy, the main tool is digital (information) This type of economy is defined by the concept of "digital economy", the literature adopted in the modern way.

The study of this concept D. Bell, F. Weber and D. Bode was performed by many foreign scientists, for example: F. Mahlup, A. Riis, A. Tafler, X. Hanamari and D. Vada, K. Errov.

Literature review. For the first time, the concept of "digital economy" was used in 1995 year by American computer science teacher Nicholas Negroponte on the basis of the University of Massachusetts. However, Nicholas Negroponte used this concept in a more figurative sense and did not give an accurate definition [3-V. Ivanov-Moscow. It's 2016y.] In Table 1 below, we will look at the comprehensive views and descriptions of the various authors about the digital economy.

Table 1: definitions given to the digital economy

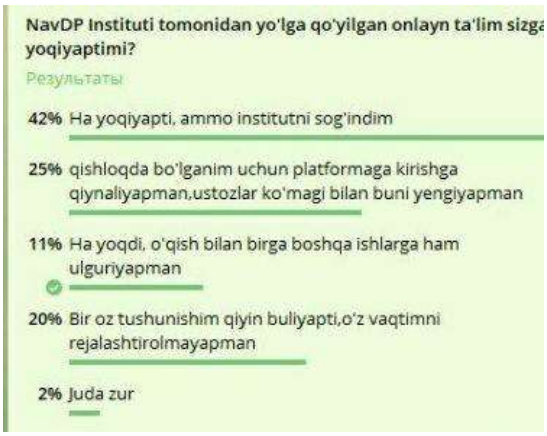
Author and source	Description and feedback
President of the Republic of Uzbekistan Mirziyayev [From the appeal to the Oliy Majlis in 1-2019]	In order to progress, we must and must master digital knowledge and modern information technology. This gives us the opportunity to go through the shortest path of Ascension. After all, today in the world there is a deep penetration of information technology into all spheres. Of course, we know very well that the formation of the “digital economy” requires the necessary infrastructure, a lot of money and labor resources. However, no matter how hard we try, when do we get into this business today?! It will be too late tomorrow. Therefore, the active transition to the “digital economy” will be one of our most priority tasks for the next 5 years. Digital technologies not only improve the quality of products and services, but also reduce excessive costs.
Us scientist N.Negroponte [2-N.Negraponte.Massachusetts, Journal.1995 y.]	Digital economy is a system of applying economic, cultural and social relations on the basis of the application of digital technologies. Sometimes it is also expressed by concepts such as a new economy, an internet economy, or a web economy.

Research Methodology. For the purposes of this research, is used a combination of two of the classic social sciences research tools – questionnaires and the internet

Doctor of Economic Sciences, member of the Russian Academy of Sciences. V. [3-V.Ivanov. Moscow 2016 y.]	The digital economy is a virtual environment, it means filling the human reality.
Professor of Economic Sciences N.Murodova [4-small business and family entrepreneurship article in the context of the digital economy. Samarkand International Conference 2020]	Digital economy: new platforms a new stage of development of Uzbekistan through technologies and business models

survey. The questionnaires are distributed among students from several departments which have used distance learning as part of their studies, as well as among carefully selected students of the same institute, who form part of the team of the same study. As a complementary method, is conducted internet survey with an equal number of representatives of each group.

Analysis and results. Digitization also has its results in higher education, in particular, in the previous years, when in the Republic of Uzbekistan there were 15 online courses of higher education institutions, in 2020 on the distance education platform of the Ministry of Higher and secondary special education all state higher education institutions in the territory of Uzbekistan established their education [5-Edu.uz data,2020y.April], which leads to the further development of the Republic of Uzbekistan for 5 years on the path of digitization. In particular, the following 1-th application shows the results of the Social Survey conducted by the students of the Navoiy State Pedagogical Institute on the channel of the Institute in the telegram social network.



Application 1: results of an anonymous survey of NavDPI students about the online system in the social network telegram

According to the results of the Social Survey conducted anonymously in the telegram network among the students of the Navoiy State Pedagogical Institute, the opinions of the students who participated in the survey were distributed as follows, 42 % of the students ' opinions about online education were positive, they noted that they missed the institute, while only 25% of the students noted that they, they expressed a positive opinion on the fact that online education allows them to engage in other work together with study, while 20% of students said that they could not organize their own time as a mountain. 2% of the students, however, assessed the system as too salty. In the following 2-th application, however, the students ' opinions about how to continue their studies online when the quarantine is over are analyzed.

Application 2: students opinions on the continuation of distance education at the end of quarantine

The votes of the students in this questionnaire were distributed as follows, of which 22% expressed their desire to continue their studies remotely, 63% said that student was eligible for collective education rather than distance learning, 5% said that student was eligible for distance learning but the benefits were face to face, 4% said that student had determined that social sciences were online.

This means that even from the above questionnaire it is known that distance learning, which is organized in a pandemic environment, is convenient for student youth and they are more developed on their own, they are striving to achieve more results, but they are eager to read them in a collective way due to their health to the institute community. Many students, however, realized that they had to learn how to properly allocate their time, and this is not an exaggeration, if we say the very first steps in development. Thus, the digital age implies a constant adaptation of the entire education, indicates the need for new research in the field of Computer Science and digital business models in particular, according to the calculations of the McKinsey global Institute for training and additional training, in 2036 year in the world will be automated up to 50% of all workflows, this leads to a significant spread of workers. In solving the problem of supply, it was noted that the Centers for professional development by employees with certain compensations of the economy occupy a special place and mass retraining of employees is necessary.

They allow the specialists of these companies to acquire new skills. [6- Official website of McKinsey global Institute]. Information and methodological support of teachers and students, as well as significant expansion of opportunities based on computer means of communication, communication and cooperation are gaining new heights in the system of information and methodological provision of pedagogical activity. We see that expanding the possibilities of providing educational information, applying color, graphics, sound, modern tools of videography should be a process that will allow you to restore the real situation when learning.

Conclusion.

Therefore, the presence of digital technology tools in education indicates that the modern teacher is developing, broadening their abilities, serving the intellectual activity. It will serve both to increase control over the activities of students and to decrease the human factor. Thus, the role of innovative digital technologies in the educational process has a positive impact. we see proof of this in today's 2020-year pandemic conditions. In particular, in the sphere of Higher Education of the Republic of Uzbekistan, favorable conditions were created for the personal activity of students, as well as for the work of the teacher, and access to free courses for students sponsored by the state to the courses of prestigious universities of the world was created. This is

evidenced by the further improvement in the quality of higher education in the coming years.

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UDC: 378:33

METHODOLOGY OF DEVELOPING INTERESTS OF STUDENTS IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGIES

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Annotasiya. Dunyoda axborot-kommunikasion texnologiyalarni rivojlanishi ta'lim tizimiga o‘zining ijobiy ta'siri ko‘rsatmoqdi. Hozirgi kunda mamlakatimiz ta'lim tizimida «Informatika va axborot texnologiyalari» fanini o‘qitish samaradorligini oshirishda tarmoqlardagi ma'lumotlardan samarali foydalanish uchun elektron ta'lim resurslarini sifatli tayyorlanishiga erishishimiz kerak. «Informatika va axborot texnologiyalari» fanini o‘qitishda o‘quvchilarga fanning amaliy jihatlari haqida bilim berish, zamonaviy komp'yuterlarning dasturiy ta'minoti, shu jumladan, amaliy va xizmat ko‘rsatuvchi dasturlar bilan ishlash malakasini hosil qilish, zamonaviy axborot texnologiyalari haqida umumiy ma'lumot berishdan iborat.

Kalit so‘zlar: fayl serveri, tarmoq texnologiyasi, proksi-server, xizmatni boshqarish.

Аннотация. Развитие информационных и коммуникационных технологий в мире положительно влияет на систему образования. Сегодня, чтобы повысить эффективность преподавания предмета «Информатика и информационные технологии» в системе образования нашей страны, нам необходимо добиться качественной подготовки электронных обучающих ресурсов для эффективного использования информации в сети. При преподавании предмета «Информатика и информационные технологии» для предоставления ученикам знаний о практических аспектах науки, развития навыков работы с современным компьютерным программным обеспечением, включая прикладные и служебные

программы, общие сведения о современных информационных технологиях заключаются в предоставлении информации.

ключевые слова: файловый сервер, сетевые технологии, прокси-сервер, управление услугами.

Abstract: The development of information and communication technologies in the world has a positive effect on the education system. Today, in order to increase the efficiency of teaching the subject "Informatics and Information Technologies" in the education system of our country, we need to achieve high-quality preparation of e-learning resources for the effective use of information on the network. When teaching the subject "Informatics and Information Technology" to provide students with knowledge about the practical aspects of science, develop skills in working with modern computer software, including applied and utility programs, general information about modern information technologies consists in providing information.

keywords: file server, networking technology, proxy server, service management.

Introduction. The rapid development of ICT will radically change the way we interact at the local and international levels and how we view our place in the world.

Studying the experience of South Korea, Japan, China, Iceland, Switzerland and the United Kingdom, the world's leading countries in the use of ICT, and using their effective teaching methods and technologies will play an important role in training professionals.

The formation of new competencies for the use of ICT in education, the active development of information in the network was a major innovation, significantly changed the views on the forms, methods and content of education in a public and continuous environment. Today's demand is to provide quality education to students in a short time, to control their knowledge. In this regard, in the fourth direction of the Decree of the President of the Republic of Uzbekistan Sh. Mirziyoyev "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" entitled "Development of the social sphere" "Improving the quality of education, secondary special and higher education and the implementation of measures for their development" [1]. This clearly shows the need for effective use of modern information and communication technologies in teaching students the subject in order to improve the quality of education. Indeed, a new way of teaching using modern information and communication technologies requires our teachers to have unique experience, in-depth knowledge, professional skills and abilities in this field.

It is the teacher's responsibility to ensure that the student's activities in the classroom are integrated into the learning process in the continuing education system. In such a process, it is necessary for the teacher to organize the lesson project in accordance with the purpose, to search for the desired result, to enter the lesson with new ideas, to accept each lesson as a new work. At the heart of information technology tools is the computer. Today, computers are used in the education system in four main areas: as an object of study; as technical means of teaching; in education management; used in scientific and pedagogical research. The widespread use of electronic methodological and didactic literature in modern information technology is a matter of

urgency. If e-learning resources reflect nationalism and modernity, we would pay more attention to the science of our youth.

The proliferation of information is creating new demands on the educational process. There is a need to use convenient tools for the acquisition and use of information in the educational process. Changes in society are leading to the use of technical means to ensure the adequate use of information in the educational process. Today, with the rapid penetration of technical means into the educational process, we are faced with the task of effectively organizing the educational process through their effective use. Although educational institutions are well equipped, it is necessary to improve the skills and competencies of teachers in order to use them in the educational process.

The development of information and communication technologies has opened up new forms of information perception: not only multimedia resources, text, but also graphic images, animation, sound, video fragments can be transmitted via the Internet and easy to write to various media. Access to intellectual resources has also increased, and new forms of learning, such as virtual labs and virtual workshops, have emerged.

Literature review. In recent years, in many countries, special attention has been paid to the implementation of a number of innovative projects in educational institutions, the introduction of information learning environment, as well as the widespread introduction of this form of education. In particular, on the development and improvement of the information educational environment in foreign countries: Y.S. Branovsky, S.D. Karakozov, V.V Laptev, N.I Rizhova, V.A Storodubtsev, the research of P.I Obrazsov and I.V Robert in the development of the basic principles of creating information didactic complexes.

Introduction of computerization of education and information technologies in the educational process in the Republic M.M.Aripov, U.Sh. Begimkulov, U.Yuldashev, N.I.Taylakov, tools and methods of organizing the use of computers in teacher training, distance learning and its organization This is reflected in the research work of N.A.Muslimov and A. Pardayev.

A.I.Bashmakov, F.M.Zakirova, L.X.Zaynutdinova, Soy M.N conducted research on the theoretical foundations of the creation of person-centered e-learning resources and pedagogical design of the educational process, multimedia technologies and tools in the educational process. The importance of application and the basis of their use have been studied by YE Drozdova, A.V.Chebotareva, A.V.Fedorov, I.M.Ibragimov.

The analysis shows that the research is mainly focused on improving the personal freedom of students in the process of computer-based learning in educational institutions, the development of innovative potential of students, the didactic nature of the educational process aimed at developing independent creative activity. little attention has been paid to the development and implementation of supply. This requires a thorough study of the formation of the ability to use modern technologies in the development of independent thinking skills in students of public educational institutions.

Analyzing research on the introduction of network technologies in the educational process, Indian scientist M. Segata conducted a number of experiments

around the world and said that information technology affects the effectiveness and motivation of education. Researcher Anders Berglund has conducted research on the exchange of information between teachers and students in computer networks based on various methods [2].

Michael H. Long, a scientist at the University of Cambridge Press, conducted empirical research on computer-based language teaching. Georgian scientist D. Geladze recognized the use of the Internet and computer technology in education as a powerful tool for strengthening communication between teachers and students in a virtual environment [4].

A.M.Anisimov, one of the open and free source software for the use of Moodle in distance learning, cited in his scientific and methodological work on the interface of the system, the characteristics of student work in the course, working with information and teaching materials and management of course elements. In his research, D.S.Lubensov focused on the creation of an information and methodological project on computer science using distance learning in Moodle, the control of students in computer science [6].

Significance/need of the study The need to increase the level of knowledge of students through the effective use of new teaching methods in the teaching of "Computer Science and Information Technology" is relevant today. One way to solve this problem is to make effective use of the information available in the network, organize lessons, and develop lesson plans. Because while working online, students gain relevant knowledge and skills. In the classrooms where computer networks are available, students are not allowed to use other programs ineffectively, except for assignments on the subject. Information on the topic can be obtained from a computer network disk, access to the Moodle system through the internal network of the educational institution, as well as receive new information via the Internet.

Interaction in the information space in the classroom and the integration of traditional, interactive forms of education can help to increase the ICT literacy of future professionals, to develop the effectiveness of ICT. In teaching the subject "Informatics and Information Technology" teachers of science can use technical equipment in the classroom, to use the capabilities of existing computer networks in the assignment of students to the quality of education. 'reveals the secret.

However, when preparing for a lesson using computer networks, it is important to keep in mind that the lesson will remain a textbook while maintaining its goals and objectives. Therefore, in the course of the lesson it is possible to follow the following basic didactic principles: consistency, structure, transparency, consistency, connection of theory and practice. In order for the teacher to support and effectively organize the learning process:

- curriculum development using network technologies in the educational process;
- coordination of educational activities and management of student activity;
- work with students individually, involve each student in the educational process;
- software products, etc., and the selection of teaching aids.

It is becoming increasingly difficult to imagine advanced innovative pedagogical technologies without modern information and communication technologies. In this regard, the resource, personnel and information bases of educational institutions are

being strengthened, and the educational process is being provided with new teaching materials. With different types of e-learning resources (Figure 1), the e-libraries of each educational institution are being enriched and placed on local networks.

Figure 1. E-learning resources

The wide range of network technologies allows them to create presentations at all stages of the educational process, ie to explain a new topic, to introduce relevant educational sites, to directly exchange and store computer information, as a means of communication, to create projects, at the stage of strengthening the desired topic, in the preparation of test assignments, writing e-mails, creating multimedia files, filling or creating crossword puzzles, working with diagrams, tables, audio and video materials is based on their practical use.

Objectives and hypotheses. One of the best ways to teach computer science and IT is through computer networks, because the software and hardware studied in science are developing rapidly. Interacting in the information space in the classroom, combining traditional, interactive forms of education, can further enhance the knowledge of future professionals in the field of information technology, helping to develop the effectiveness of this area. In teaching the subject "Informatics and Information Technology" teachers of science can use technical devices in the classroom, to use the capabilities of existing computer networks in the assignment of students to the quality of education. 'reveals the secret.

Problems of using the local network in teaching, the reception and transmission of information to students in groups, the analysis of the results of mutual exchange of information between students, the advancement of hypotheses and the development of ideas, collaborative modeling of objects in the process it is possible to incorporate features of decision making and others in solving tasks together.

The use of local area networks in teaching is a method of using new modern technical means in the educational process. It should be noted that the computer is an individual component of education for each student. Allows students to share information. The following aspects of the learning process are provided through the local network:

• Ensuring uniformity of information materials and basic technical means for all students;

• Launch computer-based learning programs in students' workplaces;

• increase the reliability of computer storage of information, allocating students with clear memory areas for work;

• by sequentially recording the results in a computer-server database and, if necessary, processing the software accordingly;

• organization of computer-based testing;

• allow students to use computer games and work independently with students on the basis of teaching materials on the teacher's computer server;

• The teacher updates the data on the central computer as needed.

The hands-on activities can provide a variety of information through the global network, including students searching for answers to questions on the topic through the global network, and showing available web pages.

In order to strengthen the knowledge, skills and abilities of students in the field of "Computer Science and IT", to develop their creative abilities through practical exercises through a computer network:

• The purpose of the computer-assisted assignment should be clearly explained to students, and the content of the assignment and how it should be handled should be thoroughly explained;

• The practical exercises provided to the students through the computer network are given to each client in the group, taking into account the aspirations and interests of the student on the computer;

• network assignments have a clear system and consistency;

• Certain rules of practical training in the field of "Computer Science and IT" can be easily applied in the performance of other tasks of the same content;

• The task must meet the requirements of the student's active movement and completion within the allotted time.

• It is possible to actively communicate with students in the local network. This is called interactive learning.

The essence of interactive teaching is to organize the learning process in such a way that all students are involved in the learning process and have the opportunity to think freely, analyze and think logically. In the process of learning, the interaction of students means that each of them contributes individually in a unique way, sharing knowledge, ideas and ways of doing things. At the same time, all this is done in an atmosphere of mutual goodwill and support. This, in turn, not only provides an opportunity to acquire new knowledge, but also develops the cognitive activity itself.

Interactive activities in the classroom involve the establishment and development of dialogic communication that leads to mutual understanding, collaboration, and joint resolution of common but important issues for each participant.

In the process of dialogical teaching, students learn to think critically, solve complex problems based on the analysis of conditions and relevant information, to consider alternative ideas, to make decisions in a coherent and reasonable way, to participate in discussions, to communicate with others. . To do this, individual, pair and group work is organized in the classroom, research projects, role-playing games are used, work is done with different sources of documents and information, creative work is used.

Research methodology. The use of network technologies in the organization of effective teaching of the subject "Computer Science and Information Technology" increases the interest of students in science. In particular, the local area network can provide electronic information on the subject from the main computer in the computer classroom, provide students with learning, control and use pedagogical technologies.

In computer network-based computer classes, it is possible to organize the learning process using file-server, proxy-server, management network services. For example, a file server network has a number of learning capabilities that allow students to access a database on a dedicated server via client computers. The instructor uses the server's ability to communicate with the client computer via network software. It is also possible to monitor students through the local network, give students individual assignments, and exchange information over the network.

It is also possible to give a methodology of teaching the course "Informatics and Information Technology" using interactive teaching aids on the basis of the Moodle system. In the online course "Computer Science and Information Technology" created in the "Moodle" system, interactive learning materials for lectures and practical training can be found on the page, presentation, survey, chat, forum, assignments, Wike, ma ' database, audio and video lessons, tests and other forms. Students' performance is supervised by the teacher. In this system, it serves to provide interactive communication between the participants of the learning process.

Analysis and results. The effectiveness of pedagogical experiments is determined by the criteria developed during the research and on this basis with the help of a special program, the geographical location of experimental areas, the acceptability of pedagogical conditions, the development of quality criteria and mathematical and statistical analysis of the results. minlandi.

The content of teaching aids on the use of computer networks in the teaching of subjects "Computer Science and Information Technology", the structure of lesson plans on the use of computer networks, didactic teaching of "Computer Science and Information Technology" on the basis of computer network services tools and methods of their use were developed and applied in practice in the teaching process.

A questionnaire was developed to determine the content of the concepts related to the process of acquiring computer training. At the beginning and end of the experiment, the experimental and control groups compared the results recorded by the students and were processed using a mathematical-statistical method. This situation also served to demonstrate the effectiveness of the methodology, which was developed by us and tested in practice during the experimental work.

The results of the experiment showed that with the help of new pedagogical technologies and computer-based software-didactic complexes, not only the mastery of teaching materials, but also the interest of students who are not able to master them has increased. . At the same time, the students became more active and the quality of their learning was a bit higher. With the help of new pedagogical technologies and computer-based software-didactic complexes, students became more active and interested in the lessons. It was especially evident in the lectures and practical and laboratory classes. That is, students were able to understand, discuss, and engage in question-and-answer discussions during the lesson. In addition, students had the opportunity to work independently on computer assignments in the computer classrooms, included in the software-didactic complexes. This allowed them to prepare for lectures and practical classes. As a result, students have the ability to always ask and answer questions with teachers on a given topic.

With the help of new pedagogical technologies and software-didactic complexes based on computer technology in groups taught on the subject "Informatics and Information Technologies" the current control is 12-14%, intermediate control is 10-12%. increased The overall mastery of students in current and intermediate controls increased by 10%

Thus, the use of computer-based methods to increase the effectiveness of the subject "Computer Science and Information Technology" in the experimental groups has shown good results through experimental work.

Conclusion. Based on observations, interviews, lesson analysis, analysis of psychological, pedagogical and methodological literature, it was determined that increasing the effectiveness of teaching the subject "Computer Science and Information Technology" on the basis of computer networks is an urgent pedagogical problem. Based on the results of the analysis, it was determined that it is expedient to develop methods of teaching the subject "Computer Science and Information Technology" through a computer network. The course analyzed the psychological, pedagogical, methodological and organizational aspects, as well as the physical features of the use of computer networks as an object of research. In lectures and practical classes on "Computer Science and Information Technology" developed a current methodology of computer networking based on modern approaches. Through the application of the developed methodology to the lessons, students' psychological, methodological, information work, creative, innovative and communicative skills were formed.

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UDC: 37.015.32

THE CONCEPTS OF "INFORMATION", "KNOWLEDGE", "DATA" WHEN USING GEOGRAPHIC INFORMATION SYSTEMS.

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Annotasiya: Ushbu maqolada axborot tizimlarining yangi shakllari, shuningdek, "ma'lumotlar", "axborot" va "bilim" tushunchalari paydo bo'lganligi ta'kidlangan bo'lib, ular GISni rivojlantirish va undan keng foydalanishga ilmiy yondoshishni ta'minlaydi. Bundan tashqari, maqolada GIS navigatsiya vositalaridan foydalanish uchun zarur bo'lgan bilimlar taqdim etilgan va bilim olishning samarali vositasi sifatida axborot tizimlaridan foydalanish ko'rsatilgan. Qaror qabul qilish jarayonida vujudga keladigan "axborot", "ma'lumotlar" va "qarorlar" tushunchalari o'rtasidagi bog'liqlik keng yoritilgan.

Kalit so'zlar: geoinformatsion tizimlar, ma'lumotlar, ma'lumotlar, bilimlar, geoinformatika, qarorlar qabul qilish, dasturlar, dasturlash tillari, navigatsiya, Data Mining, ob'ekt.

Аннотация: В этой статье освещается появление новых форм информационных систем, а также концепций «данные», «информация» и «знание», которые обеспечивают научный подход к развитию и широкому использованию ГИС. Кроме того, в статье представлены знания, необходимые для использования инструментов навигации ГИС, и показано использование информационных систем как эффективного средства приобретения знаний. Взаимосвязи между понятиями «информация», «данные» и «решения», возникающие в процессе принятия решений, широко освещены.

Ключевые слова: геоинформационные системы, данные, информация, знания, геоинформатика, принятие решений, программы, языки программирования, навигация, Data Mining, объект.

Abstract: This article highlights the emergence of new forms of information systems, as well as the concepts of "data", "information" and "knowledge", which provide a scientific approach to the development and widespread use of GIS. In addition, the article presents the knowledge necessary to use GIS navigation tools and shows the use of information systems as an effective means of acquiring knowledge. The relationship between the concepts of "information", "data" and "decisions" arising in the decision-making process is widely covered.

Key words: geoinformation systems, data, information, knowledge, geoinformatics, decision making, programs, programming languages, navigation, Data Mining, object.

Introduction. The concepts of "data", "information" and "knowledge" differ in content, despite many common features. Data refers to known facts about objects or measurements made on those objects. The data used in the GAT is highly formalized.

Information is obtained by processing data, so data can be viewed as a building block in the formation of information.

In the GAT, information is defined as a dataset that determines the extent of our knowledge of an object. In this sense, the value of information is the knowledge of the object. Knowledge in general is the result of knowledge of the truth, confirmed in practice.

Literature review. Scientific knowledge is distinguished by its structure, reliability and high level of development. Information systems can be seen as an effective means of acquiring knowledge.

The differences between the terms "data", "information", "knowledge" can be illustrated by the development of technical systems, i.e. first there were data banks, then information systems were formed, and then knowledge-based systems - intelligent (expert). systems appeared.

Currently, the software market widely uses spatially distributed information systems, including automatic design systems, automatic mapping and GAT systems. It has more advanced tools for analyzing spatial data than GAT and other automated systems.

Figure 1 shows the relationship between the concepts of information, data and decisions that arise in the decision-making process.

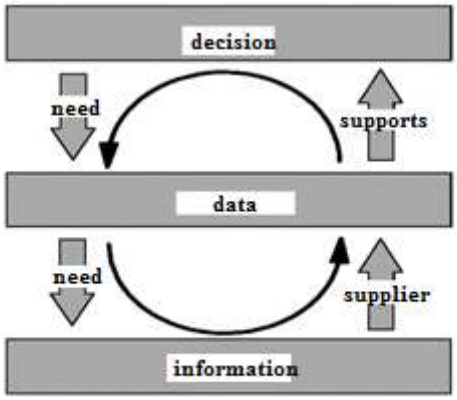

Figure 1. Decisions, information and data

As can be seen from the figure, this process is cyclical. Decision making requires data driven information. Data provides information that supports decisions and more.

The concepts under consideration are an integral part of the so-called information pyramid, in which information, the next stage is data, then a decision is made, the level of knowledge fills the pyramid. As you move up the information pyramid, the amount of data becomes the value of the decisions, i.e. the value of the business. Now

let's look at the same process from a different angle. Consider Figure 2.

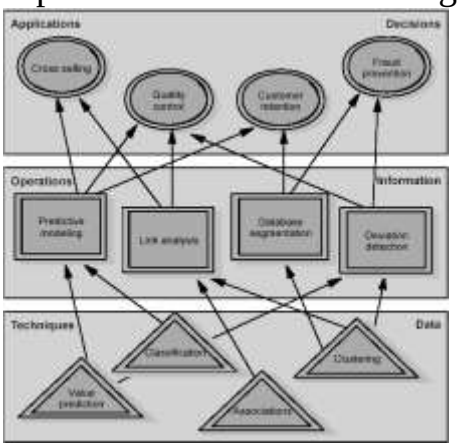

Figure 2. Tasks, actions, programs

It should be noted that the levels of analysis (information, data, knowledge) in practice correspond to the stages of development of data analysis that have formed in recent years.

Analysis and Results. The lowest metric is the detection rate of data fields that need to be considered compared to the available data; the figure shows the tasks of forecasting, classification, clustering, combining numbers.

Let's take a look at a table that shows the relationship between these concepts.

Table 1. Data extraction levels

Step 3	additions	customer retention	knowledge	Data Mining Results
Step 2	actions	*predictive modeling*	data	analysis method
Step 1	functions	classification	information	queries

To solve the classification problem, the results of the first step are used to assign a new object to one of the predefined classes based on certain values with a certain confidence.

Let's look at the problem of customer retention (defining customer confidence in a firm).

Step 1. Database - customer database. Information about the client is available (age, gender, occupation, income). A certain proportion of customers have retained their loyalty to the company using the product; other customers can no longer buy branded products. At this level, we define the type of problem - this is a classification problem.

In step 2, we define a predictive motion simulation. Using predictive modeling, we can classify a new object, a new customer, with some certainty into one of the well-known classes - a regular customer or perhaps a one-time customer.

In step 3, we can use the program to make a decision. As a result of training, a company can significantly reduce advertising costs by knowing which customers should actively send out promotional materials.

Despite the prevalence of this concept, we cannot always clearly define it and distinguish it from the concept of data. Information is multifaceted in nature. With the development of mankind, including the development of computer technology, information acquires new properties. They are:

• any messages about something;
• data that is the object of storage, processing and transmission (for example, genetic data);
• in mathematics (cybernetics) - a quantitative measure of elimination of uncertainty (entropy), a measure of the organization of the system;
• In information theory, a branch of cybernetics that studies quantitative forms associated with the collection, transmission, modification and computation of information.

Discussion. Information - meaningful interpretation of any previously unknown information about an event, object, process that is the object of a certain operation.
Operations here mean perception, transmission, modification, storage and use. To understand information, you need a system that can interpret it, change it, determine if it follows certain rules, and so on. Thus, the concept of information should be considered only when there is a source of information and a recipient, as well as a communication channel between them.
This information is enough to make a decision.
- The reliability of the information.
The data can be reliable or unreliable. Errors occur in unreliable data, and the higher the errors, the lower the reliability of the data.
- The importance of information.
The value of information cannot be abstract. The information should be useful and valuable for a specific category of users.
- Information justice.
This function describes the degree to which the data corresponds to the real objective situation. The required information is complete and correct.
- Relevance of information.
The information must be up-to-date. This property of information characterizes the degree of relevance of the data.
- Clarity of information.
The information must be understandable for people.
- Availability of information.
Accessibility describes the ability to obtain certain information. This property of information depends on the availability of data and the appropriate methods.
- Subjectivity of information.
Information is subjective in nature, which is determined by the level of perception of the subject (recipient of information).

Information requirements

- The dynamic nature of the information.
Information is available only during the interaction of data and methods, that is, during the information process, the rest of the time in data mode.
- Compatibility of the methods used.
Information taken from data. However, using the same information may result in different information. It depends on the adequacy of the selected methods of processing the initial data.

The data are objective. Methods must be subjective, methods must be algorithm-based, subjectively structured and prepared. Thus, data arise and exist in the process of dialectical interaction of objective data and subjective methods.

It is also possible to divide data into real and predictable. Factual business information includes information that describes compliance; The forecast data has been calculated or predicted, so it may not be accurate, there may be some errors.

Knowledge is a collection of facts, patterns, and heuristics that help solve a problem.

Thus, the formation of data occurs in the process of collection and transmission, i.e. data processing. How is knowledge extracted from information?

Often, real knowledge is formed on the basis of distributed interdependencies of heterogeneous data. When information is collected and passed on for an indeterminate result, you gain knowledge. The information itself is meaningless in its purest form. It follows that information is tactical knowledge that is transmitted in the form of symbols by any applied means.

For confident work with the concepts of "information", "data", "knowledge" it is necessary not only to understand the essence of these concepts, but also to feel the difference between them. However, one intuitive interpretation of these concepts is not enough here. The difficulty in understanding the difference between the above concepts lies in their clear synonymy.

First, let's try to understand these terms with simple examples.

1. The student who passed the exam needs information.
2. The student who passed the exam needs data.
3. The student who has passed the exam needs knowledge.

When considering the first option - the student needs information - the opinion is based on the fact that the student needs information, for example, calculations. The information in the second version can be a dissertation or a textbook. As a result of their use, the student receives only that information that, in certain cases, can be transformed into knowledge. The third option seems to be the most logical.

Unlike information, data is logical.

Conclusion: The concepts of "information" and "knowledge" from a philosophical point of view are concepts of a higher level than "data", which arose relatively recently.

The concept of "information" is directly related to the nature of processes in the information system, the concept of "knowledge" is more focused on the quality of processes. Knowledge is closely related to the decision-making process.

Despite the differences mentioned above, the discussed concepts do not contradict each other and are not interrelated. They are part of a single flow: information arises at the source in the process of data transfer, and knowledge arises as a result of using data under certain conditions.

Thus, good processing procedures are needed to gain valuable knowledge. The process of moving from information to knowledge requires a lot of time and money.

When building navigation systems, you first need a database to store the data. Because all the information displayed on the map is stored in the database. To do this, we must first select a database management system (DBMS) before creating a navigation system. MBBT is a lot today. We need to take a few common types as examples. For

example, SQLServer, Oracle, MySQL, SQLLite and others. The choice of one of these systems is up to everyone. Because all of these systems can perform the same function.

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UDK 372.8

IMPROVING THE TEACHING OF NUCLEAR PHYSICS ON THE BASIS OF INTERDISCIPLINARY COMMUNICATION IN PEDAGOGICAL UNIVERSITIES

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Annotatsiya: Maqolada pedagogika oliy o‘quv yurtlarida bo‘lajak fizika va astronomiya o‘qituvchilarini tayyorlashda yadro fizikasini o‘qitish jarayonini takomillashtirib borish usullari tahlil qilinadi.

Kalit so‘zlar: Yadro fizikasi, bo‘lajak fiziklarni tayyorlash, kompleks yondashuv, o‘zaro aloqalar, fikr-mulohazalar, ta’lim samaradorligi, ilmiy dunyoqarash, shaxsiyat shakllanishi.

Аннотация: В статье анализируется методика усовершенствования процесса преподавания ядерной физики на основе межпредметных связей при подготовке будущих преподавателей физики и астрономии в педагогических вузах.

Ключевые слова: Ядерная физика, подготовка будущих физиков, комплексный подход, межпредметная связь, внутрицикловые и внутри предметные связи, обратная связь, эффективность обучения, научное мировоззрение, формирование личности.

Abstract: The article analyzes the methodology for improving the process of teaching nuclear physics on the basis of interdisciplinary connections in the preparation of future teachers of physics and astronomy in pedagogical universities.

Keywords: Nuclear physics, training of future physicists, integrated approach, inter-subject communication, intra-cycle and intra-subject communication, feedback, learning effectiveness, scientific worldview, personality formation.

Introduction. The search for effective ways to improve the level of physics teaching in the system of continuing education, including higher education institutions, indicates the special role of interdisciplinary connections in the learning process.

Literature review. In studies of famous scientists as teachers Juraev M., [1] Maksimova V.G., [2] I. D. Zverev, [3] M. V. Korotov, [4] Zubov V. G.[5] etc. interdisciplinary connections act as a condition for the unity of training and education

as a means of an integrated approach to improve the efficiency of learning, especially in teaching of natural Sciences, which need to be studied from the standpoint of dialectical method. The role and significance of intersubject connections in teaching the basics of atomic physics were studied by I. O. Zakhidov [6]. Despite numerous pedagogical studies, the problem of implementing interdisciplinary connections in teaching physics in the training of future teachers remains relevant. This situation is natural and legitimacy, because due to the infinity of the universe, natural science research and its achievements are also inexhaustible. About this in his time, I. Nyuton expressed the following: "I do not know who the world takes me for. To myself, I seem like a boy who plays on the seashore and is happy if he finds a smoother pebble or a more beautiful shell than usual, while the ocean of truth lies completely unexplored in front of me" [7].

Research Methodology. This article analyzes the methodology for improving the process of teaching nuclear physics on the basis of interdisciplinary connections in the preparation of future teachers of physics and astronomy in pedagogical universities.

For the formation of mature individuals – specialists who perfectly possess the necessary knowledge, subject-based training should provide interdisciplinary connections that reveal the interdependence of natural science, society and human thinking. The relevance of inter-subject relations in teaching is also due to the current level of development of science, which clearly expresses the integration of social, natural science and technical knowledge. The integration of scientific knowledge makes new demands on specialists. The role of human knowledge in the field of sciences related to the specialty is increasing and it can be applied comprehensively in solving scientific and industrial problems. The theoretical basis of many industries is knowledge of borderline sciences, for example, physical chemistry, biochemistry, biophysics, etc. The current state of science and scientific research is characterized by V. Heisenberg as follows: *"We are no longer in such a happy position as Kepler, for whom the interconnection of the world as a whole was given by the will of the creator: Kepler believed that, having known the harmony of the spheres, he came close to understanding the plan of divine creation. However, the assumption of the existence of a general relationship of the whole, into which we, with the help of our thinking, can penetrate deeper and deeper, remains for us the driving force of research"* [7].

Taking into account the integrity of the universe, the world and natural phenomena, the problem of implementing interdisciplinary connections is complex, and its solution requires the joint efforts of scientists and teachers who creatively develop the practical foundations of teaching. Based on these considerations, it is possible to define intersubject relations as a modern teaching principle that affects the selection and structure of the educational material of a number of subjects, strengthening the system of knowledge of students, activates teaching methods, focuses on the use of complex forms of training organization, ensuring the unity of the educational process.

Analysis and results. We analyze the improvement of the physics teaching process by the example of the bachelor's training curriculum in the direction: "5110200-methods of teaching physics and astronomy" of pedagogical universities [8]. According to the curriculum, the disciplines and activities are divided into four cycles:

1. General methodological, humanitarian and natural science subjects; 2. General professional subjects; 3. Subjects in the specialty; 4. Additional subjects. In the curricula of recent years, the cycle of subjects in the specialty includes subjects of students choice. This separation of disciplines interdisciplinary communication between the disciplines of the bachelor's study programme can be summarized into three groups: 1. magiclove communication (communication of physics, chemistry, mathematics etc); 2. nutriciology communication (communication physics General pedagogy, astronomy, etc.); 3. intra-subject communication (communication section nuclear physics with other branches of General physics, for example, mechanics with electromagnetism, etc. In pedagogical research, the first type of intersubject connections are most thoroughly analyzed, intra-cycle connections are relatively poorly studied, and information about intra-subject connections is practically not found. The scheme of implementing intersubject relations is even more complicated for the task of teaching individual sections of a particular subject. For example, the intersubject connections in the teaching of nuclear physics and their complexity can be illustrated in the following diagram (Fig. 1.).

Interdisciplinary communication (IDC) in the teaching of nuclear physics.

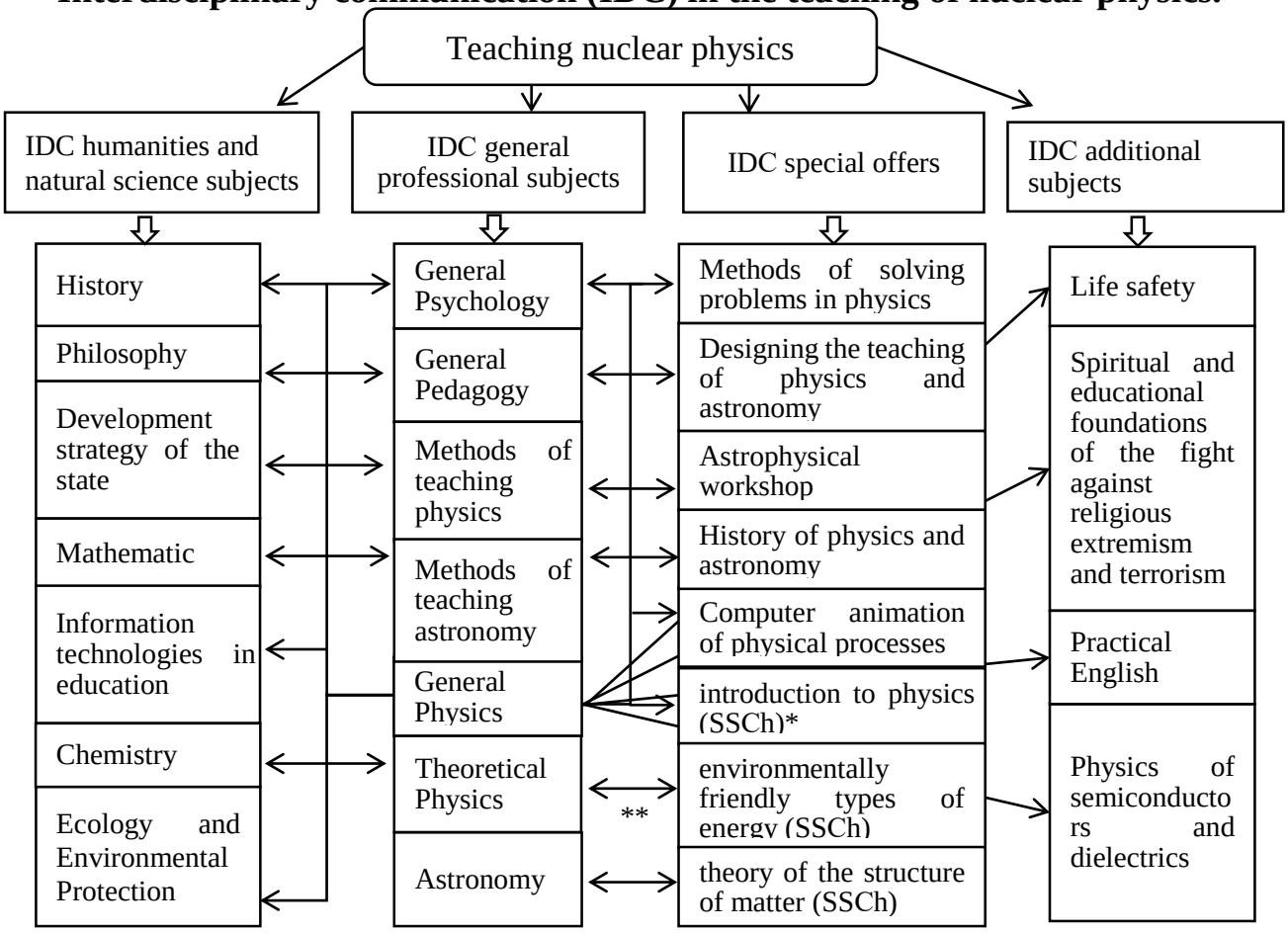

Fig. 1. Conditional scheme of intersubject communication in the preparation of bachelors in the direction: 5110200-methods of teaching physics and astronomy (SSCh)*- the subject of the student's choice, **The arrows indicate some intersubject inter-cycle and intra-subject connections of general physics.

In principle, it is almost impossible to divide intersubject connections into separate components, since each individual subject interacts with all subjects and there is feedback between these interactions.

Inter-cycle relations of physics with humanities and natural science subjects. The interdisciplinary connection of teaching physics with *history and philosophy* is analyzed in many pedagogical studies, including the works of the authors of this article [9, 10]. As a result of these studies, the importance of the historical - biographical and dialectical approach in improving the effectiveness of teaching nuclear physics is revealed. Teaching nuclear physics is directly related to the state's development strategy, since the level of development of the state and its economic potential depends on energy resources. One of these resources is nuclear power, which requires highly qualified specialists.

Teaching nuclear physics, like many natural science subjects, is impossible to imagine without mathematical knowledge. Intersubject communication with mathematics is used in many types of classes in nuclear physics: in lectures, in practical and laboratory classes. In laboratory classes in nuclear physics, mathematical knowledge is used in combination with information technology, for example, when creating and performing virtual laboratory work due to the lack of radioactive sources and devices for recording nuclear radiation. It is for training future physicists in the skills of creating virtual laboratory work that the program includes a special subject "*Computer animation of physical processes*". Although chemical processes at first glance take place far beyond the boundaries of nuclear physics, the study and conduct of experiments in nuclear physics is directly related to *chemistry*. For the study of nuclear physics, the need for knowledge of the periodic table of Mendeleev, as well as during nuclear physics experiments, the separation of individual radioisotopes is carried out using *radiochemistry*.

In nuclear physics classes, almost all topics are directly related to environmental concepts and environmental protection.

In the study of the phenomenon of radioactivity, nuclear reactions of various types, dosimetry of ionizing radiation, etc. The teacher should inform students about the impact of nuclear radiation on living organisms, about ways to control and protect against radiation, about the problems of disposal of radioactive waste, and so on[11].

Intersubject communication with general professional subjects. When considering inter-cycle intersubject relationships, we must not forget that intersubject relationships alone do not provide metasubject results. They provide a student's understanding and application of the links between different academic subjects. Therefore, *"for the organization of metasubject activity of students, it is not necessary to conduct lessons together with teachers of other subjects, since it is possible to "dive" into the understanding of the originals of the studied subject from any topic of any academic subject*" [12]. Intersubject communication in teaching physics with professional subjects refers to intra-cycle connections, since physics is located within this cycle. When considering the teaching of the nuclear physics section, we deal with intra-cycle and intra-subject connections as indicated in the diagram (Fig. 2).

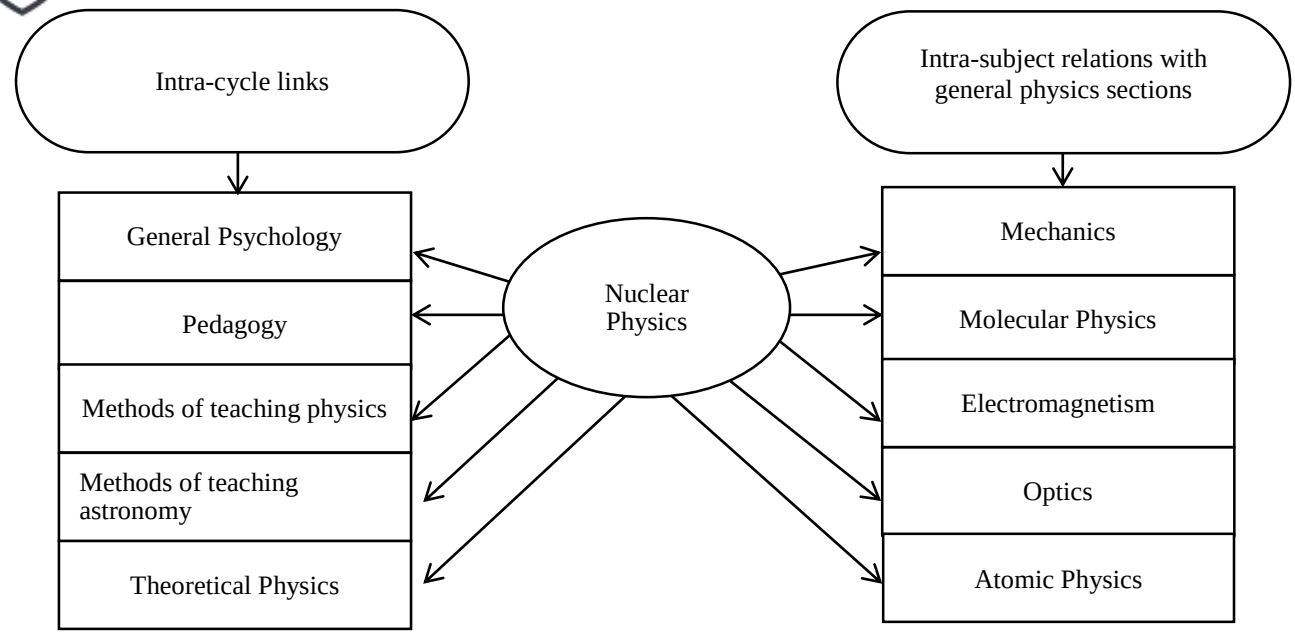

Fig. 2. Scheme of intersubject connection of nuclear physics in the cycle of general professional subjects.

The consideration and implementation of intersubject connections in this cycle plays an extremely important role in the transformation of knowledge into beliefs, since in this process intersubject connections:

1. Stimulate the craving for knowledge and strengthen the interest in the subject.
2. Expand the horizons of students and students with a comprehensive analysis of the studied physical phenomena.
3. Deepen knowledge with an integrated approach.
4. Contribute to the formation of professional interests.
5. Contribute to the formation of scientific thinking of students and students by deepening knowledge about physical phenomena.

Since elements of nuclear physics exist in the subjects of students choice provided for in the bachelor's curriculum, it is necessary to use the information of these subjects when teaching nuclear physics. For example, in the subject “Environmentally friendly types of energy”, the concept of a “green square” is introduced, in which the use of atomic energy is located in one of the nodes of the square. When studying the topic: “Fission of heavy nuclei. Nuclear reactors”, it is necessary to implement intersubject communication with the above subject, which serves to increase the effectiveness of training.

According to the curriculum, the cycle of additional subjects includes disciplines such as “Fundamentals of Life Safety”, “Physics of Semiconductors and Dielectrics”, which are directly related to modern nuclear technologies. The subject of practical English helps to expand the opportunities of future specialists trained in pedagogical universities.

Some connections with the subject of “Religious studies” can also be included in the interdisciplinary connection in the teaching of physics and in particular nuclear physics. At the same time, for inter-subject communication, you can quote from the Koran and other religious books that call for study and scientific research, for the moral

and spiritual education of future teachers. According to the research of analysts, the term “science and learning” is found more than 1000 times in the Qur'an in the testaments calling for science and scientific research. For example, in the testament “Ayat al-Kursi” we find the following words: *“...Ya lyamy maa bayna aydiihim va maa xolfahum, va lyaa yuxituna, bi shayim-min ilmihii illa bima shaa...*”[13], which means: “*He knows what was before them and what will be after them, and they do not comprehend anything of His knowledge except what He wills*”. From the above, it can be concluded that a person engaged in science must first of all meet this recognition, that is, be honest and pure in the physical and spiritual sense. Only then does God reveal his secrets to him, only in this case does a person become closer to God - closer to the truth, since “Truth” (Hak) is one of the names of God. Only such people can delve into the essence of the universe and achieve great success in science.

Conclusion

From the above analyses, it follows that intersubject relationships contribute to:

- formation of ideas about universal laws, general theories and complex problems;
- revealing the fundamental unity of " nature-man-society;
- disclosure of modern trends in the development of science under the influence of integration processes;
- uncovered the generalized meaning of physical, mathematical, chemical, biological, and other knowledge;
- formation of ideas about science not only as a system of knowledge but also as a system of methods;
- the revealed history of science and its practical application;
- the revealed social significance of natural science knowledge;
- revealing the connection of a particular science with philosophy;
- implementation of the scientific principle in the content of training;

Thus, the implementation of complex intersubject links in the teaching of physics contributes to improving the effectiveness of teaching, to the training of comprehensively developed specialists.

In this article, we have limited ourselves to a general overview of the types and meanings of interdisciplinary connections in the teaching of physics, in particular the section of nuclear physics. Obtaining real positive learning outcomes requires a more detailed analysis of the specific relationships between subjects, for example, physics with mathematics, biology, chemistry, etc., which are the task of future pedagogical research.

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UDK:811.111

LACUNA AND INTERCULTURAL COMMUNICATION

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Annotatsiya. Ushbu maqolada biz turli tillarda lakunalaring paydo bo‘lishida madaniyatlararo muloqotning o‘rni va ahamiyatini ko‘rsatib berishni maqsad qilganmiz. Fikrimizni yanada ochiq bayon qilish maqsadida biz misollarni o‘zbek tili va Xorazm shevalaridan keltirib o‘tganmiz. Lakunalar nafaqat turli tillar miqyosida, balki adabiy til va sheva doirasida ham paydo bo‘lishi mumkinligini ko‘rsatishga harakat qildik.

Kalit so‘zlar: Madaniyatlararo muloqot, lacuna, sheva, madaniyat, til, psixolingvistika, etnopsixolingvistika, muvofiqlik, diskurs.

Аннотация. В этой статье мы стремились показать роль межкультурной коммуникации в формировании лакун в разных языках. В нашей статье мы выбрали несколько примеров из узбекского языка и хорезмских диалектов, которые имеют место в общении между людьми, живущими в Хорезме, чтобы подтвердить нашу гипотезу. Мы попытались показать, что пробелы возникают не только между языками, но и между литературным языком и диалектами.

Ключевые слова: межкультурная коммуникация, лакуна, диалект, культура, язык, психолингвистика, энтопсихолингвистика, корреспонденция, дискурс.

Annotation. In this article, we aimed to show the role of intercultural communication information of lacunae in different languages. In our paper, we have chosen some examples from the Uzbek language and Khoresm dialects, which take place in communication between the people who live in Khoresm, to prove our hypothesis. We tried to show that lacunas appear not only between languages but also between the standard language and dialects.

Keywords: intercultural communication, lacuna, dialect, culture, language, psycholinguistics, etnopsycholinguistics, correspondence, discourse.

Introduction. The 20th and 21st centuries become the age of intercultural contacts. Different and present-day methods of correspondence offer the chance to move and trade data between nations in a couple of minutes. The most recent change abbreviated significant distance travel. Individuals everywhere throughout the world can speak with one another paying little heed to time zones and geographic limits. These have changed the life of society, because of new procedure: an ever-increasing number of nations of the world begin to impart these days.

Every one of us attempts to impart successfully and plainly to others by associating with individuals from various societies. This may happen ordinary and all over: in the field of business, network government assistance and correspondence examines. Because of the quick improvement of innovation, which encourages both

correspondence and travel, day by day the cutting edge world is turning out to be increasingly more intercultural.

The word correspondence is taken from Latin "commûnicarê" that way to share. It the procedure of data trade between at least two members to give and get proposed implications through a mutual framework.

Literature review. To show the psychological features of speech, we used the book by A. Maksudova "Psychology of communication." In identifying Khorezmian words, i.e. lacunae, we used “Uzbek dialectology” by V.Shetenov and Sh. Shoabdurahmonov, “Ethnophonyms of Khorezm” by A.Otajonova, “Ethnographic lexicon of South Khorezm” by Y.Bobojonov, “the Uzbek language” by O.Madrahimov. We relied on works such as “The History of Old Words”. In the statistics of the population of Khorezm, we relied on A. Sadullayev's monograph "Demographic development of the Lower Amudarya region." We also provide additional theoretical and practical information for A. Leontev's "Psycholinguistics", M. Jumaniyazova's "Ethnopsychology", R. Rasulov's "General Linguistics", G.Stefanenko “Ethnopsychology”, VVKrasnykh “Ethnopsycho-linguistics and linguaculturology”, as well as “The art of translation”, M.Mirtoji-ev, N.Mahmudov “Language and culture”, Edward Sepir “Language. An intro-duction to the study ofspeech”, Scott Soames “Linguistics and Psychology ”, Harmes F., Michael F. “Bilingualism and bilingual”, Ismael Vezuel

“Ethnopsycholinguistics and the study of culture ”, J.Alatis “Bilingualism and language contact”. We referred to the works of N. Choamsky "Language and mind", the team of authors "Handbook of psycholinguistics". Uzbek linguists have also conducted some studies on the relationship of language to human consciousness, worldview and psychology. Our linguists N.Mahmudov and A.Nurmonov were the first to study the influence of mind and psyche on language.

Research methodology. Until now, Uzbek and British scholars have done a great deal of work on the phenomenon of lacunae and intercultural communication, which are part of the Khorezm ethnopsycholinguistics. For example, O. Jumaniyazov in his book "Assimilation of Germanic languages in the Uzbek language" described in detail the phenomenon of bilingualism, which is characteristic of the Uzbek people. In determining the lacunae of the Khorezm dialect, we relied on the works of Y. Bobojonov and O. Madrahimov. The methodological basis of this article is a dialectical philosophy that recognizes the systemic nature of the universe, the interdependence of events in it, and the close interdependence and relationship of language and thought. Comparative, comparative-historical, descriptive, and etymological analysis methods are used in the study of the selected topic, depending on the nature of the collected materials.

However, methods of conceptual analysis and cross-cultural analysis were used either.

Analysis and results. At the point when individuals trade social data across various countries and social gatherings, it becomes intercultural correspondence. As a science, it examines different circumstances that individuals from various social foundations connect. It centres around language, yet in addition to social properties, thought examples and societies of different gatherings of individuals. We can say that

it incorporates understanding different societies, dialects and customs of individuals from various nations.

Intercultural correspondence is firmly associated with sociology, for example, human studies, social examinations, phonetics, brain research, and correspondence considers. It has a close connection with Etnopsycholinguistics which contemplate national explicit highlights of dialects and societies by the assistance of correspondence. We realize that we express the entirety of our sentiments, feelings by our discourse, so it is a reflection of our view and thought.

The investigation of association among culture and language started in the 1980s in Russia. A gathering of etymologists by the initiative of Leontev led a lot of research on it. Studies like this have a place with ethno-psycholinguistics. Psycholinguists offer to learn a language not as the arrangement of structure however as a "discourse action". They stress ethno-psycholinguistic procedures of discourse creation just as its discernment in correspondence. As per A. Leontev's opinion, there are various types of 'factors' that work at various degrees of correspondence in these procedures: They are as follows: a) associated with social convention; b) associated with social circumstance and social elements of correspondence; c) associated with ethno-mental attributes; and d) dictated by explicit highlights of the language of the network. These variables shape 'national-social specificities or assortments of correspondence' and Ethno-psycholinguistics investigates how figures work: a) discourse tasks, discourse practices, and discourse movement; b) etymological awareness, that is subjective utilization of language; and c) organization of procedures of correspondence. With these investigations, we can see 'ethno–psycholinguistic judgments' of discourse movement, phonemic awareness, and correspondence. Correspondence assumes a main job in our lives, if humans didn't have discourse each procedure in different circles of life had not arrived at its top as we have today. Individuals collaborate with others by methods for correspondence. Disregarding the way that the language, as the discourse system may appear to be the least yearning correspondence mode while speaking with the individual who has a place with another culture, we may have intercultural challenges in correspondence, language contrasts may prompt potential false impressions. Even though the language is a wellspring of correspondence, it is the premise of our observation. Intercultural correspondence is a correspondence of various countries. One of the parts of worldwide correspondence is the issue of beneficiary comprehension of the specific content on culture, on the casing of another culture. Such sort of writings is – trans-cultural writings. Trans-cultural writings can't be comprehended by beneficiaries from other cultures, without losing some portion of importance. There might be numerous incomprehensible words in these writings. They are called lacunas or non-equal units and some of the time they might be called holes. The idea of lacuna was created inside the Russian ethno-psycholinguists. It centers both, on issues of remote content perception just as on correspondence issues between various cultures. Ethno-psycholinguists express that common comprehension between societies is on a fundamental level conceivable because no supreme unique codes of correspondence exist. In any case, since inside the nature of human societies, no total unequivocal codes existing in intercultural understanding is just conceivable somewhat. Throughout multifaceted correspondence, various challenges flaunt, one of

the troubles in the language is a wonder of a lacuna. Now and then in semantics, it is called 'hole'. Present-day inquires about portray lacunae as national explicit components of culture which have discovered relating appearance in language and discourse of speakers and they are not comprehended or misjudge witnesses of another lingvoculture while conveying.

Lacuna as an ethnic-psycholinguistic phenomenon shows how dialects and societies contrast in their psychological structures. To conquer these distinctions, a language specialist and entho-psycholinguist need to apply some philosophical premise of intercultural correspondence. There are different definitions for holes – irregular openings in designs. Lacunae become justifiable by methods for outlines – a method for the association of experience, knowledge about the subject, and occasion characteristics which are generally associated with each other in down to earth exercises of correspondence process.

The holes can be lexical (as some Russian words can be deciphered distinctly by the descriptive way), grammatical (in English the unequivocal article with things in plural can communicate the names of Indian tribes). Elaborate (the uninvolved voice in English, which is elaborate makes contrasts from Uzbek Passive Voice). Uning butun e'tibori darsga qaratildi. } She paid attention to the lesson.
U butun e'tiborini darsga qaratdi.}
Uning sochini tarashdi. } Her hair was combed.
U sochini taratdi. }
This grouping is given by V.I.Belyanin.

If we take Khoresm dialects, we find many examples: The term "anake" that means "mother" is a phonetically modified form of the word "enaka" (nanny) to which the 74word "momo" is added and the word "anakamomo" is formed. This phonetic lexical unit means that nannies are genetically related to grandmothers, that is, to the cult of fertility. A newborn baby is called a bavak // buvak.

In local psycholinguistics, the national-explicit (gap or lacuna) characteristics of discourse can be as following: the method for filling stops, the method for disintegrating the word to disclose it to the converser. For instance, it is worthy to get some information about wellbeing multiple times, and in China, they inquire as to whether the man is worn out.

The principal indications of holes are immensity, abnormality, unacquainted. Disclosure of national-explicit importance of the word is called lacuna or once in a while gap filling. Hole filling is the accompanying: clarification, morphological interpretation, strict interpretation, and commendation. Likewise, there are a few sorts of hole filling: correlation, substitution into a few sections (the title of the novel can be deciphered not actually, yet justifiable for the individuals who read it).

A single word in English has importance and they may communicate various grammatical forms, and it might have unmistakable significance. For instance, the English word miss has two meanings.

Bachelor 1.sog'inmoq (fail to contact, hit, or reach)
E.g. Lola misses her mother when she is at the university
2.o'tkazib yubormoq a) (fail to perform or attend)
E.g. I missed my school bus this morning.

b) leave out: omit

E.g. My father usually misses his breakfast, because he has to be in the office early in the morning.

Most students of this language know its first meaning. On the off chance that they run over the word which has the signifying "to fail to hit, reach, or contact", it might become 'lacuna' for them. We know, dialects of Khorezm region are wealthy in lacunas. The vast majority of the individuals utilize "bolalari" (children) which has not just children, but additionally, it is utilized rather than "xotin".

Lacunas occur not within a system of different languages, but also within a dialect and a literary language. For example, the word "balli" is given in the Uzbek literary language and Khorezm dialects. — Balli, Mirzo, balli, gap shunday bo‘lsin, xrr…(— Balli, Mirzo, balli, so be it, ..).

Olti xalpa biri — Poshsha, kitob o‘qishi tomosha.

O‘g‘zi burni o‘xshar mosha

Ela balli olti halpa.

The piece of the significance might be lost in the translation of social writings, and a few researchers demand understanding the remote culture however content is inconceivable. Be that as it may, its embellishment really because the level of comprehension relies upon the size of social separation among societies, and beneficiaries' knowledge, and their objectives and requirements. While understanding writings, the beneficiary comprehends as per his/her own idea or cognizance. It clarifies the level of comprehension or incomprehension matters of an outside culture.

Accordingly, relocation increment on the planet, the culture is dominated. There is an idea of a "melting pot" in American culture which can be comprehended as the procedure of reconciliation of various cultures. Also in Uzbek, we have such sort of misunderstanding words. For the model in Khorezm "yoshulli" is broadly utilized among the individuals, which implies the senior individual, yet also, it might be utilized as an equivalent word of cunning, savvy, and regarded individual by others. By this word we can say that we have little data about the individuals in Khoresm. It expresses only adults are not smart, if the adolescent has profound information they ought to be regarded as the senior.

Conclusion. The general public can be very much evolved with resilience to various cultures. The practice of transcultural correspondence shows not just an extraordinary vision of the world, but a necessity of arrangement hindrances, made by national-explicit contrasts of societies.

On the off chance that anyone needs to learn the proposed language more profound and more extensive, he ought to get to know lacunas of this language. Lacunas show up as an impact of culture on language since they keep up the country's way of life and mindset. Yet, we can't discover lacunas in word references; they show up in a setting that has social explicit highlights of the language. By breaking down 'yoshulli' and 'bolalari' we can say that the Khorezmian individuals are respectful, well mannered, neighbourly. What's more, such words can be taken to our artistic language as another word. Khorezm dialects have numerous lacunas like these. Such words enhance the jargon supply of the language.

In our article, we planned to gather and characterize lacunas in Khorezm dialects. Also, based on it, Uzbek-English illustrative lacuna word reference will be written.

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UDK: 372.881.111.1

DEVELOPMENT OF ENGLISH COMMUNICATION SKILLS IN CHILDREN WITH GENERAL SPEECH DISORDERS

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Annotatsiya: Rivojlanishida nuqsoni bo'lgan bolalar uchun inklyuziv ta'lim muammosi so'nggi o'n yil ichida innovatsion ta'lim texnologiyalarining rivojlanishi va maxsus bolalarning ijtimoiy hayotda faol ishtirok etish istagi tufayli juda dolzarb bo'lib qoldi. Rivojlanishida nuqsoni bo'lgan bolalarni inklyuziv o'qitish tobora nafaqat maxsus o'qituvchilar va tuzatish markazlari, balki tor fan mutaxassislar zimmasiga yuklatila borayapti. Afsuski, ko'pincha nogiron bolalar umumiy ta'lim jarayonidan chiqib ketishadi, chunki o'qituvchilar ular bilan ishlash uchun tuzatish va maxsus pedagogika sohasida zarur bilimlarga ega bo'lishi kerak. Afsuski, ko'pincha nogiron bolalar umumiy ta'lim jarayonidan uzilib qoladilar, chunki ko'pgina o'qituvchilar ular bilan ishlash uchun tuzatish va maxsus pedagogika sohasida zarur bilimlarga ega emaslar. Inklyuziv ta'lim hamma uchun, shu jumladan, nogiron bolalar uchun bilimlar olish imkonini beradi, u bolalarga nisbatan har qanday kamsitishni yo'q qilishga va ta'lim jarayonining barcha ishtirokchilariga teng munosabatni ta'minlashga asoslanadi.

Tayanch so'zlar: muloqot, inklyuziv ta'lim, innovatsion ta'lim, nogiron bolalar, nutqida nuqsoni borlar.

Аннотация: Проблема инклюзивного образования детей с нарушениями развития очень остро стоит в последние десятилетие в связи с развитием инновационных технологий обучения и желанием особенных детей быть активно вовлеченными в социальную жизнь. Инклюзивное образование детей с нарушениями развития все больше становится частью профессиональной жизни не только специальных педагогов и коррекционных центров, но и узких предметников. К сожалению, нередко случается, что дети с ОВЗ выпадают из общего образовательного процесса, так как для работы с ними учителя должны обладать необходимыми знаниями в области коррекционной и специальной педагогики. Инклюзивное образование подразумевает под собой доступность получения знаний для всех, в том числе и для детей с ОВЗ. В основе инклюзии лежит исключение любой дискриминации детей и обеспечение равного отношения ко всем участникам образовательного процесса.

Ключевые слова: общение, инклюзивное образование, инновационное образование, дети с ограниченными возможностями, дефекты в речи.

Abstract: The problem of inclusive education for children with developmental disabilities is very acute in the last decade in connection with the development of innovative learning technologies and the desire of special children to be actively involved into social life. Inclusive education for children with developmental disabilities is increasingly becoming a part of professional life, not only among special

teachers and correctional centers, but also narrow subject students. Unfortunately, it often happens that children with disabilities fall out of the general the educational process, since to work with them teachers must have the necessary knowledge in the field of correctional and special pedagogy. Inclusive education means accessibility gaining knowledge for everyone, including children with disabilities. At the heart of inclusion is the elimination of any discrimination against children and the provision of equal attitude towards all participants in the educational process.

Keywords: communication, inclusive education, innovative education, children with disabilities, speech defects.

Introduction. Learning foreign languages, children with speech problems experience great difficulties, since the formed phonemic hearing is the basis for correct sound pronunciation, the articulation apparatus is also tuned to the usual movements of the native speech. Since there is no special program for teaching a foreign language for children with speech problems, they study according to the general curriculum, which greatly complicates their learning. From the very first school English lessons, such children have serious difficulties: they may lose confidence in themselves, the desire to study in the classroom and at home, fears and complexes can appear in them. At this stage, the relationship between a foreign language teacher, speech therapist and parents is extremely important, since only cooperation can lead to positive results. It is necessary to instill self-confidence, interest, and love for the subject in the child. The main teaching method used in early language learning is a specially organized game. It allows you to use internal motives for mastering the language, create motives for speech actions for students. To teach children good pronunciation in English, it is necessary to conduct training exercises to develop the phonemic perception of the sounds of the English language and their correct articulation. It is useful to start each lesson with a "phonemic warm-up" - preparation of the speech apparatus for "speaking" in an unfamiliar language.

Teaching English to schoolchildren with speech disorders is closely related to correctional and pedagogical work. These children have typical manifestations that indicate systemic impairment of speech activity. One of the leading signs is a later onset of speech: the first words appear at 3-4, and sometimes by 5 years. Speech is agrammatical and phonetically insufficient framed. The most striking indicator is the lag expressive speech at a relatively prosperous, at first glance, understanding of the addressed speech. The speech of these children is incomprehensible. Underdevelopment of speech means reduces the level of communication, contributes to the emergence of psychological characteristics (isolation, timidity, indecision) [1]; generates specific features in common and speech behavior (limited contact, delayed inclusion in the situation of communication, inability to maintain a conversation, listen to the sounding speech), leads to a decrease in mental activity.

Literature review. Despite certain deviations from age standards (in features in the field of phonetics), the speech of children provides it communicative function, and in some cases it is sufficient a full-fledged regulator of behavior. They have more pronounced tendencies to spontaneous development, to the transfer of developed speech skills to conditions of free communication, which allows you to compensate for speech failure before entering school. E.Romanenko developed the periodization of

manifestations of general speech underdevelopment: from the complete absence of speech means of communication to expanded forms of coherent speech with elements of phonetic-phonemic and lexical and grammatical underdevelopment. General speech underdevelopment in children has different severity, which, according to the classification of E.Romanenko 3 levels [3]: Level I - lack of common speech; Level II - the beginning of common speech; Level III - phrasal speech with elements of phonetic-phonemic and lexical and grammatical underdevelopment. Children with I and II level of speech development in general education institution are rare.

Analysis and results. *The first level of speech development*.

At this level, children either have no speech at all, or there are only elements of speech. Speech communication is extremely limited. The active vocabulary of children consists of a small number indistinctly pronounced everyday words, onomatopoeia and sound complexes. Pointing gestures and facial expressions are widely used. Children use the same complex to designate objects, actions, qualities, intonation and gestures, indicating the difference in meanings. Babble formations, depending on the situation, can be regarded as one-word sentences [2]. The differentiated designation of objects and actions is almost absent. Action names are replaced with item names (open - "tree" (door), and vice versa - the names of objects are replaced names of actions (bed - "stalemate"). Polysemy is characteristic used words. Small vocabulary reflects directly perceived objects and phenomena. Children do not use morphological elements for transmission grammatical relations. Root words prevail in their speech, devoid of inflection. At this stage, children, as a rule, lack phrasal speech. Children use one-word sentence words. "Phrase" consists of babbling elements that consistently reproduce the situation with the involvement of explanatory gestures. Each used in such a "phrase" has a diverse correlation and outside a specific the situation cannot be understood.

The sound reproduction of children is characterized by blurred articulation, the impossibility of pronouncing many sounds. Children have limited ability to reproduce syllabic structure of the word [1]. Most often, children reproduce monosyllabic sound complexes (cubes - "ku") or repeating syllables ("bi-bi", "Tu-tu"). Sound analysis of the word is impossible for children. The passive vocabulary of children is broader than the active vocabulary.

The second level of speech development.

At this stage, children use more detailed speech means. However, the underdevelopment of speech is still very pronounced. Go to it characterized by increased speech activity of the child. Communication carried out through the use of a permanent, although still distorted and limited stock of common words [3, p.20].

The names of objects, actions, individual signs. At this level, it is possible to use pronouns, and sometimes conjunctions, simple prepositions in elementary values. Children can answer family-related questions about the painting, familiar events of the surrounding life. But the words children use characterized by inaccurate meaning and sound design. Sometimes with the purpose of explaining the meaning of the word, children use gestures. Speech impairment is clearly manifested in all components. Children only use simple sentences of 2-3, rarely 4 words. However, the connections between the words of the sentence are still grammatically not formalized, which manifests itself in a large number, morphological and syntactic grammatisms [4]. Most

often in the sentence structure, children use nouns in the nominative case, and verbs in the form infinitive or third person singular or plural numbers. At the same time, there is no agreement between the noun and the verb. Adjectives are rarely used by children and do not agree with nouns in gender and number. Forms of nouns, adjectives and neuter verbs are absent, replaced or distorted.

At this stage, children sometimes use prepositions, but more often omitted or misused. The sound side of speech is also characterized by significant violations. In the speech of children, many sounds are absent, replaced or pronounced distorted. This applies, first of all, to sounds that are difficult in articulation (whistling, hissing, smooth sonorous, etc.). Many solid sounds are replaced by soft ones or vice versa (five - "stalemate", dust - "saw"). The pronunciation of articulatory simple sounds becomes clearer than on the first level. There are sharp discrepancies between the isolated pronunciation of sounds and their use in speech.

The third level of speech development.

At this level, the spoken language of children becomes more detailed, there are no gross deviations in the development of phonetic-phonemic and lexical and grammatical side of speech. This level is characterized by the presence of detailed phrasal speech with elements of lexicogrammatic and phonetic-phonemic underdevelopment [9]. In the speech of these children, replacements of words that are close in meaning are observed, separate grammatical phrases, distortion of the sound-syllable structure some words, pronunciation deficiencies in the most difficult articulation of sounds. Undifferentiated pronouncing sounds (mainly sibilant, hissing, affricates and sonors), when one sound replaces simultaneously two or more sounds this or a similar phonetic group. In the active dictionary nouns and verbs predominate. Not enough words to denote qualities, signs, states of objects and actions. Inability to use ways of word formation creates difficulties in using variants of words; children do not always succeed in the selection of single-root words, the formation of new words using suffixes and prefixes. They often replace the name parts of an object by the name of the whole object, the desired word by another, similar by value. Free expressions are dominated by simple common sentences; complex constructions are almost never used. When the use of complex sentences expressing temporary, spatial, causal relationships appear severe violations.

Agrammatism is noted: errors in the coordination of numerals with nouns, adjectives with nouns in gender, number, and case. A large number of errors are observed in use as simple and complex prepositions [6]. The comprehension of addressed speech is significantly evolving and approaching to the norm.

T.Vlasova et al. distinguish the fourth level of speech development. On the at this level of speech development, vocabulary disorders are also observed, and violations of word formation, and violations of coherent speech. Violations word formation is manifested in the difficulties of differentiating related words, in a misunderstanding of the meaning of word-forming morphemes, in the impossibility performing tasks on word formation [7].

Discussion. Due to imperfect communication skills, not fully the development of communication is ensured and, therefore, possible difficulties in the development of speech-thinking and cognitive activity. Speech behavior, speech action of a child with

speech underdevelopment is significantly different from what is observed during normal development [5]. With OHP, insufficient speech-thinking activity is revealed, related to language material at different levels. Passive vocabulary significantly prevails over the active one and is transferred to an asset extremely slow. Due to the poverty of the vocabulary of children, the possibility of their full communication and, therefore, general mental development is not are provided.

Conclusion. Poor vocabulary, grammar, pronunciation defects and shaping, difficulties in the development of a coherent speech utterance complicate the formation of the basic functions of speech - communicative, cognitive, regulating and generalizing. Violation the communicative function of speech in children with OHP interferes with full the formation of a generalizing function, since their speech capabilities do not provide a sufficiently correct perception and preservation of information in the context of its successive expansion volume and complication of content in the process of development of speech communication with others. I.Zimnaya [9] believes that the delay in the formation of one component, in this case speech, leads to a delay in the development of another - thinking, the child does not own concepts in accordance with age, generalizations, classifications, it is difficult to perform the analysis and synthesis of incoming information [8]. Defects of speech development delay the formation of the cognitive function of speech, since at the same time the speech of a child with speech pathology does not become a full-fledged means his thinking, and the speech of the people around him is not always an adequate way of transferring information, social experience (knowledge, ways, actions). Often, the child understands only that information, which is associated with familiar, visually perceived objects and people in a familiar environment. In many situations, activities and the child cannot formulate and convey with the help of speech your thoughts, personal experiences. Often he needs additional visualization, which helps him to perform certain mental operations.

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UDK 372.881.11.1

DESIGNING CORPUS-BASED MATERIALS FOR ESP (ENGLISH FOR SPECIFIC PURPOSES) CLASSES

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Annotasiya: Ushbu maqolada maxsus maqsadlar uchun ingliz tili uchun o‘quv materiallarni yaratishda korpusga asoslangan yondashuvning imkoniyatlari haqida so‘z boradi (oziq-ovqat texnologiyasi yo‘nalishi misolida).

Kalit so‘zlar: korpus, korpus lingvistikasi, miqdoriy tadqiqotlar, sifatli tadqiqotlar, so‘z chastotasi, muvofiqlik, so‘zlar ro‘yxati

Аннотация: В этом статье рассматриваются возможности корпусного подхода к разработке учебных материалов для английского языка для специальных целей (на примере пищевых технологий).

Ключевые слова: корпус, корпусная лингвистика, количественные исследование, качественное исследование, частота слов, согласованность, список слов

Abstract: This article deals with the possibilities of corpus-based approach in designing materials and activities for English for Specific Purposes (ESP) classes (in the example of food technology speciality).

Key words: corpus, corpus linguistics, quantitative research, qualitative research, word frequency, concordance, wordlist, N-gram.

Introduction. The widespread use of the internet has opened up new opportunities for linguists in terms of language teaching and research. Corpus or Corpus Linguistics is one of the new approaches which are solely based on automation and totally computer-assisted. This approach refers to analyzing texts for educational or research purposes using computer-assisted tools and websites. Utilizing texts in corpus-based research became possible in the 1980s and 1990s, with the developments in computer science and ubiquitous desktop computing technology [1]. This approach to language teaching and research is growing its popularity among linguists and language teachers around the world.

Literature review. Brazil defines a corpus as ‘a **collection** of used language’, explaining that ‘used language’ is ‘language which has occurred under circumstances in which the speaker was known to be doing something more than demonstrate the way the system works’[2]. ‘Naturally occurring’ in this definition refers to those materials that are not designed for language teaching purposes.

Sinclair gives the following definition: “A corpus is a collection of pieces of language text in **electronic** form, selected according to external **criteria** to represent, as far as, a language or language variety as a source of data for linguistic research [6]. This definition seems clearer for those who do not have any basic knowledge of corpus. The definition states that it is ‘electronic’ and it also states that corpus can serve as ‘a

data for linguistic research' which clarifies one of the important benefits of corpus for linguists. It also hints that corpus must be selected according to specific criteria set by corpus compilers.

Leech in 1992 gave the following definition to corpus: 'Computer corpora are rarely haphazard (which means 'random') collections of textual material: They are generally assembled with particular **purpose** in mind, and are often assembled to be **representative of some language** or **text type**' [3]. This definition is good in itself because it points out one of the main principles of any corpus that it should not be assembled at random but it must be compiled with a specific purpose or purposes.

Finally, let's take a look at one more definition by Weisser given in 2016 and it says that corpus '…is a collection of **spoken** and **written** texts to be used for linguistic analysis and based on a specific set of design criteria influenced by its purpose and scope'[7]. Another common feature that we can learn from this definition is that corpus can contain both written and spoken texts.

From the given definitions, we can learn that corpus or corpora is a collection of written or spoken texts in electronic form, collected on the basis of certain criteria and for specific research purposes.

Now let's try to find an answer to the following question: **'Why do language teachers need a corpus and how can they use it to teach a language?'** Randi Reppen in her book 'Using corpora in the language classroom' clearly writes about the benefits of using a corpus in language teaching. According to her observations, 'corpus linguistics can provide **descriptions of actual language use**, this information can then be used to shape and develop language-teaching materials, and even be used to develop language tests'. [5] Hunston (2002), McCarthy and O'Keeffe (2010) point out that corpus approaches can be applied to a number of areas of linguistic study: language teaching and learning, discourse analysis, translation studies, *language for specific purposes*, pragmatics, sociolinguistics, media discourse, literary linguistics and political linguistics [4]. Flowerdew (2012) points out that corpus analysis are aimed at producing data-based descriptions of language and they help us explain the typical patterns and structure of language in use and Flowerdew also states that corpus linguistics can be an effective tool to investigate functions and behavior of language [4]. Hunston (2002) gives an interesting point by saying that much of speakers' linguistic experience 'remains hidden from introspection' and corpus is 'a more reliable guide to language use than native speaker intuition' [4]. Sinclair stresses the opportunity to study the phraseological nature of language as key feature of corpus linguistics [6]. Leech (1997) describes the potential of corpora to language teaching in three ways which are:

1. The indirect use of corpora in teaching, i.e. corpora can be used to inform ELT reference works such as dictionaries and grammar, to inform the content of ELT materials and syllabuses, and to inform test design.
2. The direct of corpora in teaching, i.e. using corpus data in the classroom and enabling to access corpora for autonomous study.
3. Further teaching-oriented corpus development, i.e. developing corpora of learner English, corpora of L1 language development and corpora of English for Specific Purposes [2].

Methods. According to Ivor Timmis, there are two types of corpus analysis methodology: qualitative and quantitative, and depending on the purpose of the analysis one of these methodologies can be applied for investigation.

Quantitative research

Corpora are often associated with quantitative research, because **frequency information** can be obtained with remarkable ease. To investigate frequency, the following questions can be considered:

1. What are the most frequent words in our corpus?
2. How many instances of a given word are there in the corpus, i.e. raw frequency?
3. What percentage of the total number of tokens in the corpus does the raw frequency represent, i.e. relative frequency?
4. What are the most frequent collocations of a given word in our corpus?
5. What are the most frequent phrases of a given length (e.g. 2-word phrases, 3-word phrases, 4-phrases and so on)?
6. What are the most frequent grammatical structures in our corpus? [2]

Qualitative research

Not all research questions can be answered with 'quantitative corpus analysis' questions. "Automatic corpus analysis will not tell us, for example, which of the various meanings of the word 'tip' is most frequent, which of the various uses of the present perfect is most frequent, or how often the word 'marvelous' is used sarcastically. We need manual, qualitative reading of corpus data to supply us with this kind of information [**Ivos Timmis, p.6**]. This type of research is carried out when the researcher reads each example and observes the use of the same words in different interpretations.

For our small demonstrative study, we decided to use a 'quantitative analysis' methodology to design corpus-based activities for students studying 'food technology'. The texts for the corpus were taken from local (uzbek) websites of food producers with English-language content. To compile our corpus, we used the **Sketch Engine** online text analysis tool available at www.sketchengine.com. We compiled a corpus of 47,173 words. The Sketch Engine offers a variety of features for researchers and language teachers and for our purposes we used the following:

- 'word sketch' that processes the word's collocates and other words in its surroundings and it can be used as a one-page summary of the word's grammatical and collocational behavior;
- 'word sketch difference' which is designed for making comparisons by contrasting collocations;
- 'thesaurus' is designed to automatically generate list of synonyms or words belonging to the same category;
- 'concordance' which searches words, phrases, tags, documents, text types or corpus structures and displays the results in context in the form of a concordance;
- 'wordlist' which generates frequency lists of various kinds;
- 'N-grams' which produces frequency lists of sequences of tokens.

Analysis and results. Results from the '**Wordlist'** feature of the Sketch Engine

Nouns	**Verbs**	**Adjectives**

	Lemma	Frequency
1	product	415
2	fruit	246
3	company	229
4	production	202
5	oil	198
6	food	189
7	juice	161
8	vitamin	157
9	uzbekistan	149
10	acid	138

	Lemma	Frequency
1	be	1,494
2	dry	227
3	have	225
4	use	173
5	make	134
6	contain	93
7	produce	72
8	do	67
9	sterilize	64
10	allow	53

	Lemma	Frequency
1	high	98
2	natural	93
3	useful	91
4	other	75
5	good	73
6	more	63
7	citric	57
8	stainless	50
9	own	46
10	new	41

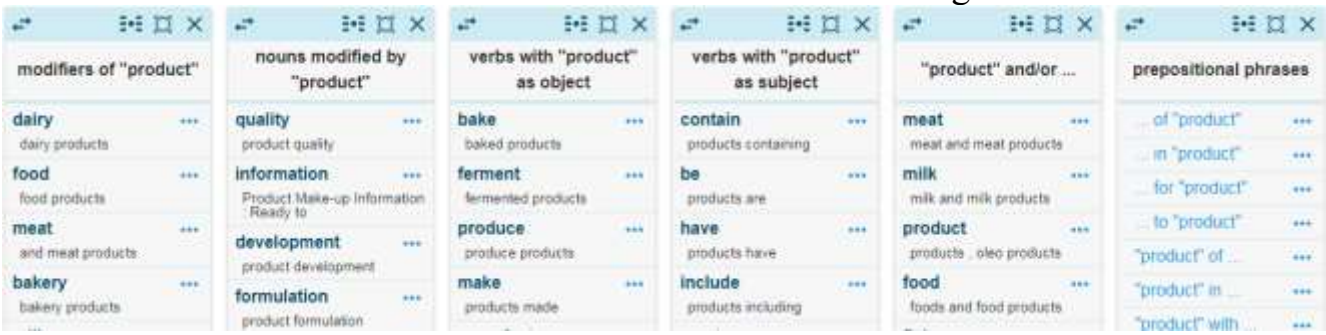
These results are taken from the Sketch Engine ‘wordlist’ feature and it shows the most frequently used nouns, verbs and adjectives in our corpus, which helps us focus on the words which are more important in a given contexts, namely types of texts from the websites specialzed in food technology and food manufacturing. Given the fact that most ESP courses are limited to academic hours, this approach can be an advantage in terms of focusing on the most important and frequent. An ESP teacher can design various activities and tasks using these words provided by the Sketch Engine as the most frequently used words in our context.

Results from the ‘**N-gram**’ feature of the Sketch Engine

	Word	Frequency
1	as well as	69
2	the production of	52
3	of the best	29
4	the best varieties	28
5	best varieties of	28

This feature shows frequency sequence of words from 2 to 6 words. We are showing the frequency sequence of the most used 3-word phrases generated by the Sketch Engine from the corpus we compiled. This feature can help language teachers and learners focus on the most frequently used phrases in specific contexts and design activities and tasks from the perspective of frequency.

Results from the ‘**Word sketch**’ feature of the Sketch Engine



This Sketch Engine feature analyses word collocations and the relationship of a specific word to other words in its surroundings. In this example, we used the word ‘product’ as this word is the most frequent noun in our corpus. This example shows the following results: ‘**noun + product’ (dairy + product), ‘product + noun’ (product quality), ‘verb + product’ (baked + product), ‘product + verb’ (products +**

containing), 'product + conjunctions' (meat and meat products). This result can provide great ideas for teachers to design various exercises that focus on the behavior and the relationship of the most frequently used words with other words in a corpus. The Sketch Engine can also display the relationship of a specific word with 'adjective', 'pronouns', 'possessors' and any other combination that a word has with other words.

Results from the '**Word sketch difference**' feature of the Sketch Engine

This feature compares two different words and shows how they relate to other words and this helps learners understand the usage of two different words with relatively similar meanings. For example, in the first example we can see that the word 'fat' cannot be 'a product' or 'phase' and both 'fat' and 'oil' can be described as 'a mixture' and 'source' in our corpus.

Results from the '**Concordance**' feature of the Sketch Engine

l manufacturers of compressor equipment. </s><s> The offered	products	are certified and meet all the requirements of modern technolog
d for high-temperature processing (pasteurization) of liquid food	products	of juices, kvass, beer, wine, kosher wine, and other carbonated
ities (if necessary) and rapid cooling of the finished pasteurized	product	. </s><s> The design of the flow-through, tunnel pasteurizer allo
s joint use with other equipment for the processing of liquid food	products	: filling machines and semiautomatic devices, etc. through the in
ine The beer and kvass filling line is designed for filling foaming	products	. </s><s> The most important condition of the process is that the
o prevent excessive foaming when pouring beer and kvass, the	product	is dosed using the isobaric method from the bottom of the bottle
ion makes it possible to increase the input and output control of	product	quality, manage biotechnological processes, eliminate disruptior

This feature displays a word in context in the form of concordance which enables both teachers and language learners to observe the use of a particular lemma in authentic texts. This type of result can help ESP teachers to look at the lemma from a qualitative point of view and design activities that focus on different uses of the meaning of the same lemma. Sometimes language teachers find it difficult to find examples of a particular grammar structure or vocabulary and if this is a case this tool can serve as a great source of authentic language examples.

Conclusion. Since most ESP courses are relatively short compared to other language courses, ESP teachers must be very selective about grammar, vocabulary, or other language features when teaching a specific group of learners. Corpus-based tools can help ESP practitioners find descriptions of language use that represent a specific genre of the field and design activities and tasks based on results of corpus tools.

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UDC: 372.881.111.1

DIFFICULTIES IN READING COMPREHENSION

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Annotatsiya: Garchi o`qib tushunish qobiliyati ingliz tilining eng asosiy ko`nikmalaridan biri bo`lsada, eng yaxshi o`qish mahoratiga ega bo`lish hamma o`rganuvchilar uchun ham oson bo`lavermaydi. Ko`pgina ingliz tili o`rganuvchilari,ular bazi ingliz tilidagi matnlarda bir yoki boshqa sababga ko`ra bazibir muammolarga uchrashini aytishadi. Bu maqola o`qib tushunishdagi bir nechta qiyinchiliklarni muhokama qiladi; misol tariqasida: dekodlashdagi muammolar, yetarli bo`lmagan so`z boyligi, tajribaning yetishmasligi, va shuningdek bir biriga zid bo`lgan, madaniyatlar aro kuzatiladigan qiyinchiliklar. Bundan tashqari, bu maqola o`sha ma`lum bir o`qishdagi qiyinchiliklarning har bir o`quvchining rivojlanishiga qanday to`siq bo`lishini, va bu muammolarga qanday yechimlar taklif qilinishi mumkinligini ochiq oydin yoritib berishga mo`ljallangan.

**Kalit so`zlar:** dekodlash, disleksiya, so`z boyligining yetishmovchiligi, kontekst, tajriba, zid madaniyatlardagi to`siqlar.

Аннотация: Хотя понимание прочитанного считается одним из основных навыков английского языка, не всегда возможно, чтобы все учащиеся приобрели наилучшие навыки чтения. Большинство изучающих английский язык утверждают, что они часто сталкиваются с определенными проблемами при понимании некоторых английских текстов по той или иной причине. В этой статье рассматриваются несколько трудностей в понимании прочитанного, примером которых могут быть проблемы с декодированием, неадекватный словарный запас, недостаток базовых знаний, а также межкультурные препятствия. Кроме того, целью данной статьи является четкое объяснение того, как именно эти трудности чтения могут создавать ряд препятствий для прогресса каждого читателя, и какие решения проблем могут быть предложены.

Ключевые слова: декодирование, дислексия, дефицит словарного запаса, контекст, базовые знания, межкультурные барьеры.

Abstract: Although reading comprehension is considered to be one of the substantial skills of English language, it is not always feasible for all learners to acquire the best reading competency. Most English learners claim that they often tend to come across certain problems in comprehending some English texts for one or another

reason. This article deals with several difficulties in reading comprehension, which can be exemplified by trouble in decoding, inadequate vocabulary, deficiency of background knowledge as well as cross-cultural obstacles. In addition, this paper aims to clearly explicate how these particular reading difficulties may bring a number of impediments to the progress of each reader, and what kind of solutions to the problems can be proposed.

Key words: decoding, dyslexia, vocabulary deficiency, context, background knowledge, cross-cultural barriers

Introduction. Despite the fact that reading brings many considerable benefits to people such as horizon expansion, a significant increase in analytical thinking, or other such kinds of advantages, this useful activity is sometimes handicapped by several problems. I am going to raise a number of highly controversial issues that most readers, whose second language is English, often encounter, when they commence reading English materials written in either academic or general style. While reading my literature review, you will face a broad range of discussions, comparisons, contrasts of the current subject, and most importantly, for each issue, I will give my recommendations and critical opinions that can help every reader deal with the difficulties. I have read more than ten literatures concerning reading comprehension problems and its advantages, and in this paper, I have summarized them in detail. Basically, my literature review discusses four main difficulties in reading comprehension, which are as follows: decoding difficulties; vocabulary deficiency; lack of background knowledge; cross-cultural barriers.

Decoding difficulties

Decoding is the phenomenon according to which a word is usually separated into individual phonemes and can be realized taking those phonemes into account. Decoding can also be called dyslexia, which is defined as a learning disorder involving difficulties in reading on the grounds of the problems such as identifying speech sounds as well as learning what relationship with letters and words they have.

In fact, dyslexia has different types but phonological dyslexia refers to reading problems.

Symptoms of phonological dyslexia (decoding problems) may be exemplified by these:

- Trouble in reading out words and realizing them in the context.
- Ignorance of the role of punctuation while reading the text.
- Reading at a slow rate (sometimes reading word-by-word).
- Confusion between the sounds and letters they represent.

According to Lyon &Shaywitz (2003, p.2), dyslexic is a particular learning disability which is originally neurobiological, and sorted by difficulties with fluent and precise word recognition, poor decoding and spelling abilities.This kind of problem can be caused by less time reading, as a result, readers may possess limited words and general command of language (Yunus, Mohamad&Woelateh, 2016; Ismail & Yusof, 2016).

Vocabulary deficiency

It is true that vocabulary plays a major role in the acquisition of a foreign language, in addition, vocabulary is considered as a basis for the enhancement of practically all linguistic skills, namely, writing; listening; speaking; spelling and especially reading comprehension. Laufer (1992) in his article stated the significance of vocabulary –

knowing what the words in the context mean can boost your capacity to comprehend the core meaning of the text. Both matured people`s and children's vocabulary knowledge is highly correlated with their reading comprehension capacity (Carroll, 1993) and, it is strongly believed that to know every word in the context is crucial. However, there are some contradictory theories by some linguists, for instance, it is not always important to know the meaning of each word. Instead, looking at the whole context, reader can comprehend the text. Moreover, with the help of the context clues, readers may have the ability to read and understand the text faster and more successfully. Staiger (1955) proposed the importance of the context on reading efficiently.

In my opinion, in terms of the advantage of fast comprehension, reading contextually is superior to spending much time on knowing the translation or meaning of every word, however, in view of a detailed analysis of a text, possessing adequate vocabulary seems better. Besides that, just memorizing the vocabulary does not mean success in reading comprehension, the ability to find the right meaning of the word from the text can result in a great success. Biemiller (2005) claims that the success in reading will not be guaranteed by teaching vocabulary. *People with a lack of either adequate word identification skills or adequate vocabulary will face failure.*

Background knowledge deficiency

Some people have a tendency to encounter so much awkwardness in the comprehension of reading in default of background knowledge. As an illustration, Stevens (1982) gave a definition for this term, what we already know regarding a subject represents the background knowledge.As to the philosophy of Swales (1990, p.9), background knowledge can be divided into two components: knowledge gained through direct experiences of life; people`s assimilated verbal experiences and encounters. In my viewpoint, without background knowledge, we cannot understand what we are reading, due to the fact that when we are reading particular information, we tend to link, compare and contrast it with the information that we possess already. Similarly, Cook (1997) states that schema, background knowledge is also named as schema, is correlated with the reading process where readers` prior experience is expected to be combined with the text they are reading.

In order to urge students to read a text, teachers are advised to provide the learners with a familiar context; therefore, they can assimilate and understand the subject. Otherwise, reader`s mind might ignore the information given in the text.

Cross-cultural barriers

Every society has their own particular value, custom, religion, thought pattern and lifestyle all of which are usually expressed in their languages. When learning one different language, cultural identities lead to difficulties in comprehension. So that it is of great importance for each language learner to take cross-cultural factors into account. For example, when a Chinese person reads this English sentence "Jane was worried as she had dreamt about a red room with red curtains", the person cannot understand its deep meaning. Owing to the fact that in Chinese culture red stands for happiness, while in English culture this color represents danger and anxiety. According to Anderson (1997), full comprehension of a language depends upon reader`s background awareness of culture.

Moreover, other cross-cultural barriers in one language can be caused by its idioms or proverbs. For instance, when I newly began learning English, I faced a sentence containing one English idiom that is: “It is raining dogs and cats”. First, it did not seem awkward or strange to comprehend but direct translation turned out to be totally different from its core meaning, because here “dogs and cats” does not mean pets, in fact, this should be understood as “it is raining heavily”. So I agree with Lu, M. (1998) who noted that the influence of language knowledge to comprehension is not larger than cultural background knowledge.

Conclusion. It is clear that there are two major tasks for reading which are decoding and comprehension. To carry out these tasks we have to deal with several difficulties such as vocabulary as well as background knowledge deficiency; cultural misunderstanding; decoding difficulties. All these problems may influence on comprehension while reading a text. According to Pretorius (2000:46), the improvement of reading skills in students will lead to an improvement in the reading levels of the students, resulting in better understanding, comprehension and academic success.

I found out so much information regarding the problems in reading comprehension from the articles and academic journals I read, and I came to the conclusion. It is very advisable for language learners to read much. Tien (2015) states that reading extensively is crucial for the development of reading skills and the acquisition of command.

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UDK 372.881.2

MODERN PEDAGOGICAL TECHNOLOGIES IN ENGLISH LESSONS IN VOCATIONAL EDUCATION

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Annotatsiya. Zamonaviy jamiyat boshqa mamlakatlar va xalqlarning madaniyati, ilmiy yutuqlari, urf-odatlarini hurmat qiladigan, harakatchanligi, dinamikligi, konstruktivligi, o'z Vatanining haqiqiy vatanparvarlari bilan ajralib turadigan o'qimishli, malakali mutaxassislarga muhtoj. Shu munosabat bilan ijtimoiy-iqtisodiy munosabatlarni ta'limda mustahkamlash kontseptsiyasiga ko'ra asosiy rol ta'lim tizimini modernizatsiya qilishga diqqat qaratiladi. Ta'lim jarayonining eng muhim qismi o'qituvchining talaba bilan shaxsga yo'naltirilgan o'zaro aloqasi bo'lib, u asosiy tendentsiyalarni o'zgartirishni, ta'lim texnologiyalarini takomillashtirishni talab qiladi. Aynan chet tillarini o'rganish ta'limning eng muhim vositalaridan biri sifatida qabul qilinadi.

Tayanch so'zlar: pedagogik texnologiya, kompyuter texnologiyasi, dizayn texnologiyasi, tanqidiy fikrlash texnologiyasi, muammolarni o'rganish texnologiyasi, keys texnologiyasi.

Аннотация. Современному обществу нужны образованные, квалифицированные специалисты, отличающиеся мобильностью, динамизмом, конструктивностью, настоящие патриоты своей Родины, уважающие культуру, научные достижения, традиции других стран и народов. В связи с этим была принята концепция гуманизации социально-экономических отношений, где основная роль отводится модернизации системы образования. Важнейшей частью образовательного процесса является личностно-ориентированное взаимодействие учителя с учеником, что требует смены основных направлений, совершенствования образовательных технологий. Именно изучение иностранных языков можно рассматривать как одно из важнейших средств обучения.

Ключевые слова: педагогическая технология, компьютерная технология, технология проектирования, технология критического мышления, технология проблемного обучения, кейс-технология.

Abstract. Modern society needs educated, qualified specialists, distinguished by mobility, dynamism, constructiveness, true patriots of their homeland, respecting the culture, scientific achievements, traditions of other countries and peoples. In this regard, the concept of humanization of socio-economic relations was adopted, where the main role is assigned to the modernization of the education system. The most important part of the educational process is the personality-oriented interaction of the teacher with the student, which requires a change in the main trends, the improvement

of educational technologies. It is the study of foreign languages that can be considered as one of the most important means of education.

Key words: pedagogical technology, computer technology, design technology, critical thinking technology, problem learning technology, case technology.

Introduction. A modern English lesson cannot be imagined and effectively implemented without the use of modern educational technologies. Pedagogical technology is a scientifically grounded choice, in the process of interaction with students organized by the teacher, made in order to maximize the development of the personality as a subject of the surrounding reality. Pedagogical technology is a kind of projection of theory and teaching methods onto practical implementation [7].

Modern technologies of teaching English should contain such signs of the system as the consistency of the construction of the process, the integrity and interconnection of individual parts. Any technology must consist of a scientific concept that contains the rationale for achieving educational goals from the psychological and socio-pedagogical side. The technology must guarantee an outcome that meets educational standards. The technology should provide for the ability to vary depending on the interaction of students with the teacher. The chosen technology always has the prospect of further development or transformation. Any technology must be understandable so that it can be applied by different teachers and students in other educational institutions. The most productive technologies, in our opinion, are information and communication, design technology, critical thinking technology, problem learning technology, case technology.

Literature review. Such researchers as Polat E.S., Dmitreeva E.I., Novikov S.V., Polipova T.A., Tsvetkova L.A. are actively involved in the development and implementation of new information technologies in the educational process. So O.I. Rudenko-Morgun in his article “Computer technologies as a new form of education” he writes that, we live in the age of the information, computer revolution, which began in the mid-80s and still continues to accelerate [5]. Here are its main milestones: the emergence of the personal computer, the invention of multimedia technology, the introduction into our life of the global information computer network Internet. All these innovations easily and imperceptibly entered life: they are widely used in almost all professional spheres and in everyday life. Information and communication pedagogical technologies help to implement a personality-oriented approach to learning provide individualization and differentiation of learning, taking into account the abilities of adolescents, their level of training.

Analysis and results. The possibilities of using Internet resources are enormous. The global Internet creates conditions for obtaining any information necessary for students and teachers located anywhere in the world: regional geographic material, news from the life of young people, articles from newspapers and magazines, etc [1]. In English lessons using the Internet, you can solve a number of didactic tasks: to form skills and reading skills using materials from the global network; to improve students' writing skills; to replenish the vocabulary of students; to form students' motivation to learn English. In addition, the work is aimed at exploring the possibilities of Internet technologies to expand the horizons of students, to establish and maintain business ties and contacts with their peers in English-speaking countries. Forms of work with

computer training programs in foreign language classes include: learning vocabulary; practicing pronunciation; teaching dialogical and monologic speech; teaching writing; working out grammatical phenomena. Students can take part in testing, quizzes, contests, Olympiads held on the Internet, correspond with peers from other countries, participate in chats, video conferences, etc [3].

One of the main requirements for teaching foreign languages using Internet resources is the creation of interaction in the classroom, which is commonly called interactivity in the methodology. Interactivity is “the unification, coordination of the communicative goal and the result by speech means”. By teaching a genuine language, the Internet assists in the development of speaking skills, as well as in teaching vocabulary and grammar, providing genuine interest and therefore efficiency. Interactivity not only creates real life situations, but also forces students to adequately respond to them through a foreign language.

Design technology

The project method is a complex teaching method that allows you to individualize the educational process, enables the student to show independence in planning, organizing and controlling their activities. The project method allows students to show independence in choosing a topic, sources of information, the way it is presented. The project methodology allows for individual work on a topic that arouses the greatest interest in each project participant, which undoubtedly entails an increased motivated student's activity. The initial stage of work on the project - the introduction and discussion of the topic is offered in a regular lesson, as well as, basic vocabulary, grammar is given, students master simple sentences. Practical work on the project begins at the stage of “Consolidating the material” and “Repetition” and becomes a harmonious part of a single learning process [2].

One of the main features of project activities, in our opinion, is achieving a specific practical goal - a visual presentation of the result. In teaching English, the project method provides students with the opportunity to use the language in situations of real everyday life, which undoubtedly contributes to better assimilation and consolidation of knowledge of a foreign language. Projects are different: in terms of duration, content. The purpose of teaching a foreign language is the communicative activity of students, practical knowledge of a foreign language.

Critical thinking technology

What is meant by critical thinking? Critical thinking is a prerequisite for freedom of choice, forecast quality, and responsibility for one's own decisions. Critical thinking, therefore, is, in fact, a kind of tautology, a synonym for quality thinking. The constructive basis of the "technology of critical thinking" is the basic model of the three stages of the organization of the educational process [4]: 1. At the initial stage, the existing knowledge and ideas about what is being studied are "called up" from memory, actualized, personal interest is formed, the goals of considering a particular topic are determined. 2. At the stage of comprehension (or realization of the meaning), as a rule, the student comes into contact with new information. It is systematized. The student gets the opportunity to think about the nature of the object being studied, learns to formulate questions as the old and new information is correlated. The formation of its own position is taking place. It is very important that already at this stage, with the help

of a number of techniques, it is already possible to independently track the process of understanding the material. 3. The stage of thinking (reflection) is characterized by the fact that students consolidate new knowledge and actively rebuild their own primary ideas in order to include new concepts in them.

In the course of work within the framework of this model, learners master various ways of integrating information, learn to develop their own opinions on the basis of understanding various experiences, ideas and perceptions, build inferences and logical chains of evidence, express their thoughts clearly, confidently and correctly in relation to others.

Problem learning technology

Today, problem-based learning is understood as such an organization of training sessions, which involves the creation of problem situations under the guidance of a teacher and active independent activity of students to resolve them, as a result of which there is a creative mastery of professional knowledge, skills, abilities and the development of thinking abilities.

The technology of problem-based learning involves the organization, under the guidance of a teacher and students' independent activities to solve educational problems, during which students develop new knowledge, skills and abilities, develop abilities, cognitive activity, curiosity, erudition, creative thinking and other personally significant qualities [8]. A problematic situation in teaching has a teaching value only when the problem task offered to the student corresponds to his intellectual capabilities, promotes the awakening of students' desire to get out of this situation, to remove the contradiction that has arisen. The problem tasks can be educational tasks, such questions, practical tasks, etc. However, a problem task and a problem situation should not be confused. A problematic task in itself is not a problem situation; it can cause a problem situation only under certain conditions. The same problematic situation can be caused by different types of jobs. According to the degree of students' cognitive independence, the problem of training is carried out in three main forms: problem statement, partial search activity and independent research activity. The smallest cognitive independence of students takes place in case of problem presentation: the communication of new material is carried out by the teacher himself. Having posed a problem, the teacher reveals the way to solve it, demonstrates the course of scientific thinking to the students, makes them follow the dialectical movement of thought to the truth, makes them, as it were, accomplices of scientific research. Problem learning technology, like other technologies, has positive and negative sides. The advantages of problem learning technology: contributes not only to the acquisition of the necessary system of knowledge, skills and abilities by students, but also to the achievement of a high level of their mental development, the formation of their ability to independently acquire knowledge through their own creative activity; develops an interest in educational work; delivers lasting learning outcomes.

Conclusion. Case technologies combine role-playing games, project method, and situational analysis at the same time. Case technologies are opposed to such types of work as repetition after the teacher, answering the teacher's questions, retelling the text, etc. Cases differ from ordinary educational tasks (tasks have, as a rule, one solution and one correct path leading to this solution, cases have several solutions and many

alternative paths leading to it). In the case technology, an analysis of a real situation (some input data) is carried out, the description of which simultaneously reflects not only any practical problem, but also actualizes a certain set of knowledge that must be learned when solving this problem [6]. Case technologies are not a repetition of a teacher, not a retelling of a paragraph or an article, not an answer to a teacher's question, it is an analysis of a specific situation, which forces us to raise the layer of acquired knowledge and apply it in practice. These technologies help to increase the interest of students in the subject being studied, develop in schoolchildren such qualities as social activity, communication skills, the ability to listen and competently express their thoughts. With active situational training, the participants in the analysis are presented with facts (events) related to a certain situation according to its state at a certain point in time. The task of the students is to make a rational decision, acting in the framework of a collective discussion of possible solutions, like game interaction. So, case technology is an interactive teaching technology based on real or fictional situations, aimed not so much at mastering knowledge as at developing new qualities and skills in students.

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UDC: 8.1751. 811/811.879

IMPROVING THE TECHNOLOGIES OF INDIVIDUALIZATION OF EDUCATION IN TEACHING ENGLISH TO ESP STUDENTS

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Annotatsiya – maqolada talabalarning bilim darajasiga qarab umume'tirof etilgan baholash tizimlari haqida ma'lumot berish va keyinchalik ularni mazkur tizimlar asosida bilimini aniqlab ko'rishga yo'naltirish, agar guruhdagi talabalarining bilim darajalari va qobiliyatlari bir-biriga mutanosibligi, mazkur guruhlarga kasbga doir leksikonlarni o'rgatishni boshlash uchun yetarlicha asos bo'lishi mumkinligi, lekin ba'zilarining fikriga ko'ra esa texnikaga oid terminlar asosiy-dominant so'zlar bo'lib qolmasligi lozimligi haqida ko'plab fikrlar keltirilgan.

Kalit so'zlar: baholash tizimlari, qobiliyat, ta'lim, talaba, ta'limni individuallashtirish, mutaxassilar, maxsus texnik matnlar.

Abstract – an article that provides information about well-known assessment systems based on students' level of knowledge and then directs them to determine their knowledge on the basis of these systems, if the knowledge and skills of students in the group are commensurate with each other. There have been many opinions that there may be sufficient grounds to begin teaching, but that in the opinion of some, technical terms should not be the main-dominant words.

Key words: assessment systems, skills, education, student, individualization of education, specialists, special technical texts.

Аннотация - это статья, которая предоставляет информацию об известных системах оценивания, основанных на уровне знаний учащихся, а затем направляет их на определение своих знаний на основе этих систем, если знания и навыки учащихся в группе соизмеримы с каждой из них. др. Было много мнений о том, что может быть достаточно оснований для начала преподавания, но, по мнению некоторых, технические термины не должны быть главными доминирующими словами.

Ключевые слова: системы оценивания, навыки, образование, студент, индивидуализация обучения, специалисты, специальные технические тексты.

Introduction. In the first stage, the teacher focuses on improving students' pronunciation, word formation and grammar skills, word formation and vocabulary learning. Selected texts and topics will also include simpler material such as family, friends, meaningful leisure, health, nature and the environment, and so on. Teaching grammar is an integral part of communicative competence and is an important factor in the formation of oral and written speech in English. The ability to use grammar in a variety of contexts during a conversation does not lose its relevance, even in situations where language is associated with extralinguistic factors. In the first stage of grammar teaching, countable and uncountable nouns, verbs denoting past, present, and future

tenses, modes denoting situation and quantity, interrogative and negative forms, modal verbs, adjectives, co. classes on topics such as swearing and assimilation.

Literature review. Communicate in order to consolidate the knowledge learned, ask and answer questions, identify the person based on the information provided, express their views and attitudes to a situation, visit a doctor, buy something in a store or store it will be possible to organize interactive exercises such as. From the end of the second year of study, it is appropriate to provide information about generally accepted assessment systems based on students' level of knowledge and then to guide and promote their knowledge based on these systems. If the level of knowledge and skills of the students in a group are commensurate with each other, these groups will be sufficient grounds to start teaching professional lexicons, but some believe that technical terms should not be the main-dominant words. According to some experts in this field, it is advisable to teach English in a targeted manner, that is, in students' future field of study at all stages of education. Due to the fact that most of the students at our university have a sufficient level of knowledge of a foreign language, English is taught for only two academic years, and the language of instruction is English, terms and career-oriented English are the first. Of course, there are pros and cons to this, which can be explored and discussed in detail. In the second stage of education, you can learn to translate and learn the various rules of the language, as well as to recite a summary of technical texts. This includes the development of four language skills based on the technical context, including the formation and development of professional text translation skills.

Analysis. The situations presented and described in the tasks and exercises should be part of a professional dialogue. In the third stage, students gain the basic knowledge needed to translate a particular text and understand the essence of the problem. The study of terms is important in the teaching of technical English and in the translation of specialized technical texts. The study of professional vocabulary takes place mainly in the process of reading texts related to the field. This includes a description of the machine, tools, equipment, and manufacturing process. At this stage, you will be able to find an alternative to the words in the target language in your own language and develop general translation skills. When working with such materials, in the translation of idiomatic units, phrases and idioms specific to a particular nation, describing objects, bodies, concepts and verbs, specific words and phrases with many meanings may face various problems. The grammatical aspect of teaching should also serve as a facilitator of translation of the predicative construction and the passive pronoun. One of the most important aspects in the targeted teaching of a foreign language is the study of translated words and word groups on the basis of their appropriate classification in the terminological system. Their main task is to express the relevance of a particular concept to a particular field, and it is unlikely that anyone other than people who are not related to that field will have a sufficient understanding of such language units.

Technical college students teach specific language units that are relevant to a specific area of science and are needed to understand a wide range of advanced areas such as energy, construction, and aviation. They should be able to work with the necessary system of terms, terminological dictionaries, relevant literature and Internet

materials in the field of education. It should be noted that in the process of translation, the meaning of a term is sought in the relevant alternatives to the language being translated, in most cases technical terminology is a neologism of the languages being translated and translated if it is not a neologism. There will be a suitable permanent alternative in the system. If there is no suitable alternative in the translation of the term, then it is necessary to choose a specific monosemantic alternative based on logical and linguistic analysis based on the text. The ambiguity of some terms requires students to be more careful when translating specific texts. Although many terms are unambiguous, the terminological system includes ambiguous units and their translations are context-based. Students should also be familiar with the structure of terms. Some of them are from a single word and some are from a single keyword, one or more words that match the meaning of the main element in the compound with other words and express it more fully, may also consist of additional words [1].

Discussion. Terms consisting of several words are mostly found in specialized literature and may have some difficulty in translating them. For example, when translating a phrase consisting of several elements from English into Uzbek, the teacher asks the students to translate the noun connected to the compound (the last word in the word group), the semantic difference between them. It would be expedient to teach them step by step the subtle methods of translation, such as identifying the connection, dividing them into small groups according to their meanings (from left to right). In addition, translating words that have very similar shapes and completely different meanings is one of the most common mistakes students make [2]. This may be due to the fact that students believe that the meaning of these words is in proportion to the words in their native language, or that they do not change the content. They can also confuse formal similarities in words with semantic similarity and units with some terms that can replace each other. Therefore, it is a good idea to make a list of words that have similar meanings but differ in meaning in different languages [3]. Here are some examples of such words: the English word operator does not mean, as everyone guessed, a cameraman holding a camera, but is used as a technical term in the sense of a mechanic, machinist, and radio operator. The meanings of the word apparatus are well known, but not everyone knows its meanings, such as device, instrument, machine tool, mechanical tool.

The next step in this process is for students to choose between starting a career and continuing their studies. If they want to continue their studies at the master's and postgraduate levels, they will have to study academic English [4]. First, they will need English for entrance exams, which will focus on reading, speaking and translating skills. Second, any academic activity, especially postgraduate activities, requires students to deepen their knowledge of English in order to work with scientists and colleagues from other countries, to get acquainted with their work, to keep abreast of the latest scientific developments in the field [5]. Third, participation in international scientific conferences, seminars and symposiums with lectures and presentations, writing scientific articles in a foreign language make a significant contribution to the development of scientific potential and science. This, in turn, requires a sufficient knowledge of the stylistic requirements of the scientific text, the appropriate and rational use of words and other language units. Special linguistic skills are also required

to provide information about scientific ideas, discoveries, research, to formulate various hypotheses, and to explain improved and revised concepts and phenomena. This includes making arguments, publishing research results, and using specific language tools to draw conclusions [6].

Language units studied at this stage include: abstract nouns such as hypothesis, phenomenon, scrutiny, objective, empiricism, verification, bias, aspect, procedure, facet; from the verbs infer, point out, presume, suppose, replicate, duplicate; from the connectives and constructions that signify cause and effect, it follows that, so, thus, to imply, to involve, to lead to, to result in, since, therefore [7].

It is also important to teach emphasis in order to convey the important points of writing a scientific article or work to the reader and professionals. Students who have a higher level of English than other students are more likely to attend the academic courses listed above and have a certain level of language skills if they want to continue their studies or research activities in foreign countries [8]. Teachers, in turn, should encourage such students to read specialized literature in the field and to watch various programs on television and similar devices. Knowledge of English for business provides an opportunity to communicate effectively in the business world and is of great importance to graduates to move faster on the career ladder and develop a high passion for growth [9].

In addition to developing their knowledge of a foreign language, such graduates are also required to demonstrate it. These graduates are required to be able to read and reply to short messages, emails, create various resumes, present schedules and graphs, answer phone calls, and talk about a variety of business topics [10]. Strengthening the knowledge of similar cases and business activities is also carried out at this stage.

Conclusion. In short, the above-mentioned technical education courses can be used in any educational institution in a personalized way. In the first stage of the process, the general rules of a foreign language are taught, and in the remaining stages, they are taught professionally. The second phase focuses entirely on working with technical texts, learning the terms accordingly, and developing all language skills based on the technical context.

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UDC: 82-1/-9.821.111

HISTORY OF MYTHS IN ENGLISH LITERATURE AND THE OLDEST MYTHS

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Annotatsiya - Maqolada ingliz adabiyotida afsonalarning yaratilish tarixi, ularning turlari va kelib chiqishi haqida ma'lumotlar berilgan. Shu bilan birga, qadimgi afsonalar ko'rib chiqiladi; ulardan parchalar keltirilgan va chuqur tahlil qilingan. Izlanishlarimiz natijasida biz ingliz adabiyoti tarixida yaratilgan afsonalarning ahamiyatini to'liq angladik.

Kalit so'zlar: afsonalar tarixi, qadimiy afsonalar, rivoyatlar, qadimiy epik qo'shiqlar, mifologik maktab, xalq ertaklari.

Аннотация: В статье представлена информация об истории создания мифов в английской литературе, их типах и происхождении. При этом учитываются древние мифы; выдержки из них цитируются и глубоко

анализируются. В результате нашего исследования мы получили полное представление о важности мифов, созданных в истории английской литературы.

Ключевые слова: история мифов, древние мифы, легенды, старинные эпические песни, мифологическая школа, народные сказки.

Abstract – The article provides information about the history of the creation of myths in English literature, their types and origins. At the same time, ancient myths are considered; excerpts from them are quoted and deeply analyzed. As a result of our research, we have gained a full understanding of the importance of the myths created in the history of English literature.

Keywords: the history of myths, ancient myths, legends, ancient epic songs, mythological school, folk tales.

Introduction. Ballads played an important role in the development of children's literature and the development of English literature. The origins of the ballads are varied. These include Christian legends, ancient epic songs, Ristar novels, and even ancient plots. In the description of all the ballads, the plates play a key role. The largest group is the historical ballads, which tell about real historical figures that exist in the conditions of real events. The protagonists of the ballad are diverse, the most famous of which is about the ruthless bandit Robin Hood. Ballads about Robin Hood were copied during the XV-XVI centuries and collected in a single collection, sticks. John Mary's Latin History of Great Britain, published in 1521, tells the story of Robin Hood and his wonderful assistant, John Sheryurak, during the reign of Richard.

Literature review. The first attempts to understand the essence of mythological concepts and their scientific interpretation were made by ancient scholars. In particular, while Plato interpreted myths from a philosophical point of view, the Greek philosopher Eugèmer (3rd century BC) saw mythical images as symbolic representations of real historical figures that lived in the past. In the first half of the 19th century, a "mythological school" emerged in Germany. The theoretical foundations of the mythological school German philologists' brothers Y. and V. Grimm in his book German Mythology. They are in the process of analyzing folk tales identified the remnants of mythological imagery in the epic plots and came to the important scientific conclusion that the mythology of the Indo-European peoples was based on a single foundation.

Scientists such as A. Kun, V. Schwartz, V. Mannhardt (Germany), mythology Breal (France), mythology Müller (England), F.I. Buslayev, A.N. Afanasyev, O.F. Müller, A.A. Potebnya (Russia), who developed this theory, made a comparative study of myths grown up later, many new scientific directions emerged in world mythology.

Analysis and Results. According to the historian, Robin Hood led a group of hundreds of volunteer snipers, and the state army could not match them. The robbers only robbed the rich, protected the poor, and did no harm to women. The only surviving example of an Anglo-Saxon heroic epic among Germanic tribes who immigrated to Britain is The Song of Beowulf. The work was created during the VIII-IX centuries and was written in the early X century. The epic reflects the ancient Germanic myths of the pagan period, but in later times it also included Christian religious views. The epic has more than three thousand lines and consists of two parts. In the epic, the image of Beowulf is portrayed as a brave, noble national hero who does not hesitate to

sacrifice his life to help people. The epic was created during the collapse of the tribal system and contains several rituals. These include the relationship between the king and the warriors, the cremation and the burial of the dead.

In the artistic thinking of the people, the reality is reflected in fiction in the harmony of imagination. For example, when we look at the images of beautiful women in folk tales and epics, we see that the people live not only in their aesthetic ideals but also in real life. It also generalizes and reflects the best qualities of a woman. From this the conclusion to be drawn is that the world is an abstract - idealistic and realistic imagination another feature of folklore is the combination of doing indicates. In many genres of folklore, including folk tales, historical and lyrical songs both reality and the protagonist are realistically expressed. In many works of folklore genres, the principles of artistic depiction of the protagonist are common. The people recognize only a hero who has ideal qualities and can follow the masses. Therefore, the heroes of folklore are uniquely idealized. From the earliest times of history, man has not only fought for his survival but also the longevity of his tribe. Consequently, the content of all, rubbish, fairy tales and riddles primarily aimed at shaping a conscious, strong and agile human upbringing. People's perception of the world around them and about it accumulated knowledge, wise wisdom and conclusions based on life experience in the form of a kind of advice to children, conveyed to them in a way that is understandable to them. That is why different peoples, even from each other, there are also many in the folklore of distant lands there is a commonality.

In the most ancient literary monuments of many peoples, such as myths and legends, fairy tales - similarities are obvious: this aspect is more about the man and his great, honorable mission on Earth heroism, intellect, nobility, goodness, beauty is reflected in the hymns. Scientists rightly believe that in the development of scientific ideas, philosophy, literature, fine arts, sculpture, architecture, music, Myths serve as a unique source in the emergence of theatrical art. They claim that the oldest fairy tales describe various folk customs, traditions, and tribal customs. Or the plot of their primitive myths (reality). Over time, with the development of human society, fairy tales and legends children have “mastered” (or most of what adults have ever created for themselves as they presented the best things to the little ones), and then the world Along with the brightest examples of his literature, he "mastered" such works as "Robinson Crusoe", "Gulliver", "Gargantua".

Folklore studies the genres of folklore in three literary rounds. The concept of the tour has a wide meaning. It covers a variety of genres. Species differ like their depiction of reality. Epic reality objectively reflects in the form of a plot story, lyric subjectively describes a person's impressions of reality, his inner experiences; drama while the characters reflect the scenes of life through speech and movement. According to Professor B. Sarimsakov, three types of literature can be applied to folklore, but these three literary types do not fit, only folk proverbs, riddles, various sayings, applause and curses should be studied separately. It is necessary [1].

In this regard, the scientist divides the genres of Uzbek folklore into the following types:

1. Epic: legend, narration, legend, fairy tale, epic, folk, historical song, anecdote;
2. Lyrics: love songs, ceremonial songs, labor, songs, and papers;

3. Drama: oral drama, comedy, puppetry, asking;

4. Special type: simple sitting applause, cursing, adages, proverb, riddles and other phrases.

Tradition is a product of folk art. It is based on its socio-historical sources has It is known that the first examples of folklore were created in primitive society, they have relatively established traditions and peculiarities of the people of that time reflected their worldviews. This is the case with the form, plot, images and works of folklore provided certain stability of motives. The artistic taste of the people formed over the centuries - has an aesthetic taste, folklore always lives by these international aesthetic principles. These people are verbal is an objective law for creation [2].

Discussion. The oral tradition of the English people developed at the expense of the literature of the tribes subjugated to the nation. That is why in the examples of oral art of the English nation there are many similarities with the examples of the folklore of different peoples of the world. Enriched by the cultural heritage of Hindus and nomadic tribes, this literature is still rich in romance, realistic plot, simple and intelligible construction, simple language that attracts the attention of the peoples of the world pulling. Oral creation and oral performance of folklore works have given rise to their unchanging stable forms - traditions. For example, although there is a certain difference in genre between heroic tales and epics, the artistic style has a traditional form. Thus, the folklore differs from the written literature by some features analyzed above. However, it has much in common with written literature in terms of its immense spiritual and educational value in human education.

Mythology reflects the aspirations of our ancient ancestors to understand the universe and its place in the universe. After all, mythology consists of man's ideas about nature and the universe. Accordingly, mythology is an integral part of the spiritual history of mankind. The primitive form of thought first appeared syncretically. A set of syncretic ideas is a phenomenon that arose within the general requirements of the primitive way of life and worldview. Consequently, the primitive man, who cannot think analytically and abstractly, does not separate himself from nature and considers himself to be one with the forces and phenomena of nature, that is why man observes a series of phenomena tries to draw them to him and thinks that he is capable of creating them, and on the other hand, the forces of nature and things, that is, what we call inanimate, are unique to man. He considers talent to be inherent in the life in which he lives. It was natural for primitive man to think and draw conclusions in this way because, to understand the existing historical conditions and the nature of various phenomena in nature, he had to have at least a certain level of imagination and worldview about natural phenomena. As a result, our ancient ancestors imagined the phenomena of nature and society in a mixture, that is, in a generalized, imaginary way, which led to the origin and spread of many mythological views and then to the creation of fairy tales [3].

The legends narrated based on myth are distinguished by their syncretic character. Their ancient specimens, which appear in the form of narratives about supernatural phenomena, tell the story of customs, rituals, religious elements, gods, and ext. From its earliest form, religion embodied two characteristics, movement based on self-confidence. Both of its features have evolved into belief, and the more complex

forms that result from religious action have become worship. First of all, the seed, the tribal form of religion emerged, embracing the concepts of totemism, animism, fetishism, and shamanism [4]. Later, the world-famous religions of Islam, Buddhism, and pure Christianity emerged. The tribal faith belonged mainly to the primitive community, a classless society, and the relatively later Islamic feudal system. Mythological myths belong to the seed, the tribal form of religion, which first appeared. They formed a separate group and played a significant role in determining the origin, development and evolution of Islam [5]. These legends, which form a separate category, have a unique system of images. It consists of gods, patron cults, titans, heroes, myths, spirits, and holy forces. Each of them has a symbolic meaning and has become a supporter of the tribe, people, tribe, faith. Examples of legends have come down to us from historical sources, chronicles, the composition of the Avesta, Islamic suras created among the ancient Turkic peoples. 10 Positive examples of this type of image promote such leading ideas as peace, tranquillity, glorification of goodness, and condemnation of evil. Negative copies act as a symbol of face, calamity, and disaster. The plot is compact, based on one or two episodes, and the complex events are unusual. The episodes play a decisive role in the miracles of the supernatural powers of the gods, and goddesses who act on the motives. Mythological myths are distinguished by their enlightenment and information function. According to primitive concepts, each of these mythological images, formed based on myths, customs, ancient worldviews, imaginations, formed based on belief in gods, deities, reality, which affect supernatural phenomena acts as a manager of one of the various fields belonging to the social hay [6]. They are divided into two types according to their content and function. The first group is the gods. These are Humo - god of happiness, state god, Anaxita - goddess of water, Hubbi - god of water, Mirrix - god of war, victory, Mitra - god of sun, light, Kayumars, god of goodness Yima, Nahit - prosperity, goddess of prosperity. Every divine power is sanctified, distinguished by the function of creation [7]. The second consists of pir saints. Khubbi is the Amu Darya Piri, Choponota is the Piri of cowherds, Kambar is the Piri of horsemen, Farhod is the Piri of builders, and Hizr is the piri of greenery, fertility and desert. These different images are distinguished by their sponsorship function. It is these gods, the pir, that define the nature of this type of myth [8]. The system of motives, consisting of imaginary events and happenings associated with the divine subjects, created a unique plot of details belonging to this type of myth, in particular, mysterious events, supernatural phenomena. These plots are distinguished by the fact that they tell stories about gods, goddesses, pir and deities. They describe the beliefs of primitive concepts, such as the cults of water and fire, in particular, the activities of such myths as "Anaxita", "Qayumars", "Odami Od", "Er Xubbi", "Anbar ona" [9]. The attitude of these myths to reality is based on the fact that the events of the story are true, and the criteria for its reflection are based on exaggeration, fiction. The primitive listener was convinced that his events were true. Real events in the fictional system, such as earthquakes and floods, do not hinder the story, but help and build trust. The style of interpretation is based on fiction and performs the function of a message. The interpretation of natural phenomena brought the imaginary events closer to the world and attracted the listener's attention as a reliable source. One of the most important features of this type of myth is that it is

based on a miracle. Formed on the basis of mythological images with a domestic meaning, these legends mainly told stories related to such concepts as taboo, magic, dualism, shamanism, contributed to the emergence and development of the religion of fire, and, most importantly, the taboo of sacred things led to the emergence of a ban on mysterious means [10]. It is based on primitive society, tribe, tribal customs, early worldviews, and religious attitudes. These legends originated and became a tradition in the early days of the feudal-patriarchal system, after the collapse of the primitive life order.

Conclusion. Mythological images are directly related to the religious worldviews of our ancestors, and such worldviews, that is, animistic and totemistic ideas in Central Asia, in general, in the Turkic peoples from ancient times to the present day through folk writings, epics, fairy tales and traditions living; Natural phenomena - light, darkness, storm, cold, heat, earthquakes, fires, floods, volcanic eruptions, etc. The imagination of our ancestors are associated with the movement of divine forces in the form of zoomorphic (animal form), anthropomorphic (human form) considered.

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UDC: 316.75 (575.1)

INTELLECTUAL AND SPIRITUAL-MORAL ASPECTS OF RAISING THE CULTURE OF INTELLIGENCE IN UZBEKISTAN

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Annotasiya: Ushbu maqolada, ziyolilikni madaniy hodisa tariqasida tavsiflash, endigina unga madaniy hodisa sifatida yondashish masalasi, ziyolilikni madaniyatshunoslik nuqtai nazaridan tahlil qilishga bag‘ishlangan izlanishlar yuzaga kelganligi hamda ziyolilik boshqa aqliy mehnat shakllariga nisbatan ustuvor ahamiyat kasb etishi haqida fikr bildirilgan.

Kalit so‘zlar: Ma'naviy ishlab chiqarish, intellektual ishlab chiqarish, ziyolilik, ma'naviy-axloqiy hodisa, madaniy omilkorlik qobiliyati, intellektual qadriyat, bilim, ijodkor, madaniy omilkorlik.

Аннотация: В данной статье феномен интеллигентности характеризуется как явление культуры, утверждается, что в последнее время актуализировались исследования, посвященные анализу интеллигентности с позиции культурологии; интеллигентность имеет превосходства над другими формами умственной деятельности.

Ключевые слова: Духовное производство, интеллектуальное производство, интеллигентность, духовно-нравственный феномен, потенциал культурного мастерства, интеллектуальная ценность, знания, творческая личность, культурное мастерство.

Abstract: This article analyzes the problem of people's intellectual culture, the spiritual and moral culture of society, the structural elements of intellectual potential, the citizen's understanding of his personality and individuality, and interpersonal relationships.

Key words: Spiritual production, intellectual production, intelligence, spiritual-moral phenomenon, cultural factoring ability, intellectual value, knowledge, cultural factor.

Introduction. The ever-increasing complexity and diversity of life, which is characteristic of modern society, is the “acceleration of change”, in the context of the polyphony of methodological discourses, the multidimensional being, high levels of flow and uncertainty in existence, the growth of information flow in the context of the formation of a new educational paradigm, and a number of other factors require intellectualized education, in this context higher education is seen as an institution producing intellectual culture.

However, it should be noted that the phenomenon of “intellectual deficit” is not absent, and due to “functional stupidity” there is an increase in the number of low and

medium intellectual abilities of some individuals, in this sense, pedagogical associations calls for its activities to be a major issue on the agenda.

In terms of the general nature of intellectual culture, “on the scale from one individual to a whole society; or in the process of intellectual activity, from a person who forms his own intellectual culture to the development of an intellectual culture in society”. Many researchers define intellectual culture through thinking and its characteristics, considering it as an element of professional or spiritual culture.[1]

Literature Review. The philosophical understanding of the culture of intelligence is also realized at the universal (as a world phenomenon), special (as a historical and cultural phenomenon) and singular (the existence of intellectual qualities in a particular person) level. It should be noted that it is the philosophers who pay special attention to the universal nature of intellectuals. For example, while N.N. Moiseev emphasizes that intelligence is the product of the evolution of the mind, V.I. Vernadsky and Teyar de Sharden explain that intelligence is a form of universal behavior, based on high values of the spiritual essence of man. That is, it interprets society as a spiritually leading subject of development.

It is impossible to understand the essence of the culture of intelligence without fully understanding the content and structure of intelligence. From this point of view, in the study of problems in the field of research, the logical and psychological basis of intelligence, its structural elements, its interaction with other forms and issues related to the impact of education on it were systematically analyzed. The works of researcher representatives of psychology, such as M.K. Akimova, A.N.Voronin, E.A.Valueva, E.V. Dudorova, Z.H. Sierralta, N.A. Lujbina are of great importance.

The development of intellectual culture in society is inextricably linked with changes in science. Some philosophical issues related to this aspect of the problem have been studied in the scientific works by I.A.Bykovsky, N.Y.Trushkina, A.S.Stepanenko, O.D.Shipunova, D.A.Rostovykh, R.V.Shutov, A.E.Nikitin and N.Y. Popova.

Although researchers such as U.Kerimov, H.Yorkulov, N.Rizaev, O.Okyulov, M.Kalandarova, V.I.Andriyanova have not conducted a separate study on the culture of intelligence in our country, but in their research on artistic, philosophical and legal problems, related aspects. It describes its three elements, namely, intellectual-pedagogical, social-legal, spiritual-moral. The first element includes mastering the basics of science, as well as the formation of intellectual abilities and skills in the individual. The second aspect constitutes the socio-legal factors of intelligence, the third is the place of intelligent people in intellectual activity, which consists of a dialectical connection between the object of education and the subject.

Researchers such as A.A.Aziziqulov, L.A.Qurbonova, A.A.Qambarov, Z.K.Asrarova, D.R.Kenjaeva, F.U.Musinov, D.Y.Xodjaeva, T.H.Qurbonov, F.N.Jurakulov have focused on the cultural-spiritual, procedural, creative and value-emotional aspects of intelligence. In this research, intelligence is considered as a set of mental abilities, mental needs, creative skills and abilities, explained in relation to the innovative and informational activities of society and the individual. It is argued that in the development of a culture of intelligence, a person's creative and critical thinking, a special place in the issues of social activism.

The analysis of the existing scientific literature and research shows that the factors of raising the culture of intelligence in the citizens of Uzbekistan, which is being updated, have not been studied separately as an object of independent research. This led to the selection of the research topic as an object of scientific study.

Research Methodology. The dissertation uses structural-functional, comparative-historical, causal analysis, dialectical and complex approach, logic, observation, inquiry methods.

Analysis And Results. Although the current literature pays special attention to the formation of intellectual culture, there is almost no independent research on this topic. The unity of intellect and personality is understood as a phenomenon of intellectual culture. “The effect of intellect on the quality of personality”-such personal intellectual efficiency can be hampered by a variety of factors. For example, according to the international rating agency NOP World, people around the world spend 16.6 hours a week watching TV, 8.9 hours in front of a computer and 6.5 hours reading. In 2016, the following countries were on the list of countries reading the most books per week.[2] (Table 1)

Table 1. The list of countries reading the books the most in 2016

№	Countries	The amount of hours
1	India	10.7
2	Thailand	9.4
3	China	8
4	The Philippines	7.6
5	The Czech Republic	7.4
6	Russia	7.1
7	Sweden	6.9
8	France	6.9
9	Hungary	6.8

That is why reading is the basis of intellectual culture. Also, the increase in the number of readers of reading culture remains one of the main features of the intellectual activity of the 20th century. Also, the culture of reading is the manifestation of new ways of thinking and new organizational forms of activity, that is, in the process of reading development, subjectively acquiring new ideas allows a person to go beyond the standard activities and create new ideas. In our opinion, the culture of reading is a person’s level of perfection, spiritual richness and rationality, independent thinking, acceptance of universal values, the ability to see and evaluate the opposite aspects of events, actively increase their knowledge, creative approach to work. As we create the conditions for the development of this culture, we will at the same time enable it to know the reality that exists, to adapt to it, to develop itself, and to govern itself. In other words, the culture of reading allows a person to effectively apply the knowledge and experience contained in it. The upbringing of such a person is the main task of the field of education. Therefore, “the decline in interest in reading, in turn, the decline in literacy is one of the major threats to the sustainable development of society and the state. That is why many developed countries are taking strict measures to prevent this negative situation. Nationwide complex programs are being developed. They envisage

systematic measures to unite the efforts of public authorities, libraries, educational institutions, education, science and business, civil society institutions and the media. Particular attention is paid to the formation of social consciousness about the value and importance of reading, targeted support and development of reading culture among various segments of the population, improving publishing, the formation of a book market that fully meets the intellectual, spiritual and cultural needs of society. According to the world experience, the adoption of such targeted programs and concepts will have a positive effect.[2]

The culture of the individual is characterized by the specificity of the activity in which the manifestation is carried out, as well as the formation of the intellectual culture of students with the acquisition of socio-cultural and professional experience. In terms of pedagogical significance, intellectual culture, like individual education, is shaped, developed, and evolving. At the same time, the formation of the intellectual culture of cadets means the organization of the educational process and its pedagogical methods, its harmony with reality, and so on.

Intelligence (consisting of the ability to adapt to communicative conventionality) and creativity (expressed in the ability to present innovation in a short period of time and on the basis of social order) are modern personality traits, as well as the basis of successful self-activation and social flexibility. Intellect - income, social background, level of personal education and knowledge, family circumstances, etc. is formed under the influence of socio-economic factors such as, as well as depends on the socio-cultural context (this or that culture arises from the basis or is limited to itself).

Intelligence and creativity operate in a complementary ratio. The function of the intellect is to optimize the relationship with the environment, to reconnect with it, to stabilize situations and to save it. The creative beginnings, on the other hand, are more active, focusing on transforming the environment, without relying on cultural heritage and traditions. The specificity of such a complementary relationship lies in the dominance of one of these two components.

The intellectual elite, now also known as the new class - the class of creators, has given the country a worthy place on the world stage, and today has gained unprecedented freedom of experimentation in the field of modern information technology. Of course, this does not exclude the possibility that freedom can turn an innovative, creative person into a technocrat. Creative technologies lead to absolute changes in the activities of the subject, helping a person to think in unfamiliar situations, intelligent machines reduce the energy of thinking intonation. The work of the electronic machine becomes a kind of intellectual imagination for man, which informs the individual from the activity of his own brain, because its task is also to fully master the capabilities of a computer program.

The interactive screen integrates a person into his network to such an extent that, in time, until he feels part of the network, he becomes exactly like his personal "I" with the virtual. The mass use of computers affects the minds of people, changes their perceptions of right and wrong, turns the transition to a specific culture - a representative of the “cyberculture” that is emerging in the computer world, has its own traditions, lifestyle, moral norms, language. Hence, in modern society there is a threat of loss of human individuality, which, on the one hand, intensifies the aspirations,

recognition and efforts to realize their intellectual and creative abilities in an innovative society. In modern society there is a threat of loss of human individuality, which, on the one hand, and on the other hand, it is in an innovative society that individual aspirations, recognition and efforts to realize their intellectual and creative abilities intensify.

Conclusions. As a result of the research, the factors hindering the development of intelligence were identified:

- the instability of students' interest in learning;
- imperfection of educational content and technologies;
- the ineffective nature of the interaction between faculty and students.

In order to intensify pedagogical activities for the development of intellectual culture, we consider it necessary to implement the following pedagogical conditions of this process:

- The formation and strengthening of interest in learning among students as the basis of intellectual culture.
- Improving and activating the content and technological components of the educational process.
- Teachers help and support in the development of self-organization and intellectual activity of students.

The solution of the problem of products of intellectual and spiritual-moral activity depends in many respects on the methodology used in their study, while they may differ functionally or in essence, use the same methods of cognition, and the laws of dynamics show whether they are general or not. But these are primarily a matter of understanding the differences. However, other issues also arise in connection with the importance of the relationship between them, the forms of interaction. Consequently, in real life, they are internally and interconnected with the solution of the basic problems of human existence. The changes that have taken place in the life of our society over the past decades have created opportunities for a free approach to the analysis of theoretical and methodological issues, while at the same time requiring a reconsideration of the methodological principles used. Here the development of this problem, the reliance on the knowledge accumulated in the history of philosophy, plays an important role. History has shown that there are conflicting views in this area, as well as on the correctness of the same methodology.

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UDC: 965-12(452)

PROFESSIONAL MANAGEMENT PROSPECTS IN HIGHER EDUCATION

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Аннотация: Мазкур мақолада олий таълим тизими бошқарувининг мавжуд ҳолати ва уни ислоҳ қилишнинг замонавий ёндашувлари тадқиқ этилган. Кадрлар тайёрлашда сифатли менежментни ташкил этиш ва бошқарувда ҳиссобдорликни шакллантириш долзарблиги асосланган.

Калит сўзлар: сифатли менежмент, ҳисобдор бошқарув, исфатли таълим, бошқарув моделлари, бошқарув тамойиллари.

Аннотация: В статье исследуется текущее состояние управления в системе высшего образования и современные подходы к его реформированию. Организация управления качеством и формирование подотчетности в менеджменте основаны на срочности обучения.

Ключевые слова: управление качеством, подотчетное управление, здоровое образование, модели управления, принципы управления.

Abstract: This article examines the current state of governance in the higher education system and modern approaches to its reform. The organization of quality management and the formation of accountability in management are based on the urgency of training.

Keywords: quality management, accountable management, sound education, management models, management principles.

Introduction. Today, many scientific papers have been published on the culture of management and its role and importance in the life of the higher education institution. In particular, it is noteworthy that the research of several experts in the field of management of the educational institution and some scientists working in this field is devoted to the study of various aspects of management culture in the educational institution.

Given the role of education in society, it should be noted that the study of the specific management culture of the educational institution, the formation of a culture of management organization, the practical use of the potential of human resources is relevant today.

Literature review. The dynamics of development of activities in the market of educational services, first of all, indicates the intensification of appropriate competition, which provides a high quality educational process. However, the experience of many foreign countries shows that traditional approaches to quality management are almost impossible to achieve the desired result. While the traditional approach is based on the concept of quality control and the application of measures to prevent deviations from the established indicators, the current situation requires systematic management of this process.

- initial - resource quality control;
- current - control of the educational process;
- final - quality control of education.

Such an approach to quality management involves the regulation of the educational process through the selection and initial control of entrants, the provision of teaching materials to teachers and the control of the current results of student education. In modern conditions, higher education institutions have begun to use marketing methods to provide quality education to students, study the market of educational services, identify their target segments, develop strategies to combat applicants in accordance with the needs and desires [1]. requiring an immediate response to these changes in order to ensure high quality, which in turn implies the introduction of new approaches to quality management at the level of each higher education institution, a systematic reorganization focused on the quality of activities and services. The modern model of management should be geared to the needs of consumers of services and the needs of the staff of the higher education institution designed to meet these requirements.

Research methodology. In the training of competitive personnel, the role and importance of the system of continuing education in scientific observation, methods based on the principles of abstract-logical, comparative and systematic analysis, systematic approach, analysis and synthesis, historically were used.

Analysis and results. An analysis of the scientific literature on the problem studied shows that such an approach usually reflects Total Quality Management. This concept covers all structures of the higher education institution as an enterprise, and all its activities are aimed at increasing the efficiency of use of human and material resources in the process of maximizing the satisfaction of the needs of consumers, workers and society as a whole. In addition, this concept can be applied in the organization of any form of activity and, as international experience shows, contributes to its effectiveness [2].

Thus, in the system of higher education, general quality management is a specific approach to management in relation to the process of training, which involves all employees, aimed at ensuring and maintaining quality within all structures of the organization, as well as achieving long-term success by meeting consumer demand for educational services and benefiting employees and society as a whole.

The above goals are primarily development directions, not end results. As the needs of consumers, society, and employees are constantly changing, they will need to be constantly monitored, forecasted, and met in advance. In turn, the rapid development of technical support requires the improvement of methods of quality control and assurance, organizational mechanisms and methodologies of management. The study

of general quality management mechanisms includes the study of the needs of consumers, employees, enterprises, as well as the study of the internal resources of the higher education institution, the size of the resource base. In addition, overall quality management ensures the improvement of existing planning and the development of new processes, as well as self-assessment according to certain criteria, while monitoring changes in the needs of all participants in these activities.

Measures to improve the quality of educational services in higher education institutions require the implementation of plans within the general planning and its coordination with the overall strategy. This requires the development and organization of an information channel system that provides for the receipt and recording of internal and external information.

External information channels include: communication with consumers; indicators of external activity efficiency; information on the situation in the services market; information on the effectiveness of training young professionals, the subsequent professional activity of graduates.

Among the internal information channels, the following are distinguished:

- information on employee satisfaction;
- indicators of the effectiveness of the process, in particular, education;
- quality indicators of processes;
-efficiency of the quality system (quality-oriented costs, it
effectiveness of improvement measures, etc.);
- External and internal self-assessment data [3].

In the use of external and internal channels of information, the needs of consumers, employees and society are analyzed, areas for improvement and important processes are identified. Interaction methods will be developed for each process and appropriate staff training will be provided. The scheme of the planned improvement process includes:

- setting priorities between regulated processes based on the important parameters that affect these processes;
- data collection and preliminary analysis. Once the relationship between impact factors (process parameters) and quality indicators has been identified, causal factors are identified to determine the criteria for successful implementation;
- re-examining the efficiency standardization as a determination of the success of problem solving. The study of consumer feedback (students, employers, employees of higher education institutions) allows statistical processing of primary data and status indicators of the initial data on the effectiveness of this activity, as well as identifying additional positive and negative impacts, problem solving and updating internal standards .

The final stage of the overall quality management cycle is the self-assessment carried out by the forces of higher education institutions.

The main tasks of self-assessment are: to analyze the reasons for the reflection of current and planned indicators and compare them as a condition for future planning; description of areas of activity aimed at improving the activities of the higher education institution; determination of the current status of the higher education institution; better coordination of interactions between managers and employees; comparison of results

of work of different structural divisions; coordinating the efforts of different constituent units to improve quality [4].

Self-assessment is a mandatory component of a modern higher education institution and involves the retention of relevant documents. The results of the self-assessment should be communicated to managers at all levels and to each employee.

Conclusions. Thus, the reform and development of socio-economic spheres of the Republic of Uzbekistan requires an immediate response to these changes in order to ensure sustainable high quality of education, which in turn requires the introduction of new approaches to quality management at the level of each higher education institution. implies the organization. This approach typically reflects Total Quality Management. This concept covers all structures of the higher education institution as an enterprise, and all its activities are aimed at increasing the efficiency of use of human and material resources in the process of maximizing the satisfaction of the needs of consumers, workers and society as a whole. Moreover, this concept can be applied in the organization of any form of activity and, as international experience shows, contributes to its effectiveness.

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UDK: 10.89.569

AESTHETIC SIGNIFICANCE OF LABOR IN PERSONAL DEVELOPMENT

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Annotasiya: Maqolada shaxsni rivojlantirishdagi estetik mohiyati, uning yosh avlod ma'naviyatini yuksaltirishdagi o‘rni, shuningdek insonning mehnat faoliyatining jismoniy va intellektual jismoniy va xususiyatlari yoritilgan.

Tayanch so‘zlar: mehnat, estetik mohiyat, shaxs va jamiyat, jismoniy va intellektual xususiyatlar, tabiat, go‘zallik, yestetik did.

Аннотация: В статье раскрывается эстетическая сущность труда в развитии личности, его роль в повышении духовности подрастающего поколения, а также физические и интеллектуальные особенности трудовой деятельности человека.

Ключевые слова: труд, эстетическая сущность, личность и общество, физические и интеллектуальные характеристики, природа, красота, эстетический вкус.

Annotation: The article reveals the aesthetic essence of work in the development of a personality, its role in enhancing the spirituality of the younger generation, as well as the physical and intellectual characteristics of a person's labor activity.

Key words: labor, aesthetic essence, personality and society, physical and intellectual characteristics, nature, beauty, aesthetic taste.

Introduction. Labor is an expression of creative abilities that combine the interests of the individual and society. Aesthetic aspects of labor activity are determined by the norms of individual freedom, which are reflected in his physical and intellectual abilities. Activity materializes in conscious behavior, ensuring that a person acquires a certain skill. Such skill, which is specific to any type of work, is distinguished by the specificity of the activity, the norms of quantity and quality. Skill is a subject of labor associated with technical complexities, which helps to creatively express human abilities in overcoming the "resistance" of materials. As these possibilities emerge through the emotional perception of a particular type of labor, naturally this labor acquires an aesthetic character. In other words, a self-fulfilling labor activity means that a certain amount of physical and intellectual forces are mobilized.

Materials and methods. Through labor activity, man demonstrates and develops his creative power and abilities, in which man acts, firstly, under the influence of certain objective conditions, and secondly, in a combination of subjective-personal qualities. Among them, working conditions, his organizational status, social status and level of human dignity play an important role. In this process, along with the objective conditions, the social significance of human labor, which is a subjective factor, its personal responsibility, the qualities of creativity emerge.

Man has created history only with the ability to work, changed nature according to purpose, understood beauty, and created new values. Ghafur Ghulam "What is

beauty?" As he wrote in his poem, "beauty is work, sweating on the forehead, work is beautiful, it is worth bragging about!" [1].

Naturally, in order for a person to live and prosper, he first had to have the blessings that satisfy his material needs and cultivate them. In this sense, one breath did not cease to satisfy its own needs, it did not cease to create material blessings, and this process continued indefinitely. However, as Gegel writes, "needs cannot be met, but they are constantly and constantly renewed: there is no end to the needs of food, satiety, dreams, and tomorrow there will be hunger and fatigue again" [2].

Result and discussion. Qualified behavior is a prerequisite for successful job performance. Consequently, the labor process is constantly changing and vibrant, not only perfecting, but at the same time strengthening new skills. Not only that, the emergence of a certain level of skill takes place in the process of labor and requires initiative, creative intuition, courage. Therefore, the concept of skill also includes excellent knowledge of the processing of material properties, skill in the use of tools of labor, correct understanding of the will and situation, and sustainable initiative. Naturally, it is impossible for a person not to be satisfied with this situation and the results achieved, not to rejoice, not to give in to creative feelings. It is an aesthetic feeling that results from mastering and performing actions at a high level under the influence of the same labor.

By expressing the standard of excellence in the work process, skill becomes a source of aesthetic pleasure. It should be borne in mind that the aesthetic meaning of labor also depends on the characteristics of the activity. When a person pursues creative and lofty goals and freely uses his physical and spiritual abilities, he creates satisfaction, enjoys his work, and enjoys aesthetically. Irrespective of the content and conditions of the activity, it acquires an aesthetic character when labor is free, when a person is directly interested in and enjoys its results, when he directs his creative abilities to high spiritual goals.

But the aesthetic feeling that is born in the process of work does not mean enjoying the mere appearance of performance. It takes on a creative character in the activity, like a game, and retains the meaning of social change, even if it takes place in a free, natural way, and manifests itself as a serious and complex activity. Therefore, the aesthetic pleasure born in the process of labor is connected with the understanding of this deep, inner essence of it, with the spirit of vital creativity. Man feels creative even when he uses some simple, seemingly simple actions in the process of labor, he realizes the meaning of the re-creation of labor.

The process of live labor forms a more complex structure - the structure of production. In the process of production, people have a certain social relationship with each other and with the means of production. Naturally, in the preparation of the product you have to perform a complex task, such as the use of certain tools (machines, tools, equipment, etc.), as well as their proper placement and interaction. All this constitutes a social production that takes place at a certain rate, has its own function, structure, organizational appearance. This structure acquires an aesthetic expressiveness with a high degree of well-established and perfected. A highly organized process, with a certain degree of embodiment and transition, has an aesthetic

effect on people, creating an emotional uplift that evokes a creative response to the activity.

The history of aesthetic activity shows that in almost all nations the aesthetic properties and properties of recyclable materials such as wood, clay, gypsum, glass were learned in the process of labor and used creatively in the creation of works of art. For example, it is known that in Uzbek poetry, especially in our classical literature, epithets and metaphors related to flora and fauna are widely used. These include the image of the sun, moon, cypress, ohu, and so on. The processing of stone and wood has served as a subject in the aesthetics of the peoples of Central Asia, representing the labor and skill of the artist. In addition, natural materials such as bone, leather, lime, and clay have been widely used in the fine arts as a means of demonstrating creative aesthetic ability and satisfying needs. As the researchers wrote, "In the practical use of the product is given an aesthetic assessment" [3].

It is known that certain aspects of the process of labor activity have played a different role in the aesthetic culture of the people. The research of folklorist B.Sarimsakov shows that aesthetic values have a special place in the structure of ceremonies dedicated to Labor Day. He writes, "The peculiarities of the holiday are, first of all, in the preparation of special dishes, wearing new clothes and holding it with humor and joy" [4].

The aesthetic nature of labor depends in many ways on the social conditions in which it takes place. In the recent past, communist ideology, labor subordinated to the foundations of social property, extinguished the creative freedom, ability, self-interest in the individual, led to his spiritual impoverishment, and most importantly, "alienated" him from the results of his labor. Independence put an end to the alienation of labor from the individual and created real conditions for the full and comprehensive manifestation of his spiritual and creative powers.

Competition in the conditions of market relations has made it necessary for producers of material goods to engage in a wide range of creative activities, create quality products, grow goods that meet the artistic and aesthetic tastes and needs of consumers. At the same time, the provision of individual freedoms (freedom of speech, freedom of conscience, ownership, etc.) as a necessary condition for the development of society has led to the need for high political consciousness, moral responsibility, critical and creative approach to their work. Increased aesthetic norms and requirements for work processes and product manufacturing, which has focused on the application of modern technologies, innovative projects in production, in particular, design activities, production and industrial aesthetics will become the most attractive and lucrative field.

Conclusion. Thus, labor has a strong and multifaceted effect on a person, gives an aesthetic meaning to his activities, helps him to develop spiritually. In this case, the priority of creation, the higher the perfection, the more stable its aesthetic essence, the stronger its spiritual impact. So, labor acquires an aesthetic meaning in a person by combining knowledge, experience, will and character.

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UDK: 10.56.254

NATIONAL CULTURE AND INHERITANCE

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Annotasiya. Mazkur maqolada milliy madaniyat va unda vorisiylik tushunchasining mazmun-mohiyati, vorisiylik (meros) har qanday sohada insonning haqiqiy o‘zlashtirishida namoyon bo‘lishi, va ayni paytda mahalliy yoki dunyo miqyosidagi jarayonlar shaklida ham ifodalanishi mumkinligi tahlil qilinadi. shuningdek, vorisiylikda milliy musiqa madaniyatning asosi bo‘lgan fol'klor, dostonchilik, maqomdonlik yo‘nalishlarida vorisiylik (meros)ning ahamiyati ilmiy tahlil etiladi.

Kalit so‘zlar: milliy madaniyat, musiqa madaniyati, fol'klor, dostonchilik, maqomdonlik, ijrochilik san'ati, vorisiylik va meros, milliy madaniy meros, xalq og‘zaki ijodi.

Аннотация: В статье анализируется сущность национальной культуры и концепции наследования, тот факт, что наследование может выражаться в реальной квалификации человека в любой области и одновременно в форме

локальных или глобальных процессов. Кроме того, анализируется значение наследственности в областях фольклора, эпоса, макома, которые составляют основу национальной музыкальной культуры.

Ключевые слова: национальная культура, музыкальная культура, фольклор, эпос, маком, исполнительское искусство, наследие и наследие, национальное культурное наследие, фольклор.

Annotation: This article analyzes the essence of national culture and the concept of inheritance, the fact that inheritance can be expressed in the real proficiency of man in any field and at the same time in the form of local or global processes. Moreover, the importance of inheritance in the areas of folklore, epics, maqom, which are the basis of national music culture is analyzed.

Keywords: national culture, music culture, folklore, epic, maqom, performance art, inheritance and heritage, national cultural heritage, folklore.

Introduction. Nowadays endeavours to preserve their cultures have become the main goals of developing countries when many cultures are encountering. According to the theory of ethnicity, one of the main factors in the understanding of identity and the formation of a nation is the attention to national cultures and the attitude to their inheritance. This causes the habits and traditions could be preserved that are belong with daily life.They are also undergoing a process of exposing transformations under the influence of various innovations too. Such innovations leads to the introduction of various threats with their positive aspects. We can observe it in educational institutions, collective and family relations. We need to understand that in the fight against such threats, it is necessary to approach the "identity" of our people on the basis of "inheritance".

Materials and methods. The problem of the nature and role of succession in the development of the social life of mankind has always attracted the attention of researchers. The definition of succession given by E.A. Baller is more widely used in many social literatures. He writes that inheritance is a set of connections between the various stages and levels of both being and cognition, the essence of which is the retention of this or that element of the whole as a system or the transition from one state to another. By linking the past to the future, the succession ensures the stability of the whole [1]. So inheritance is an objective law in human life, ensuring the interconnectedness of the stages of development. Revealing the essence and specificity of historical inheritance, some authors consider it necessary to distinguish between the concepts of inheritance and heritage.

Inheritance is the values, ideas, experiences, knowledge of the past, the ways of assimilating them, that is, the ways of creative activity of people and its organization and its results. The process of assimilation, or more precisely, cultural heritage, is very important and is one of the basic laws of culture in action. This process unites the past, present, and future of humanity as a whole and becomes the usual ready-made achievements. Based on the achievements, the society chooses the shortest ways to achieve its goals. In addition, spiritual heritage greatly expands the level of people, enriches their lives mentally and emotionally, serves as an inexhaustible source of knowledge.

Result and discussion. Inheritance is multilateral and multiform. Its clear manifestation is distinguished by the multiplicity of types, the diversity of tendencies. The mechanism of inheritance of each new generation differs from the experience of the past in different areas of culture. Inheritance is manifested in the actual assimilation of a person in any field, and can also be expressed in the form of local or global processes. The local (limited) form of inheritance has professional (professional), national, ethnic, and other manifestations of culture. This activity is characterized by uneven crises, as it jumps from one stage to another, rather than in a uniform, straight-line form in the cultural stages. In the process of inheriting the spiritual achievements of mankind, the processes of inheritance take place in a comprehensive (general) form in a detailed direction.

There is a culture-defined method and mechanism for passing on to future generations. Some of them have been practiced since ancient times, such as demonstrations, folklore, epics, and the art of maqom.[2]

According to A.O. Stern, the concept of heritage is broader than the concept of inheritance. He says that inheritance means that the old retains the elements that are necessary for the new, not against it. [3] So, in his view, inheritance is a set of uncritical habits that are only necessary for new cultures and can live with them. In our opinion, this idea is a bit controversial and many nations have habits that can stand against for some innovations.

Inheritance can also be seen in the traditional material culture and its development, the order of use, the relationship to them. This is also evident in traditional economic relations. As humanity ascends from one stage of its historical development to another, it does not recreate its own culture but relies on previously achieved results.

In his book East-West, V.K. Chaloyan noted that the achievements of the East, the Caucasus, Byzantium, Iran, and Arab civilization were the wealth of the West. Achieving a high level of socio-economic and cultural life in the West, the development of the heritage of the East has raised the ideological views of the West in a new direction. The Western Renaissance is a new higher-level continuation of the Eastern Renaissance. The inheriance in world culture is include that.

Inheritance is a connection between different levels of development and different elements, that is, it ensures the preservation of the characteristics necessary for the structure and content of specific cultures. In this context, inheritance is a main category reveals the essence of communication etiquette. It is also a necessary condition for the various forms of change that take place in human communication.

When we think about the issue of inheritance in the development of cultures, many people see it in one side with the concept of cultural heritage. Although the concept of cultural heritage is very closely related to the concept of inheritance but it differs in two different ways:

1) Inheritance - the concept is a general philosophical category. It is therefore of methodological importance to all social, natural sciences without exception. The category of cultural heritage is used only in relation to events that take place in the field of culture and even, in the field of spiritual culture.

2) The concept of succession represents an objective connection of events. The concept of cultural heritage, on the other hand, manifests itself in the form of a critical assessment of the laws of succession and the creative use of cultural values inherited from past generations.

Илмий адабиётларда ворисийлик ва маданий мерос тушунчаларини фарқлаш ҳақидаги масала ҳали тўғри ҳал қилинмаган. Бугунда ворисийлик сўзи ҳуқуқий масалаларга кўпроқ даҳлдор деб қаралиб, ворислик термини остида талқин қилинмоқда.

The issue of differentiating the concepts of inheritance and cultural heritage in the scientific literature has not yet been properly analyzed. Today, the word inheritance is considered more relevant to legal issues and is interpreted under the term heirdom.

According to experts, the concepts of inheritance or cultural heritage are a synonymous term. In our view, inheritance or getting heritage from the past has its own meanings, and inheritance is a relatively broader concept. At the same time, it should not be forgotten that the culture of the new generation of historical periods is connected with the culture of past historical periods on the basis of inheritance. This does not mean that everything created in the culture of past generations is the source of inheritance in the culture of the new historical period. Or, the reflection of cultures to show their ancestral identity when the need arises is heritage [5], the constant use of ancestral cultures in daily life, their widespread reflection in social life - inheritance.

In order to define the concept of inheritance more broadly, it is first necessary to know the definition of the concepts of ceremony, tradition and custom. However, unfortunately, in the field of ethnology, cultural studies, folklore, art history and folklore, a comprehensive theoretical and methodological approach to the definition and description of the above terms and their distinctive features has not yet been introduced [6]. According to widely accepted definitions, a ceremony is an event that has occurred and will occur with the demands and needs of human life, material and spiritual life. Any ceremony is created and lives by combining the main features that reflect the level of socio-economic, political and cultural development of a nation at a certain stage of historical development [7].

Tradition is a cultural phenomenon that arises in the process of historical development on the basis of natural and social needs, inherited from ancestors to generations, and affects the cultural life of people. Tradition is a set of accepted rules and regulations that are ingrained in people's minds as a kind of social rule [8]. Traditions are: a) a socio-historical phenomenon; b) an integral part of the processes of public life; c) criteria for determining the lives and activities of people; g) can be described as one of the spiritual factors in the management of society and people [9]. In particular, they are born at the changes of human life, often with the need to remark and legitimize these points.

It is known that the culture of each period has its own characteristics of the people of that period. Its development is directly related to the development of society. Without denying the uniqueness and antiquity of the culture of each nation, it should be noted that in some cases, despite its multifaceted, contradictory nature, it remains the only achievement of all mankind in world culture. It can be seen that this situation played an important role in the development of the culture of the peoples of the Near

and Middle East, including the peoples of Movorounnahr. Therefore, the introduction of mutual national culture (folklore, epics, baxshichi, maqomdon, performance), created by our ancestors and polished for many years, representing the uniqueness of our people, increasing attention to them on the basis of succession, has a strong self-awareness, strong beliefs and attitudes. to be nurtured in the spirit of devotion to one's own national values and to feel a sense of moral responsibility to the future of all mankind.

Each generation begins its cultural development from assimilating the values created by previous generations not from space. This assimilation serves as a basis for the creation of a unique raw material, new values, the development of culture to a higher level. It is these two processes - the objectively necessary connection between the old and the new - that constitute the essence of heirdom.

When it comes to heirdom in culture, there is a difference between positive and negative heirdom, which serves development (progressive) and hinders development (reactionary). Culture relies on the results of the previous period at each stage of its development. The preservation of the results of the previous period in the later stages of development indicates that heirdom has a positive meaning.

Inheritance in the culture development always emerges as a dialectical unit of preservation and creative development of previously achieved results. As a result of this process, stable, conservative elements of culture called "traditions" appears. There can be no culture without traditions. The place and role of cultural traditions in the historical process is incomparable. After all, the historical experience, enhanced over the centuries, is accumulated and passed from ancestors to generations, the unity of people is ensured appeared the ability to preserve identity.

At all, cultural traditions also include ideas, views, perceptions, knowledge, values, norms of behavior, and similar processes that are passed down from generation to generation, historically determined, and become an integral part of social consciousness. Tradition has a unique look iin every field of culture. For example, the traditions in the field of art (epic, being a bakhshi, maqom singer, curiosity, music) differ from each other with their unique criteria.

As a result of the detrimental consequences of looking at our national heritage under the guise of class, many layers of our cultural heritage have been assessed as the remnants of the history, unnecessary, have lived their lives. Consequently, the unique achievements of folk applied arts in pottery, wood carving, jewelry and a number of other areas disappeared. The experience and achievements gained in these areas have to be re-established today.

The class approach to process has also left a tragic mark on folklore. The terrible image of this period is reflected in the following words of Kurbannazar Abdullayev (Bola Bakhshi): The years 1933-1940 are terrible years. The best people will be lost, books and manuscripts will be destroyed ... At that time, the performance of status and epics as "remnatss of the past" and "feudal period" was banned. I haven't told a epos in seven years. I told them secretly, to whom I trusted completely.]

Evaluating culture from the point of view of narrow class interests, turning it into a field of class struggle, has led to the repression of a large part of our creative intelligents, which was formed before the October Revolution, the people of the past

and the link in national and cultural development. The tragic fate of such great nationalists as Cholpon, Fitrat, Abdulla Qodiri also allows us to make such a conclusion.

After the events of October 1917, the monuments taken to Russian cities under various dodgeries are uncountable. In particular, researchers estimate that in 1923 alone, more than 254,200 historical collections were sent to libraries and museums in Moscow and St. Petersburg. Today, the Russian archive of background documents contains 2687 audio documents belong to the history of our country. 2617 of them are completely absent in the archives of Uzbekistan. Of the 1231 gramophone records available, 296 date from 1907-1912 and are of great historical significance. The Russian State Archive of Photographic and Film Documents contains 622 films reflecting our history, 218 of which the archives of our country do not have them.

Conclusion. Thanks to independence, the drawbacks in this area have been disappeared in our republic, and our values has the same age old centuries have been restored. Today, our cultural heritage, with all its potential, is becoming an integral part of the spiritual world of our people. As a result of the restoration of inheritance mechanisms, our national culture is developing as a whole, a whole phenomenon consisting of different shapes and shades. Independence also provided an opportunity to explore the layers of our national cultural heritage that have been hoarded in the depths of history.

At the same time, the unreasonably forgotten traditions of our national cultural heritage are being widely revived, and the life and work of our great ancestors are being evaluated free of old stereotypes. The religious-philosophical works of Imam Bukhari, Imam Termezi, Najmiddin Kubro, Ahmad Yassavi, the literary-artistic, socio-philosophical, socio-political views of our ancestors, such as Amir Temur, Hussein Boykaro, Amir, Feruz are forbidden to be studied because they are representatives of the ruling class is being studied is also proof of our opinion.

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UDK 63

MINERAL FERTILIZER STANDARDS IN COTTON SECTIONS EFFECT ON NPK QUANTITIES

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Annotasiya. Maqolada Qoraqalpog‘iston Respublikasining Orolbo‘yi sug‘oriladigan o‘tloqi-allyuvial tuproqlari sharoitida almashlab ekish tizimlari orqali yetishtiriladigan asosiy g‘o‘za, kungaboqar, kunjut va soya ekinlarining N, P, K miqdorlarini aniqlash maqbul o‘g‘itlash tizimiga bag‘ishlangan tajriba natijalari keltirilgan .

Kalit so‘zlar: g‘o‘za, kungaboqar, kunjut, soya, rivojlanish davri oziqa modda.

Аннотация. В статье представлены результаты экспериментов по оптимальной системе удобрения для определения количества N, P, K основных культур хлопок, подсолнечника, кунжута и сои, выращиваемых в Республике Каракалпакстан в условиях орошаемых лугово-аллювиальных почв Приаралья

Ключевые слова: хлопок, подсолнечник, кунжут, соя, питательные вещества в период развития.

Abstract. In the article, the Aral Sea-Fed meadow of the Republic of Karakalpakstan-alluvial soil in the conditions of the exchange of planting systems through the results of the experiment devoted to the optimal fertilization system of determining the quantities of N, P, K of the main cotton, sunflower, sesame and soybeans are presented.

Key words: wheat, sunflower, sesame, soybeans, nutrient substance of the period of development.

Introduction. It is important to develop optimal standards for the application of mineral fertilizers to obtain high cotton yields from cotton grown after the main crops such as winter wheat, corn, sunflower, safflower, rice, sesame, soybeans in the Republic of Karakalpakstan.

This is because the type of crops planted to create a favorable environment in the soil, the system of crop rotation and the level of agro-technology of care have a

significant impact not only on the agrophysical properties of the soil but also on its agrochemical and reclamation properties.

Therefore, in the conditions of the Republic of Karakalpakstan, it is important to scientifically and practically substantiate the impact of optimal fertilizer rates on cotton yields after past grain crops.

Literature review. Z.Tursunkhodjaev (1972), N.Kashkarov (1979) in the systems of crop rotation 3: 7, 2: 6, 2: 4, 1: 4: 1: 4, 2: 4: 1: 3, etc. in different soil and climatic conditions of the republic.), N.Khalilov, P.Bobomirzaev, (2002), X.Atabaeva, O.Qodirxodjaev (2006), D.Yormatova, X.Xushvaqtova (2008), M.Amanova, A.Rustamov (2010), T.Azizov , I.Anarbaev and others (2010, 2016) Sh.Nurmatov and others (2012), B.Izbasarov (2016), M.Amanova, L.Allanazarova (2017), R.Sidikov and others (2017), A.Amanov and others (2017) have conducted a number of scientific studies on various factors by a number of brilliant scientists and have given the necessary practical recommendations for production.

Research Methodology. Research is conducted through field experiments. Experiments, phenological observations, soil and plant sampling are carried out in accordance with the manuals "Methodology of field experiments" (Dospekhov, 1985), "Methods of state varieties of agricultural experiments" (1964) and "Methods of field experiments" (2007). Quantities of humus, general and mobile species of NPK in soil samples were carried out according to the methods "Methods of agrochemical, agrophysical and microbiological research in polyvinyl cotton fields" (1963) and "Methods of agrochemical analysis of soil and plants of Central Asia" (1977).

Analysis and results. Field experiments from 2017 until 2020 years were held on the farm "Sapargul Khasanova" in Khojayli district of the Republic of Karakalpakstan. The soil of the experimental field was meadow-alluvial, irrigated from scratch, with 0.797% humus in the plowed layer (0-30 cm), 0.075 and 0.063% of total nitrogen, total phosphorus and potassium, respectively, and N-NN4 -10.2 mg from the mobile forms of nutrients. / kg, N-NO3 -7.3 mg / kg, P2O5 -28 mg / kg and K2O -118 mg / kg. Hence, the soil of the experimental field is considered to be poorly supplied with nutrients.

Experiments on the optimal fertilization system for cotton planted the following year after the main sunflower and soybean crops grown through crop rotation systems in the alluvial soils of the Aral Sea irrigated meadow of the Republic of Karakalpakstan were carried out according to the following structure (Table 1).

Table-1

Cotton-related research experimental system, 2019

Options serial number	Past types of crops planted before cotton.	Annual norms of fertilizers applied to cotton, kg / ha			Use time, kg / ha							
		N	P_2O_5	K_2O	Before the plow			Along with planting	Flower bud formation		Flowering	
					N	P_2O_5	K_2O	N	N	K_2O	N	P_2O_5
1		160	100	75	-	70	40	30	65	35	65	30

2	Sunflowe r	200	140	100	-	100	50	50	75	50	75	40
3		240	170	125	-	120	60	70	85	65	85	50
4	Soybean	160	100	75	-	70	40	30	65	35	65	30
5		200	140	100	-	100	50	50	75	50	75	40
6		240	170	125	-	120	60	70	85	65	85	50

In cotton, each variant is 4.8 m wide, 50 m long and has a total area of 120 m2. The experiment was performed in 3 repetitions with a total area of 4320 m2.

The experiment area is initially divided into appropriate reversals and variants, and according to the experiment system, ammonium nitrate (34% N), urea (46% N), suprefos (N-10%, R2O5-22-23%) and potassium chloride (60% K2O) minerals fertilizers were applied.

Experiments, phenological observations, soil and plant sampling were carried out on the basis of the manuals "Methodology of field experiments" (Dospekhov, 1985), "Methodology of the State variety for testing agricultural crops " (1964), "Methods of field experiments" (2007).

Quantities of humus, general and mobile species of NPK in soil samples were carried out according to the methods "Methods of agrochemical, agrophysical and microbiological research in watering cotton fields" (1963) and "Methods of agrochemical analysis of soil and plants of Central Asia" (1977).

We analyzed the nutrient content of the plant throughout the developmental stages of cotton and at the end of the application period (Table 2).

NPK content per leaf is -1.61: 0.82: 0.81 in accordance with the norms of mineral fertilizers (N160P100K75, N200P140K100 and N240P170K125 kg.) applied at the end of the application period of the plant when caring for cotton after planting sunflowers; 1.63: 0.84: 0.84 and 1.65: 0.83: 0.83, respectively, these figures are 1.65: 0.77: 2.74; 1.65: 0.81: 2.75 and 1.68: 0.83: 2.75 per cent, 1.73: 1.11: 1.55 in cotton; 1.74: 1.14: 1.57; 1.75: 1.15: 1.58 percent and 1.43: 0.65: 1.24 in the bowl; 1.50: 0.67: 1.25; Was 1.51: 0.64: 1.23 percent.

Table-2

In plant organs according to the developmental phases of cotton amounts of NPK, in% (in the field planted with sunflowers)

Options serial number	The norm of mineral fertilizers applied to cotton, kg.	Periods of development										
		2-4 real leaves (28.05.19)	The period of flower bud formation (03.07.19)			flowering period, 23.07.19			end of validity, 03.09.19			
		Stem+leaf	leaf	Stem	Flower bud formation	Leaf	stem	Flower	Leaf	stem	Cotton	Cotton boll
Nitrogen, %												
1	$N_{160}P_{100}K_{75}$	2,68	3,87	2,90	3,71	3,45	2,81	3,70	1,61	1,65	1,73	1,43
2	$N_{200}P_{140}K_{100}$	2,75	3,85	2,90	3,74	3,42	2,85	3,74	1,63	1,65	1,74	1,50

3	$N_{240}P_{170}K_{125}$	2,74	3,85	2,91	3,70	3,43	2,80	3,75	1,65	1,68	1,75	1,51
Phosphorus, %												
1	$N_{160}P_{100}K_{75}$	1,67	2,20	1,43	2,18	2,21	1,60	2,32	0,82	0,77	1,11	0,65
2	$N_{200}P_{140}K_{100}$	1,75	2,27	1,42	2,17	2,25	1,61	2,34	0,84	0,81	1,14	0,67
3	$N_{240}P_{170}K_{125}$	1,76	2,27	1,43	2,20	2,24	1,62	2,34	0,83	0,83	1,15	0,64
Potassium, %												
1	$N_{160}P_{100}K_{75}$	1,35	1,29	2,41	2,35	1,23	2,25	2,85	0,81	2,74	1,55	1,24
2	$N_{200}P_{140}K_{100}$	1,37	1,30	2,43	2,34	1,26	2,26	2,86	0,84	2,75	1,57	1,25
3	$N_{240}P_{170}K_{125}$	1,37	1,32	2,42	2,35	1,31	2,25	2,87	0,83	2,75	1,58	1,23

Relatively acceptable levels of NPK in plant organs by the developmental stages of cotton were observed in areas planted with shade as a past crop (Table 3).

That is, the amount of NPK in the leaves at the end of the application period of the plant is 1.62: 0.85: 0.84; While 1.63: 0.88: 0.86 and 1.65: 0.87: 0.87 percent, these figures are 1.73: 0.85: 2.75 in the base; 1.75: 0.87: 2.78 and 1.75: 0.87: 2.78 per cent, 1.75: 1.15: 1.55 in cotton; 1.77: 1.17: 1.59 and 1.76: 1.16: 1.62 percent and 1.47: 0.65: 1.26 in the bowl; 1.49: 0.67: 1.29 and 1.48: 0.68: 1.29 percent.

In the area of sunflower planted options, the cotton yield is characterized by lower yields than in the area planted to shade crops. We certainly associate this with the fact that the sunflower crop removes high amounts of nutrients from the soil.

That is, in the study, the highest cotton yield was observed in 5 variants (36.7 centner) where mineral fertilizers were applied at a high N200P140K100 kg., norm in soybean-planted areas. Against the background of this crop, mineral fertilizers N240P170K125 kg / ha were applied, and in 6 variants the cotton yield was 1.7 centner (35.0) less than in 5 variants.

In the area where sunflowers are planted, mineral fertilizers N160P100K75, N200P140K100 and N240P170K125 kg., are applied to the cotton, and the cotton yield is 28.2; 30.9 and 31.7 centner respectively, in the areas where soybeans are planted, cotton is 6.7 compared to the options used in these norms; 5.8 and 3.3 centner respectively.

Therefore, it can be concluded that the application of the annual norm of cotton N160R100K75 and N200R140K100 kg / ha to the areas planted with shade as the main crop is highly cost-effective.

Conclusion / Recommendations.

1. In 2019 of the experiment, the amount of mineral nitrogen (N-NN4 + N-NO3) in the 0-30 cm layer of soil before planting cotton was 17.5 mg / kg in the area under winter wheat, 15.5 mg / kg in the area under sunflower, sesame seeds. mineral nitrogen in the

0-30 cm layer of soil (N-NN4) depending on the norms of mineral fertilizers (N160P100K75, N200P140K100 and N240P170K125 kg / ha) applied at the end of the application period of cotton, when the area is 17.1 mg / kg and 18.5 mg / kg in the area planted with soybeans? + N-NO3) is 19.8, 21.0 and 22.0 mg / kg in winter wheat, 22.7, 24.1 and 26.2 mg / kg in sunflower, 27.3 in sesame. 28.6 and 30.0 mg / kg and the highest values in the shade areas were 28.5, 30.6 and 32.2 mg / kg.

2. At the end of the cotton growing season, the highest dry mass in the area under winter wheat was 154.6 g / plant in 12 variants applied to N240P160K140 kg / ha, while the weight of cotton was 0.3 gram compared to the mineral fertilizer norm N200R140K100 kg / ha. was low. The norms of mineral fertilizers applied to cotton in the sown sesame area were slightly higher than the other options of N160P100K75, N200P140K100 and N240P170K125 kg / ha, but the dry mass of the plant was higher (136.5; 149.2 and 153.8 g / plant).
3. The highest cotton yield in the area under winter wheat and sunflower was 33.2-31.7 centner in cotton varieties N240P160K140 kg. applied in options 3 and 6, while the norms of mineral fertilizers applied to cotton in the area sown sesame were N160P100K75, N200P140 It can be concluded that N240P170K125 kg. had a positive effect on the increase in cotton yield, albeit slightly compared to other options (29.3; 33.4 and 33.8 centner).
4. When high-tech agro-techniques were applied to cotton fields in the following year, low norms of mineral fertilizers, not high norms, proved to be effective (34.9 centner in 10 variants applied to N160R100K75 kg , 36.7 in 11 variants fed to N200R140K100 kg. in 36 variants). ts / ha and 35.0 ts / ha of cotton were obtained in 12 variants fed with cotton at the rate of N240P160K140 kg. (Edited)Restore original

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UDC: 631.2

TRANSFORMATION PROCESSES IN TRADITIONAL AGRICULTURE OF SURKHAN OASIS

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Annotasiya. Ushbu maqolada mustaqillikning dastlabki yillarida o‘zbek xalqi an'anaviy dehqonchilik xo‘jaligining bozor iqtisodiyoti sharoitiga moslashish jarayoni Surxon vohasi misolida ko‘rib chiqildi. Xususan, mustaqillikkacha yerga egalik shaklining ahvoli, salbiy oqibatlari, mustaqillikdan keyin yangicha ijtimoiy iqtisodiy jarayonlar ta'sirida bozor iqtisodiyotiga mos sohadagi o‘zgarishlar, ekin turlari, ekish usullari va dehqonchilik mehnat qurollarining transformasiyaga uchrashi o‘rganildi. Mamlakatimiz qishloq xo‘jaligida xo‘jalik yuritishning uch shakli, ya'ni qishloq xo‘jaligi shirkatlari, fermer xo‘jaliklar va dehqon xo‘jaliklar vujudga kelishining Surxon vohasi dehqonlari ijtimoiy va xo‘jalik turmushiga ta'siri tarixiy va etnologik tahlil qilindi.

Kalit so‘zlar: Transformasiya, islohat, an'analar, zamonaviylik, daromad, bozor munosabatlari, mulkdor, tomorqa, shirkat, fermer.

Аннотация. В статье рассматривается процесс адаптации традиционного земледелия узбекского народа к условиям рыночной экономики в первые годы независимости на примере Сурхандарьинского оазиса. В частности, изучались состояние формы собственности на землю до обретения независимости, его негативные последствия, изменения в рыночной экономике после обретения независимости, виды сельскохозяйственных культур, методы посадки и трансформация сельскохозяйственных орудий под влиянием новых социально-экономических процессов. Историко-этнологический анализ влияния формирования трех форм хозяйствования в сельском хозяйстве страны, а именно сельскохозяйственных предприятий, фермерских и дехканских хозяйств, на социально-экономическую жизнь фермеров Сурхандарьинского оазиса.

Ключевые слова: трансформация, реформа, традиции, современность, доход, рыночные отношения, собственник, компания, фермер.

Abstract. This article is aimed at examining the process of adaptation of the traditional farming of the Uzbek people to the conditions of a market economy in the early years of independence on the example of the Surkhan oasis. In particular, the state of the form of land ownership before independence, its negative consequences, changes in the market economy, types of crops, planting methods and the transformation of agricultural tools under the influence of new socio-economic processes after independence were studied. In addition, it analyzes the historical and ethnological aspects of the impact of the emergence of three forms of farming - that is, agricultural companies, farms, and peasant farming, in agriculture on the social and economic life of farmers in the Surkhan oasis.

Keywords: Transformation, reform, traditions, modernity, income, market relations, owner, land, company, farmer.

Introduction. The formation of new agrarian relations and the process of integration into the world economic life led to significant changes in the socio-economic, economic and cultural life of the rural population during the years of independence in Uzbekistan. The ethnological analysis of the changes in the attitude to land, natural resources and the means of production in general in the worldview and in the psyche of the people, the processes of formation of the property class is not only of scientific but also practical significance. As a result of the intensification of ethno-cultural relations with other nations of the world, along with the preservation of traditional cultures, modernity began to appear.

The nature, climate, soil, water, and conditions of the Surkhan oasis have long been very conducive to farming here. As the President of the Republic of Uzbekistan Shavkat Mirziyoyev noted: “The Surkhan oasis has long been famous for its fertile soil, professional, tactical farmers who harvest two or three times a year. They are hard-working farmers of Surkhandarya, who supply cabbage and vegetables, herbs, melons, fruits, grapes and citrus fruits to the markets of our country in both winter and summer”. [1, 280].

Literature review and research methods. There are a number of studies on the history, culture, traditional economy, agricultural development of the population of the Surkhan oasis, which provide some information about the specific agriculture of the oasis. A number of historical and ethnographic works of such scientists as A.A.Askarov, A.Ashirov, B.Karmysheva, H.Berdiyev, S.N.Tursunov, E.O.Kobilov, were used as main sources of the article. In addition, the article studied a number of laws of the Republic of Uzbekistan, archival materials of normative legal acts and data included in the statistical collection.

Research Methodology: Scientific research methods such as structural and functional analysis, statistical comparison, analysis and synthesis were widely used in writing the article.

Analysis and results: According to archeologists, the first irrigated agriculture in our country was formed at the beginning of the second millennium BC in ancient Bactria, ie in the Surkhan oasis [2, 9-16; 3, 8-32]. This region belongs to the hot and dry climate zone. It is suitable for growing cotton and subtropical crops under artificial irrigation [4, 117].

The peoples of Central Asia had a form of inheritance of land ownership in the late nineteenth and early twentieth centuries. The introduction of valuable crops into agriculture had an impact on the further development of inherited land tenure and the development of agriculture. [5, 274].

Under the reign of the former Soviet regime, depriving a farmer of land, the reward of his labor, had far-reaching negative consequences. The sense of ownership, land ownership had diminished, and as a result peasant working for the common good had emerged. Under these conditions, which lasted almost seventy years "... the unique ability of the farmer to combine the qualities of both a laborer and a master has been completely lost ..." and eventually he "... was eventually turned into a hired worker

who benefited more from his monthly salary than from his monthly results of his job". [6, 23-24].

“Almost the majority of the population of Soviet villages was unaware of life in private ownership and did not not aspire to what they were unaware of, nor considered its advantages ....”

After the independence of Uzbekistan, a new era in the development of agriculture began, and it was very important to adapt agriculture to the requirements of a market economy.

From the first years of independence, Uzbekistan began to pave the way for the formation of a class of property owners. At that time, it was necessary to give land to farmers as a private property. The Constitution of the Republic of Uzbekistan states that “The economy of Uzbekistan, evolving towards market relations, is based on various forms of ownership” [7, 18]. The same case was also stated in the Law on Property of the Republic of Uzbekistan [8, 30].

In 1989, 240,000 families in the republic’s villages were homeless, and more than 1.8 million houses were in need of expansion to build and grow agricultural products. [9, 57]. Therefore, on the eve of independence and from the first years of independence, the government started to allocate lands to the local people as a private property for farming purposes.

After the adoption of the decree of the President of the Uzbek SSR "On the provision of fodder for livestock and poultry in private farms of the Republic and increase the production of livestock products" in May 1990, many rural families who had not owned land and property until then were provided with land and purchased livestock. Although, in 1990, 4,900 families were allocated 7,100 hectares of land for farming purposes this decree on the basis of this decree, almost 14,260 families in the oasis were in need of land in Surkhan oasis [10, 103].

The most important result of the agricultural reforms in Uzbekistan was the distribution of land to the population through the expansion of private farms, i.e. the allocation of irrigated land to private farms and orchards.

On January 21, 1991, the President of the Uzbek SSR I.Karimov made a decision to allocate 108.5 thousand hectares of irrigated lands from cotton fields to the population for private plots. On the basis of this decision, until May 12, 1991, 13233 hectares of land were allocated to 111849 families in Surkhandarya region. [11, 68]. Such measures led to a certain improvement in the living conditions of the rural population and an increase in the income of the population from private farms. By the end of 1991, the area used by private farms in the country increased to about 500,000 hectares. The Republican Association of Personal Assistant Farms were established to help private landowners and protect their interests.

Between 1992 and 1995, another 22,000 hectares of land in the Surkhan oasis were set aside for private plots and given to landless and low-income farmers. Most of the land allotted for this private plot was allocated to young families to form a private farm. The former Soviet regime in the oasis allocated 8,000 hectares of state farm land to farmers as private plots [12, 11]. The allocation of these lands for private plots changed the attitude of farmers to the land in a positive way. Families who received plots of land not only met their needs for potatoes, vegetables, fruits, and livestock

products, but also sold them at farmers' markets and contributed to the provision of food to the population. The process – giving away people extra irrigated land was really important and was a right decision. The ones who got the land began to earn money, felt free and independent as a landlord. [13, 65-66]. Since then, there were some changes in the social and domestic life of the population of the Surkhan oasis. These changes were primarily reflected in the improvement of living standards of farmers in the oasis from year to year.

During the years of independence, three promising forms of agricultural management in the country, namely, agricultural cooperatives (companies), farms and dehkan farms have been selected, the laws "On agricultural cooperatives (companies)", "On farms", "On dehkan farms" were adopted. At present, these forms of management and ownership of property have been enshrined in law. A mechanism has been developed to implement these laws. Now it is possible to choose the form of management depending on the conditions of the regions, population density and the type of main crops. In particular, it was found useful to establish agricultural companies in areas with large populations and limited land resources, growing cotton and grain on large areas.

First of all, it should be noted that land, which is the main means of production in all three types of management, cannot be private property. The Land Code of the Republic of Uzbekistan stipulates that land is state property [14, 19].

Agricultural lands are given to the permanent ownership of an agricultural company to carry out commercial agricultural production for the specified purpose [15, 89-93].

The Law on Farms has created great opportunities for the development of independent farms. Under this law, land is leased to a farm for a period of up to fifty years, but not less than thirty years. This means that the farm owns the land on a lease basis. The status of farms is defined as an independent business entity with the right of a legal entity, based on the joint activities of members of the farm who were engaged in the production of marketable agricultural products using land plots leased to him on a long-term basis.

The state protects the property rights of the farm to its own property. Unlike a member of a corporation, a farm owner also had full ownership of the produce he grew and could sell it wherever he wanted.

Ownership, use and disposal of property on farms is carried out by members of the farm by mutual agreement [16, 169-170].

New benefits had been established for dehkan farms, which were one of the forms of management. Because the main purpose, interest and importance of farming was that farming brough great benefits to the state and society, whether by bringing its products to market or by providing food for its family..

Dehkan farms were entitled to inherit land on a lifetime basis with the right to inherit in accordance with this law. Initially, the law limited the amount of land that could be owned by farmers, with the upper limit set at 0.35 hectares on irrigated land and 0.50 hectare on non-irrigated land, and up to 1 hectare in the desert and semi-desert regions.

Own houses, agricultural crops and saplings, trees, productive livestock, poultry, agricultural machinery, equipment, vehicles, intellectual property, as well as other property, crops, income (profit) in the law other unrestricted property may be the property of the dehkan farm. The state protects the property rights of the dehkan farm to its own property. [17, 182-187].

The territory of Surkhandarya region consists of plains, lowlands, river valleys, hills and hills, mountain slopes and mountains, which has a significant impact on the diversity of settlements of different ethnic groups, their specialization and the formation of infrastructure. [18, 31-34]. Therefore, taking into account the land structure and economic specialization of the region, they can be divided into two large regions, which differ sharply from each other.

The first region occupies a very large area in the Surkhan-Sherabad valley in the southern and central part of the region. Mainly plain and plain-mountainous areas in the region are engaged in irrigated agriculture, more precisely, in cotton, grain, vegetables, horticulture, beekeeping, silkworm breeding and dairy farming, sheep breeding for different purposes. The area of these districts is 51.0% of the region's territory, where 71.6% of the rural population lives and therefore 10 out of 14 districts belong to this zone.

The second zone includes Boysun, Sariosiya, Uzun and Altynsay districts specializing in mountain-pasture horticulture and cattle-breeding, sheep breeding for meat, wool and dairy purposes as well as horticulture and viticulture in river valleys. Of these districts, Boysun district corresponds to a typical mountain zone. Due to the fact that some villages in other districts are located on mountain slopes, streams and valleys, they can also be included in the mountain pasture zone. [19, 220].

From the past, agriculture has been practiced in these regions, taking into account the geographical and climatic conditions. Over the centuries, different types of crops have been localized. Especially in the early days of independence in the Surkhan oasis, crops were transformed and new features of agriculture developed. Many types of crops have been grown in the oasis, and a number of new crops have been developed. These types of crops were adapted to different geographical areas of the oasis depending on how they were cared for. For example, if new sorts of rice and melons used to be grown near the river, where water of the oasis was abundant, new types of oats and drought-resistant wheat varieties were localized in its mountainous and hilly areas [20, 415-421].

Although many new crops have been introduced into the Surkhan oasis, the locals have retained the basic features of ancient farming in their traditional farming. In other words, such a tradition ensures the preservation of many ethnographic features in the oasis-specific way of life and culture.

From ancient times, the people of the Surkhan oasis have used a variety of tools to facilitate and increase the efficiency of their labor in the process of farming. Farmers of the oasis paid special attention to the preparation of labor tools used in the cultivation of land among the tools of agricultural labor [21, 18-26].

A variety of labor tools such as hoes and shovels were widely used by local farmers to cultivate the land. The tools of agricultural labor are made by blacksmiths taking into account natural and local conditions. As a result of the transformational

processes that took place during this period, the tools of agricultural labor were also improving. Improvement of tools used in agriculture, in turn, had a positive impact on the development of agricultural production.

Conclusion / Recommendations: After analyzing the results of the study, the following conclusions were drawn, as well as a number of suggestions and recommendations have been made.

During the years of independence, a large-scale work has been done to develop agricultural activities in Uzbekistan. The social status of the farmer increased. The legal basis for agricultural activities has been created. The impact of this on the economic culture of the oasis population needs to be studied more ethnologically.

1. The remnants of the totalitarian system of land ownership have long had a negative impact on the oasis. It took a long time for a new-minded farmer to emerge in line with the market economy. This, of course, was the result of reforms in the field. These processes also need to be analyzed on the basis of many field studies.
2. An important economic, social, political and spiritual basis has been created for the development and prosperity of agriculture. In a market economy condition, modernization of agriculture has manifested itself in the form of entrepreneurship. Along with the development of agriculture, the development of organic agriculture, which has been a leader for centuries, involves the use of traditional methods of farming and modern scientific and technological advances.

Local crop types, planting methods, and agricultural labor tools have been transformed. As a result, agricultural productivity has increased significantly. This in turn has led to an economic improvement in the living standards of the population.

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UDC: 530.12:523

WORMHOLES WITH A NUT CHARGE IN HIGHER CURVATURE THEORIES

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Abstract: We consider scalarized wormholes with a Newman-Unti-Tamburino charge in both Einstein-scalar-Gauss-Bonnet and Einstein-scalar-Chern-Simons theories. By varying the coupling parameter and the scalar charge we determine the scalarized wormhole solutions, and their dependence on the Newman-Unti-Tamburino charge. We generalize these scalarized wormhole solutions in two ways. On the one hand, we include a Newman-Unti-Tamburino charge and on the other hand we consider besides the Gauss-Bonnet invariant also the Chern-Simons invariant.

Keywords: wormholes, scalar fields, NUT charge, black holes, higher curvature theories

Introduction. An alternative higher curvature invariant to study curvature-induced spontaneously scalarized black holes is the Chern–Simons invariant. However, in the static case of the Schwarzschild metric the invariant vanishes, and therefore no spontaneously scalarized Schwarzschild black holes arise. This is different for the Kerr metric, since rotation leads to a finite Chern–Simons source term for the scalar field[1], which should allow for spontaneously scalarized Kerr black holes. In order to learn about scalarized rotating Chern–Simons black holes without having to deal with the full complexity of the challenging set of the resulting coupled partial differential equations, one may first resort to the technically much simpler case and include a Newman-Unti-Tamburino (NUT) charge instead of rotation, as pursued successfully by Brihaye et al.[2,3].

To obtain traversable wormhole solutions the energy conditions must be violated. In General Relativity this can be achieved by the presence of exotic matter. However, by allowing for alternative theories of gravity traversable wormholes can be obtained without the need for exotic matter[4]. Employing the string theory motivated dilaton-Gauss-Bonnet coupling, static scalarized wormholes were shown to exist, and their domain of existence and their properties were studied before[5-7]. In the dilatonic case, the black hole boundary of the domain of existence corresponds to static dilatonic black holes[8]. For other coupling functions, which give rise to spontaneously scalarized Gauss-Bonnet black holes, the black hole boundary of the domain of existence of

scalarized wormholes consists of the corresponding spontaneously scalarized black holes [9].

Here we present the actions involving the Gauss-Bonnet and the Chern–Simons term and exhibit the equations of motion for both cases. We then discuss the boundary conditions, the conditions for the center, i.e., the throat (or equator), and the null energy condition. Subsequently we address the numerical procedure and present our results.

Action and equations of motion

We use the effective action for Einstein-scalar-higher curvature invariant theories in the following

$$S=\frac{1}{16\pi}\int\left[R-\frac{1}{2}\partial_\mu\phi\partial^\mu\phi+F(\phi)I(g)\right]\sqrt{-g}d^4x, \tag{1}$$

where R is the curvature scalar, and ϕ denotes the massless scalar field without self-interaction[10]. The scalar field is coupled with some coupling function $F(\phi)$ to an invariant $I(g)$. We choose the coupling function $F(\phi)$,

$$F(\phi)=\alpha\phi^2, \tag{2}$$

where α is the coupling constant, the simplest choice leading to curvature-induced spontaneous scalarization of black holes.

For the invariant $I(g)$ we make two choices, (i) the Gauss-Bonnet term

$$I(g)=R^2_{\mathrm{GB}}=R_{\mu\nu\rho\sigma}R^{\mu\nu\rho\sigma}-4R_{\mu\nu}R^{\mu\nu}+R^2, \tag{3}$$

and (ii) the Chern-Simons term

$$I(g)=R^2_{\mathrm{CS}}={}^*R^{\mu}{}_{\nu}{}^{\rho\sigma}R^{\nu}{}_{\mu\rho\sigma}, \tag{4}$$

where the Hodge dual of the Riemann-tensor ${}^*R^{\mu}{}_{\nu}{}^{\rho\sigma}=\frac{1}{2}\eta^{\rho\sigma\kappa\lambda}R^{\mu}{}_{\nu\kappa\lambda}$ is defined with the 4-dimensional Levi-Civita tensor $\eta^{\rho\sigma\kappa\lambda}=m^{\rho\gamma\sigma\tau}/\sqrt{-g}$. While both invariants are topological in four dimensions, the coupling to the scalar field ϕ via the coupling function $F(\phi)$ provides significant contributions to the equations of motion.

We obtain the coupled set of field equations by varying the action (1) with respect to the scalar field and to the metric,

$$\nabla^\mu\nabla_\mu\phi+\frac{dF(\phi)}{d\phi}I=0\ , \tag{5}$$

$$G_{\mu\nu}=\frac{1}{2}T^{(\mathrm{eff})}_{\mu\nu}\ , \tag{6}$$

where $G_{\mu\nu}$ is the Einstein tensor and $T^{(\mathrm{eff})}_{\mu\nu}$ denotes the effective stress-energy tensor

$$T^{(\mathrm{eff})}_{\mu\nu}=T^{(\phi)}_{\mu\nu}+T^{(I)}_{\mu\nu}, \tag{7}$$

which consists of the scalar field contribution

$$T^{(\phi)}_{\mu\nu}=\left(\nabla_\mu\phi\right)\left(\nabla_\nu\phi\right)-\frac{1}{2}g_{\mu\nu}\left(\nabla_\rho\phi\right)\left(\nabla^\rho\phi\right), \tag{8}$$

and a contribution from the respective invariant $I(g)$. For the chosen invariants we obtain (i)

$$T_{\mu\nu}^{(GB)} = \left(g_{\rho\mu}g_{\lambda\nu} + g_{\lambda\mu}g_{\rho\nu}\right)\eta^{\kappa\lambda\alpha\beta*}R^{\rho\gamma}{}_{\alpha\beta}\nabla_{\gamma}\nabla_{\kappa}F(\phi), \tag{9}$$

and (ii)

$$T^{(CS)\mu\nu} = -8\left[\nabla_{\rho}F(\phi)\right]\mathrm{T}^{\rho\sigma\tau\mu}(\nabla_{\tau}R^{\nu})_{\sigma} + \left[\nabla_{\rho}\nabla_{\sigma}F(\phi)\right]^{*}R^{\sigma(\mu\nu)\rho}. \tag{10}$$

To obtain static, spherically symmetric wormhole solutions with a NUT charge N we assume the line element to be of the form

$$ds^2 = -e^{f_0}\left(dt - 2N\cos\theta d\varphi\right)^2 + e^{f_1}\left[dr^2 + r^2\left(d\theta^2 + \sin^2\theta d\varphi^2\right)\right]. \tag{11}$$

All three functions, the two metric functions f_0 , f_1 and the scalar field function ϕ, depend only on the radial coordinate r .

When we insert the above line element (11) for the metric and the scalar field into the scalar-field equation (5) and the Einstein equations (6) with effective stress-energy tensor (7), we obtain five coupled, nonlinear ordinary differential equations. However, these are not independent, since the θ-dependence factorizes, and one ordinary differential equation can be treated as a constraint. This leaves us with three coupled ordinary differential equations of second order. Note that in case (i) the system can be reduced to one first order and two second order ordinary differential equations.

Throats, equators, and boundary conditions

In order to obtain scalarized nutty wormhole solutions, we need to impose an appropriate set of boundary conditions for the ordinary differential equations, which we now address. We first introduce the circumferential (or spherical) radius

$$R_C = e^{\frac{f_1}{2}}r, \tag{12}$$

of the wormhole spacetimes, which may possess one or more finite extrema. If there is a single finite extremum, this corresponds to the single throat of the respective wormholes. Here we will mainly consider such single throat wormholes, thus featuring a single minimum. But wormholes with more extrema may also exist. They might, for instance, possess a local maximum surrounded by two minima. The local maximum would then correspond to their equator, while the two minima would represent their two throats, making them double throat wormholes.

To obtain the first set of boundary conditions we therefore require the presence of an extremum of the spherical radius at some $r = r_0$. This yields

$$\left.\frac{dR_C}{dr}\right|_{r=r_0} = 0 \Leftrightarrow \left.\frac{df_1}{dr}\right|_{r=r_0} = -\frac{2}{r_0}. \tag{13}$$

Some details on the condition $R_C''(r_0) > 0$ are given in the Appendix. In the following we will refer to the two-dimensional submanifolds defined by $r = r_0$ and $t = const$. as the center of the configurations.

We obtain the second set of boundary conditions by requiring the usual boundary conditions for $r \to \infty$. The associated asymptotic expansions of the metric functions and the scalar field read

$$f_0 = -\frac{2M}{r} + O\left(r^{-3}\right), \tag{14}$$

$$f_1 = \frac{2M}{r} + O\left(r^{-2}\right), \tag{15}$$

$$\phi = \phi_\infty - \frac{D}{r} + O\left(r^{-3}\right), \tag{16}$$

where M denotes the mass of the wormholes and D corresponds to their scalar charge. The quantity ϕ_∞ represents the asymptotic value of the scalar field. We note that all higher order terms in the expansion can be expressed in terms of M, D and ϕ_∞. Thus the solution is uniquely determined by these quantities (and parameters of the theory).

Energy conditions

In wormhole solutions the null energy condition

$$T_{\mu\nu}n^\mu n^\nu \geq 0, \tag{17}$$

must be violated, where n^μ is any null vector ($n^\mu n_\mu = 0$). Thus it is sufficient to show that null vectors exist, such that $T_{\mu\nu}n^\mu n^\nu < 0$ in some spacetime region. Such a null vector n^μ is given by $n^\mu = \left(1, \sqrt{-g_{tt}/g_{\eta\eta}}, 0, 0\right)$, and thus $n_\mu = \left(g_{tt}, \sqrt{-g_{tt}\,g_{\eta\eta}}, 0, 0\right)$. The null energy condition then takes the form

$$T_{\mu\nu}n^\mu n^\nu = T_t^t n^t n_t + T_\eta^\eta n^\eta n_\eta = -g_{tt}\left(-T_t^t + T_\eta^\eta\right). \tag{18}$$

Consequently the null energy condition is violated when

$$-T_t^t + T_\eta^\eta < 0. \tag{19}$$

Alternatively, considering the null vector

$$n^\mu = \left(1, 0, \sqrt{-g_{tt}/g_{\theta\theta}}, 0\right), \tag{20}$$

the null energy condition is violated when

$$-T_t^t + T_\theta^\theta < 0. \tag{21}$$

These conditions have been addressed before for various scalarized wormhole solutions [9-11].

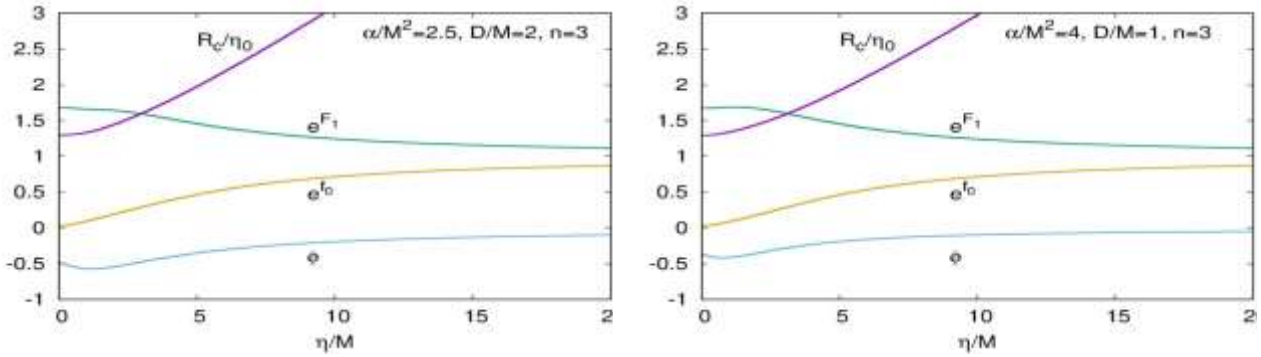
Results. In order to solve the coupled Einstein and scalar field equations numerically we introduce the inverse radial coordinate $x = 1/r$. The asymptotic region $r \to \infty$ then corresponds to $x \to 0$. In this region the expansion of the metric functions and the scalar field reads (see Equations. (14)-(16))

$$f_0 = -2M\,x + O\left(x^3\right), \quad f_1 = 2M\,x + O\left(x^2\right), \quad \phi = \phi_\infty - D\,x + O\left(x^3\right). \tag{22}$$

We treat the system of ordinary differential equations as an initial value problem, for which we employ the fourth order Runge Kutta method. From the above expansion we read off the initial values,

$$f_{0,\mathrm{ini}} = 0, \quad f'_{0,\mathrm{ini}} = -2M, \quad f_{1,\mathrm{ini}} = 0, \quad f'_{1,\mathrm{ini}} = 2M, \quad \phi_{\mathrm{ini}} = 0, \quad \phi'_{\mathrm{ini}} = -D. \tag{23}$$

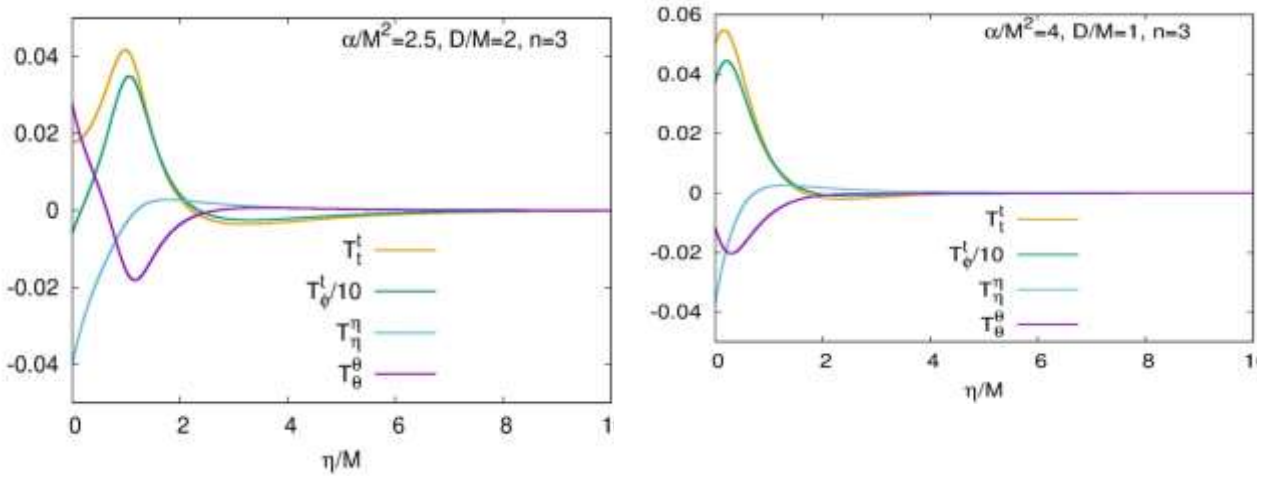
The computation then starts at spatial infinity, $x = 0$, and ends at the center at some finite $x = x_0$, where the condition (13) is reached.



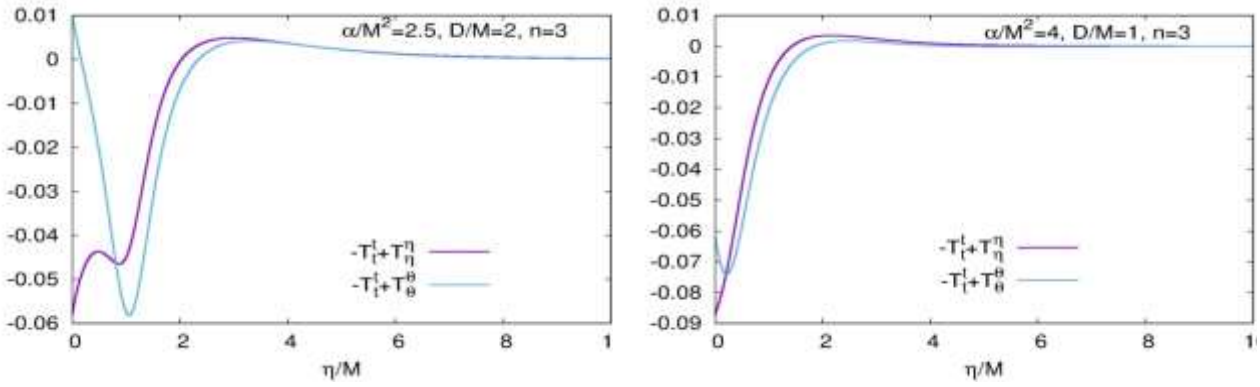
a) b)

Figure 1. Examples of nutty wormhole solutions: Metric profile functions e^{f_0}, e^{F_1}, ***scalar field function*** ϕ, ***and scaled circumferential radius*** R_c / η_0 ***vs radial coordinate*** η / M ***; (a) Gauss-Bonnet with parameters*** $\alpha / M^2 = 2.5$, $D / M = 2$ ***and*** $n = N / M = 3$. ***(b) Chern-Simons with*** $\alpha / M^2 = 4$, $D / M = 1$ ***and*** $n = N / M = 3$.

By following the above numerical procedure we obtain the sets of nutty wormhole solutions for both invariants $I(g)$. Here we demonstrate some typical solutions for both cases. We exhibit in Figure. 1 the metric profile functions e^{f_0}, e^{F_1}, and the scalar field function ϕ versus the radial coordinate η / M for the Gauss-Bonnet invariant (a) and the Chern–Simons invariant (b), choosing parameters $\alpha / M^2 = 2.5$, $D / M = 2$ and $n = N / M = 3$, and $\alpha / M^2 = 4$, $D / M = 1$ and $n = N / M = 3$, respectively. The figures also show the circumferential radius R_c / η_0 versus η / M. As required, R_c reaches an extremum at the center $\eta = 0$. We note that the solutions have rather similar properties for both invariants.



a) b)



c) d)

Figure 2.Examples of nutty wormhole solutions: (c) and (d) stress-energy tensor components T_t^t, T_ϕ^t, T_η^η, ***and*** T_θ^θ ***vs radial coordinate*** η / M ***;(e) and (f) null energy condition conditions*** $-T_t^t + T_\eta^\eta \geq 0$ ***and*** $-T_t^t + T_\theta^\theta \geq 0$ ***vs radial coordinate*** η / M **.**

To see that the wormhole solutions violate the energy conditions, we inspect the components of the effective energy momentum tensor, T_t^t, T_ϕ^t, T_η^η, and T_θ^θ. These are shown for the same solutions and the Gauss-Bonnet and Chern–Simons invariants in Figures. 2(a) and 1(b), respectively. In particular, we note, that the component T_η^η is negative in the vicinity of the center for both invariants. Moreover, all components are negative in some region of the spacetime. We exhibit in Figures. 1(c) and 1(d) the null energy conditions $-T_t^t + T_\eta^\eta \geq 0$ and $-T_t^t + T_\theta^\theta \geq 0$ for the Gauss-Bonnet and Chern–Simons invariants, respectively. The figures clearly demonstrate the null energy condition violation for both invariants.

Conclusions. We have investigated scalarized wormhole solutionswith a NUT charge in these higher curvature theories. The presence of a NUT charge leads to solutions with a Misner string on the polar axis. However, the dependence of the polar angle factorizes and thus only a set of coupled ordinary differential equations for the metric functions and the scalar field arises. Moreover the usual boundary conditions at spatial infinity are retained.

Solving numerically the ordinary differential equations we have obtained scalarized wormhole solutions a NUT charge for both higher curvature invariants. These wormhole solutions possess a minimum of the circumferential radius, that arises naturally in these solutions, and that is identified with the wormhole throat. When integrating the ordinary differential equations beyond the throat, a maximum may be encountered, that would correspond to an equator.

The presence of a NUT charge can be viewed as model for learning about scalarized rotating wormhole solutions. Their construction still represents a challenging task, not only because complicated sets of coupled partial differential

equations need to be solved, but also because the proper conditions for the throat need to be formulated together with the proper set of junction conditions.

Acknowledgement

We gratefully acknowledge our German partners from the University of Oldenburg, Professor Jutta Kunz and Professor Burkhard Kleihaus, for their close assistance in preparing this article.

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UDK 378:63(575.146)(091)

BALANCE OF TEMPERATURE IN SOLAR COLLECTORS BY AERODYNAMIC METHODS

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Annatatsiya. Ayni vaqtdagi Quyosh kollektorlarida tashqi temperatura $+10^0$ ….$+15^0$S gacha bo'lganda kollektorlar o'ziga yetarli issiqlik energiyasini to'play olmaydi. Shuning uchun mavsumiy kollektorlarni yaratish kerak. Quyosh kollektorlarini samaradorligini oshirish orqali quritish shkaflaridagi meva va sabzavotlarni tez va sifatli quritib olish imkoniyati mavjud bo'ladi. Kollektorlar asosan o'ziga tushgan issiqlik energiyasini uzoq muddat davomida saqlab turishi kerak.

Аннотация. В существующих солнечных коллекторах при температуре наружного воздуха $+10^0$ ….$+15^0$ градусов коллекторы не могут накапливать достаточно тепловой энергии. Поэтому необходимо создавать сезонные коллекторы. Повышая эффективность солнечных коллекторов, можно будет сушить фрукты и овощи в сушильных шкафах быстро и эффективно. Коллекторы должны надолго сохранять получаемое тепло.

Abstract: At present solar collectors, when the outside temperature is + 10 ^{0}C.... + 15^0 C degrees, the collectors cannot store enough heat energy. It is therefore necessary to create seasonal collectors. By increasing the efficiency of solar collectors, it will be possible to dry fruits and vegetables in drying cabinets quickly and efficiently.Collectors need to retain the heat they receive for a long time.

Kalit so'zlar: Kollektor gelioquritgich,aerodinamika,qoraga bo'yalgan toshlar,qoraga bo'yalgan bakalashkalar, temperatura, gradus, konvektivli quritish shkaf, quritgich.

Ключевые слова: Коллекторная солнечная сушилка, аеродинамика, камни, окрашенные в черный цвет, ракушки окрашены в черный цвет. температура, градус, конвективный, шкаф, сушилка.

Key words: Solar collector dryer, aerodynamics, stones painted black, shells painted black. temperature, degree, convective, cabinet, dryer.

Introduction. Solar energy, which is the main source of renewable energy in Uzbekistan, is one of the leading renewable energy sources. This means that this type of energy can be widely used in various sectors of the economy. Wet fruits can be stored in separate conditions for 5-6 months. The quality of such stored fruits, vegetables and grapes decreases, the physical weight decreases. That is why it is important to dry the fruit. In our country, the luminosity of the sun throughout the year is 270-300 days, and the maximum power of solar radiation per square meter of surface

placed perpendicular to the sun's rays reaches 1 kW. During the year, the total amount of solar energy per square meter of the horizontal surface of the territory of the Republic is 1650-1750 kWh, which is equal to the heat energy released during the combustion of 140-150 kg of petroleum fuel[1].

Literature revew. There are natural and artificial methods of drying agricultural products. While the natural methods are air-dried and solar-powered (solar drying), there are many methods of artificial drying. These include convective, infrared, conductive, acoustic waves, and vacuum drying. One of the most common methods today is the convective method of drying products. This method is done by transferring the heat energy of the heated air to the product being dried. Drying of products is carried out by the energy transferred to them, evaporating the moisture in them and removing them by heat. This method is implemented in tunnel, chamber, turbine, belt, drum and shaft devices. The quality of products dried by this method does not differ from the products obtained by sublimation. Dried fruits and plants soaked in liquid quickly and completely return to their original state. The smell, taste, color and vitamins of raw products are maximally preserved during the drying process.

Currently, the demand for seasonal convective solar collectors is high because convective solar collectors cannot provide enough heat energy to the drying cabinet due to heavy rainfall in autumn and spring. The recommended solar collector provides sufficient heat to the drying cabinet for efficient operation in all seasons. Materials needed to make a convective solar collector;

1. Sharp stones painted black (black moth).
2. Polycarbonate or transparent keel, glass.
3. The wooden rack is 4 × 4.5 cm thick.
4. Glass wool.
5. Black water-filled cans.
6. Twist mix.
7. Pipe.

Research Methodology. The advantage of the collector is that it retains the energy absorbed and absorbed for a long time. Depending on the season, black painted stones or black bottles filled with water are placed. For example, in the summer months, more heat-retaining materials are placed inside the collector, because the daytime heat is hot, so the drying cabinet has enough heat energy. Excess solar energy entering the collector is stored by the black stone and water-filled shells inside the collector. Due to the cooling of the heated collector, the fruit inside the cupboard continues to dry even at night. Due to the long drying time, it is possible to dry more fruits in less time [1]. In winter, the collector should not contain substances and materials that absorb solar heat. not enough heat is provided. Collectors built on soil or concrete absorb most of the heat they receive. This reduces the efficiency of the collectors. To prevent this, the lower part of the collector should be covered with one or two layers of fiberglass with poor thermal conductivity. In order to keep the hot stones inside the collector warm for a long time, racks of the required length with a thickness of 4 × 4.5 cm are placed on the glass parallel to the size of the black-painted stones, and large black stones are collected first. As a result, the heat energy of the heated stones does not pass to the concrete or the ground. To place the stones in the collector in an orderly manner,

the stones should not fall between the parallel wooden racks. Air aerodynamics are also taken into account in the solar collector. The air from the openings in the front of the collector reaches the drying cabinet in three different ways.

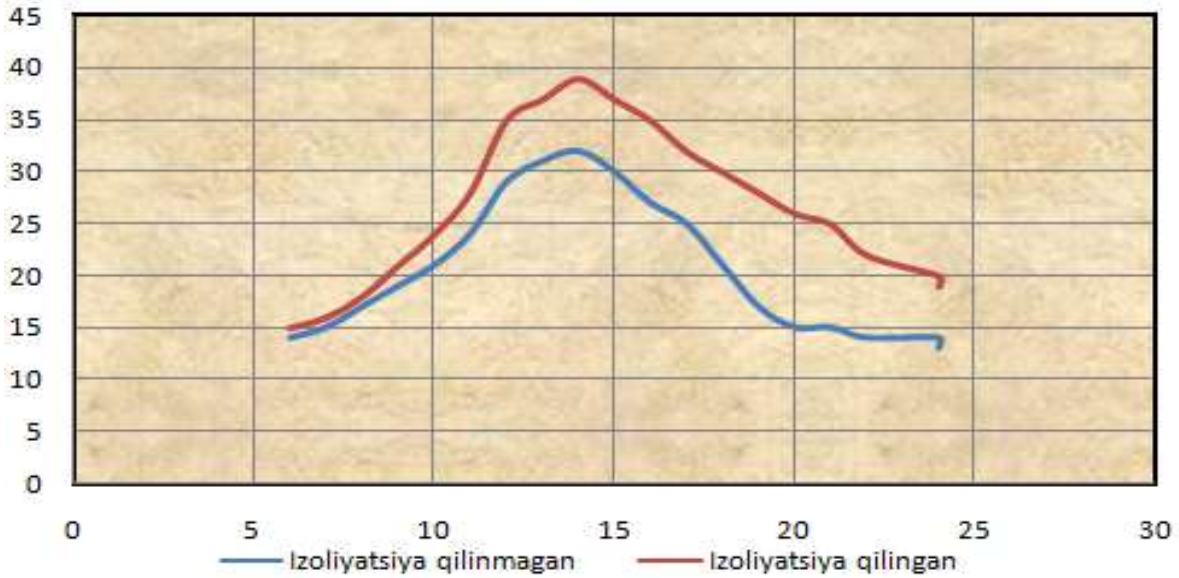
Analysis and results.

1. Between the stones through the pipes: through the pipes (metal pipe) placed between the stones, the air velocity increases and the heat moves towards the cabinet.

2. By parallel wooden racks: in the evening, when the outside temperature drops, it is possible to transfer the heat energy under the hot stones from the parallel wooden racks to the cabinet by convection.

3.The stones, between the shells: the air that enters the collector through the hole, the hot stones, the hot air that passes through the hot shells and goes to the convection drying cabinet.

As a result, it is possible to maintain the temperature in the drying cabinet at 50^0-60^0 C for a longer period of time. The results show that the heat retention times for 24



hours with thermally insulated, aerodynamically operated collector, and thermally insulated and non-aerodynamically collected collectors are shown in the following graph. The graph shows the temperature on the Y axis from 0^0…. $+45^0$degrees. 0-30 hours on the X axis.

$$\cos i = Q_{nur} + Q_{kon} + Q_{AB} + Q_B = C\left[\left(\frac{T}{100}\right) - \left(\frac{T^u}{100}\right)\right] + \propto (t_1 - t_0) + Q_{AB} + Q_B \quad (1)$$

Here $\propto$ is the heat transfer coefficient, $\propto$ = 5.7 + 3.8th, there is the air velocity [2]. (1) formula for the heat exchange air velocity inside the collector indicates that If

the air aerodynamics inside the collector is not good, if there is no possibility to control the air velocity inside, the heated air does not reach the drying cabinet well, so the fruit inside the cabinet does not dry well [3]. By the aerodynamic method inside the collector, wind flow occurs at different temperatures at three different speeds. Moisture in the fruit does not evaporate quickly, it takes a long time for the fruit to dry. It should be noted that when making collectors, the device itself should not absorb heat inside the collector. The efficiency of our recommended collector is close to the efficiency of the vacuum collector. In the construction of solar collectors, physicists Joseph Stefan, Ludwig Bolsman, Reley-Gins, Fure, Vinn are required to build on the basis of these laws, knowing the laws of displacement. Black-painted rocks and water-filled shells emit electromagnetic radiation of varying wavelengths as they heat up. The temperature of an object, its heat radiation, occurs in an invisible part of the spectrum. When we look at the scale of the atoms that make up an object, thermal radiation is the emission of photons by excited atoms. It is necessary to take into account the latitude of the land on which the surface of the solar collector is built. The temperature inside the collector is increased by allowing sunlight to fall perpendicular to the surface of the collector. For the city of Karshi, in the summer months it is$38^0 \div 39^0$ [2]. Most of the solar energy falls on the infrared region of the spectrum, and almost half on the wavelength range of the spectrum from $4 \cdot 10^{-7}\ m$to $7 \cdot 10^{-7}\ m$ [1]. In summer, the temperature inside the collector is $65^0 \div 75^0$ available. The outer surface of the collector can be covered with transparent glass, keel or polycarbonate. It is advisable to use clear glass in windy places.

Conclusion. In conclusion, scientists have predicted that humanity will eventually have to turn to the Sun, the earth's main source of energy. [5] With the improvement of solar collectors, the temperature inside the drying cabinet can also be balanced. Depending on the season, melons and fruits can be packed in the drying cabinet.

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