



# ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING

**KHOREZMSCIENCE.UZ**





## CONTENTS

<b>Section 1. MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY.....</b>	<b>4</b>
MADRAKHIMOVA FERUZA RUZIMBAEVNA /// DEVELOPMENT OF CRITICAL THINKING IN THE PROCESS OF MEDIA LITERACY AND MEDIA EDUCATION.....	4
URAZBAEVA DILBAR ABDULLAEVNA /// THE NEED TO CONDUCT RESEARCH ON THE QUALITY OF LIFE IN ONCOLOGICAL PATIENTS.....	8
<b>Section 2. ACTUAL PROBLEMS OF NATURAL SCIENCES.....</b>	<b>14</b>
OTAEV ODILBEK, ATAJANOVA SHIRIN MASHARIPOVNA, ABDULLAEV IKRAM ISKANDAROVICH, IBRAGIMOV SHODLIK /// TERMITE INFESTATION IN HISTORICAL BUILDINGS JUMA MOSQUE IN ICHAN-KALA OF CITY KHIVA (UZBEKISTAN).....	14
<b>Section 3. MODERN PROBLEMS OF PHILOLOGY AND LINGUISTICS.....</b>	<b>24</b>
MASHARIPOVA NARGIZA, GAYRATOVA GOZAL /// MERONYMY RELATIONS AND ITS TYPES.....	24
MASHARIPOVA NARGIZA, MATKARIMOVA SHOKHISTA /// SEMANTIC RELATIONS: SYNONYMY AND PLESIONYMY.....	28
JUMATOV RASHID YANGIBAEVICH /// PARADIGMATICS OF LOCATIVE SYNTAXEMES REPRESENTED BY TOPONYMS IN THE FUNCTION OF ADVERBIAL MODIFIER OF PLACE IN THE UZBEK LANGUAGE.....	31
MAHMUDOVA UMIDA URAL KIZI, NEGMATOVA NIGORA BEGMAT KIZI /// LINGUOCULTURAL FEATURES OF TRANSLATION STUDIES.....	36
MUKIMOVA GULNORA RASHIDOVNA, NEGMATOVA NIGORA BEGMAT KIZI /// THE ROLE OF PHYTONYMS IN THE SYSTEM OF METAPHORICAL TRANSFER IN THE WORKS OF ALISHER NAVOI.....	39
<b>Section 4. MODERN PROBLEMS OF TOURISM AND ECONOMICS.....</b>	<b>44</b>
TADJIYEV BEHZOD UMIDJANOVICH /// NEW OPPORTUNITIES OF SMALL BUSINESS AND ENTREPRENEURSHIP IN NEW UZBEKISTAN.....	44
ABDULAZIZ ABDUMUMINOVICH MATRUZIEV /// ASSESSMENT OF THE INFLUENCE OF FACTORS ON THE QUALITY MANAGEMENT PROCESS OF HEAT SUPPLY ENTERPRISES.....	51
ABDULAZIZ ABDUMUMINOVICH MATRUZIEV /// THE VALUE OF THE HEAT SUPPLY SERVICES SECTOR IN THE SOCIO-ECONOMIC LIFE OF SOCIETY.....	56



**Section 5. MODERN PROBLEMS OF TECHNICAL SCIENCES.....60**

**KHASANOV ABDURASHID SALIEVICH, SIROJOV TALANT TOLIBOVICH /// EXTRACTION OF IRON FROM COPPER SMELTER WASTE.....60**

**SADIKOVA MUXAYO MURATOVNA, NOSIROVA ELNORA MAXMUD QIZI /// CURRENT STATUS OF PROBLEMS AND ISSUES IN RESEARCH AND DEVELOPMENT OF EFFECTIVE ENGINEERING MODIFIED COMPOSITE MATERIALS AND COATINGS.....67**

**KAMOLIDDIN JURABOEVIH RUSTAMOV /// ANALYSIS OF TECHNICAL SOLUTIONS FOR THE PRODUCTION OF MULTIFUNCTIONAL MACHINES.....71**

**KAMOLIDDIN JURABOEVIH RUSTAMOV, ILHOM IKROMJANOVICH USMONOV /// PROSPECTS FOR USE OF ELECTROMAGNETIC DUMP TRUCKS IN QUARIES.....77**

**Section 6. ACTUAL PROBLEMS OF HISTORY, PHILOSOPHY AND SOCIOLOGY.....84**

**AMETOV TEMIRBEK ALMASBAEVICH, BERDIMURATOV MARAT ESEMURATOVICH /// MODERN DIRECTIONS OF EDUCATION/ AND VOCATIONAL TRAINING FOR YOUNG PEOPLE.....84**

**SHERMANOV ISOBEEK CHILMAMATOVICH /// LAWS OF SOCIAL AND SPIRITUAL DEVELOPMENT OF BIOTECHNOLOGICAL PROCESSES...90**

**ALIDJANOVA LAZIZAXON ABBASOVNA /// PROBLEMS OF HUMAN HEALTH AND BIOETHICS IN ISLAMIC THEOLOGY.....94**

**ABURAKHMANOV ALIMARDON ABDUSALOMOVICH /// THE NEED FOR THE FORMATION OF ECO-ETHICAL THINKING IN THE SYSTEM OF SOCIETY AND NATURE RELATIONS.....98**

**ASATULLOEVI INOMJON ABOBAKIR UGLI /// THE DEVELOPMENT OF PHILOSOPHICAL IDEAS ABOUT THE SOUL IN WESTERN PHILOSOPHY.....103**

**NAVRUZOV OYBEK EGAMKULOVICH /// THE ROLE OF THE SOCIAL ENVIRONMENT IN FORMING THE EDUCATIONAL VALUES OF YOUTH IN FAMILY AND EDUCATIONAL INSTITUTIONS.....108**

**SAFOEVA SADOKAT NASILLOEVNA /// TEXT-REALITY INTEGRATION AND SOCIOLOGICAL ANALYSIS OF LITERARY TEXT.....114**

**Section 7. ACTUAL PROBLEMS IN MODERN ART AND ARCHITECTURE**

**KHOLBOY KHASANOVICH KHASANOV /// THE ROLE AND IMPORTANCE OF USING NEW PEDAGOGICAL TECHNOLOGIES DURING THE DRAWING OF THE “GUDON” HEAD IN PENCIL DRAWING LESSONS.....119**





## MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY

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### DEVELOPMENT OF CRITICAL THINKING IN THE PROCESS OF MEDIA LITERACY AND MEDIA EDUCATION

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**Annotation:** Mazkur maqolada mediasavodkhonlik va mediata'lim jarayonida tanqidiy fikrlashni rivojlantirish masalalari haqida so'z boradi. Mediasavodxonlik, mediata'lim, mediamuhit, mediamatn so'zlariga ta'rif berilgan bo'lib, talabalarda tanqidiy fikrlashni kuzatish, uning ilmiy nazariy asoslari o'rganilgan. Muallif pedagog ma'lumotlarga tayanib, mavjud ilmiy adabiyotlar asosida axborotlashgan jamiyatda mediasavodxonlikni rivojlantirish va tanqidiy fikrlashning o'ziga xos jihatlarni o'rganan.

**Kalit so'zlar:** Mediasavodxonlik, mediata'lim, mediamatn, mediamuhit, tanqidy fikrlash, talim, talaba, internet, ahborot, globallashuv.

**Аннотация:** В данной статье рассматриваются вопросы медиаграмотности и развития критического мышления в процессе медиаобразования. Даются определения понятиям медиаграмотность, медиаобразование, медиасреда, медиатекст, изучается наблюдение за критическим мышлением учащихся, его научно-теоретические основы. Автор исследовал уникальные аспекты развития медиаграмотности и критического мышления в условиях информационного общества, опираясь на педагогические данные и опираясь на имеющуюся научную литературу.

**Ключевые слова:** Медиаграмотность, медиаобразование, медиатекст, медиасреда, критическое мышление, образование, студент, Интернет, информация, глобализация.

**Abstract:** This article discusses the issues of media literacy and the development of critical thinking in the process of media education. The words media literacy, media education, media environment, media text are defined. The formation of critical thinking among students, its scientific and theoretical foundations were also studied. On the basis of pedagogical information, the author studied and analyzed the unique aspects of the development of media literacy and critical thinking in the information society based on the existing scientific literature.

**Key words:** Media literacy, media education, media text, media significance, critical thinking, education, student, Internet, information, globalization.

**Introduction.** Today's Internet networks and news media provide the audience with a variety of information in terms of form and content. This requires each person to understand and critically analyze, to determine the aesthetic and artistic value of media texts (that is, messages that contain information and are transmitted using communication tools), and the possibilities of their personal development. These data need critical judgment and independent analysis.

First of all, every child should learn to think independently, to think on the basis of knowledge of facts and laws based on national and historical traditions. Therefore, it is necessary to teach him to work with information in a broad sense. This means that it is necessary to form independent critical thinking. The process of critical reflection and analysis of works of media culture is called critical media literacy. This, according to one of the American researchers, L.M. Simeli, helps educators and students develop a critical position when perceiving or thinking about media texts. In order to develop critical media literacy, educators and students should first study the initial ideas about media texts, critically examine the situation depicted or hidden in the media text. Also, he must distinguish truth from half-truth, truth from error, fact from fiction, impartiality from bias (1). According to many researchers, the problem of critical media literacy is an integral part of media competence, which implies the formation of the ability to make independent assessments and critical understanding.

**Main Part.** Media literacy helps students critically engage with the media while understanding its importance in life. A media-literate student evaluates media texts critically and consciously, maintains a critical distance from popular culture, and can resist media manipulation. Media literacy training provides students with the following opportunities: - development of skills, knowledge and attitudes necessary to analyze the methods of active construction of reality by mass media;

- to develop the skills, knowledge and attitudes necessary to analyze the methods of active construction of reality by mass media;

- to gain knowledge about the social, cultural, political and economic importance of these structures and the values they promote;

- to develop the appreciation (evaluation) of media texts and level of aesthetic perception;

- to decode the media texts in order to recognize and evaluate cultural values, practical significance, ideas in them;

- recognition, analysis and application of various technical uses and creation of media texts;

- to know that the creators (builders) of media texts do it based on the following different motives (control, pressure, etc.);

- to understand that each person participates in the selective and analytical process of researching media texts. This process and the meanings associated with it depend on psychological, social and natural factors. Media literacy is the ability to acquire, interpret, analyze and create media texts. Media literacy is the ability to use, analyze, evaluate and communicate messages in various forms (2). It is the process of preparing a media literate person who has developed the ability to perceive, create, analyze, evaluate media texts, understand the socio-cultural and political context of media activities in the modern world, and representational systems used by media. The activity done by such person in society and social life will be related to civic responsibility" (3). The media literacy movement is a movement created to help people understand, create and evaluate the cultural significance of audiovisual and printed texts. Everyone can be media literate. It can analyze evaluate and create the print and electronic media texts (4).

As you can see above, although there are some inconsistencies in the definitions of different authors, the central element of media literacy is considered to be the process of independent critical understanding of various media messages.

One of the most important tasks of media education is to form students' skills of full understanding and critical analysis of media texts. If students learn to analyze and understand the content of the information they are receiving, they will be able to think and make creative decisions in the future. Critical analysis of various messages spread through mass media is not a profession, but modern life is a way of understanding" (5). Media text analysis is interpreted as a method of studying the message expressed in television, film, press material, website, etc., in order to develop independent thinking, critical thinking, and aesthetic taste in students, by knowing its individual aspects, components, and artistic uniqueness.

The analysis of media texts is considered in close connection with the following concepts:

- media literacy
- the ability to analyze and synthesize spatio-temporal reality, the ability to "read" media text;
- the impact of media texts on the audience: in the field of education and training, the formation of consciousness, behavior, attitudes, reactions, responses, information dissemination, etc.;
- media text interpretation - the process of translating the media message into the language of the perceiving person;
- media perception
- perception of media reality, feelings and thoughts of the authors of this media text. Media text is defined as the formation of the skills of purposeful multifaceted perception of information and multifaceted evaluation of audiovisual works of art (6). Its analysis includes the following components: determining the type of mass media and the category of the message, searching for possible errors and inaccuracies in the media text, features of the media language, expressive means, determining the potential addressee (audience type, social status), determining the purpose of the media message, the goals of this media text and compatibility with means, etc.

Text, as an integral functional structure, is open to various meanings existing in the system of social relations. It is manifested in the unity of open and hidden, non-verbalized meanings, direct and secondary, hidden meanings. The uniqueness of the media text is that it "contains not only an objective fact, but also its subjective re-formation. It reflects the feelings of the author, his attitude to this fact, evaluation, interpretation. In the final pictorial summarization of this fact, we are told the worldview of the creator, his ideological, philosophical and aesthetic views are revealed. By evaluating them, we investigate, clarify, form our attitude to the world, and sometimes rediscover the world around us in the figurative form of art " (7).

Thus, the media text not only carries the burden of information, but also becomes the result of the communication of subjects participating in the process of creating and perceiving media information and the creative understanding of its essence, because the works of media culture, like any artistic text, in a broad sense are "thoughts about ideas, experiences, experiences, words about are texts about texts".

V.S. Bibler's "Dialogue of Cultures" individuals, persons, social groups, peoples, historical periods, cultures of countries, etc. they engage in dialogic communication with each other. They continuously interact and thereby mutually enrich each other and complement each other. The problem of analyzing texts of different nature is one of the leaders.

Each media text has its own subject, author, speaker, writer. The two things that define a media text as a statement are its plan and the execution of that plan. Media text refers to a generally understandable system of symbols, i.e. a certain "language" (for example, the language of art). In the process of media text analysis, it is necessary to touch upon the concept of text. If there is no language behind the text, it is no longer a text, but a natural sign less phenomenon. But at the same time, each text as a statement is an individual, unique and irrevocable thing, and its whole essence is embodied in it. And this is what is related to the truth, truth, goodness, beauty, history in it. Everything that is repeated and re-expressed in relation to this moment turns out to be material and instrumental. The text is a phenomenon of life, that is, its true essence is always played on the border of two minds, two subjects. A person always expresses himself in his human identity, that is, he creates a text (8).

He defined the complex processes of the social and communicative function of the text. It is primarily a communication between sender and receiver. The text acts as a message directed from the information carrier to the audience. It is also a link between the audience

- to review the internal content of the main episodes, to reveal the laws of construction of the whole work in the clearest way;
- trying to understand the logic of the author's thinking;
- determination of the author's concession;
- evaluation of the author's system of views by the listeners, is to express his personal attitude to this concept (10).

Many pedagogues working in the field of media, media pedagogues who have led media education programs in universities, have really had the opportunity to communicate openly with students. The discussion includes the ability to critically evaluate and interpret the works of media culture.

The cultural theory of media literacy and media education prioritizes the following goal. That is, to help students understand how mass media can enrich the audience's perception, knowledge, skills, etc. (11). In working with students, attention is paid to the development of basic information, familiarization with stereotypes, evaluation of media texts and critical analysis. In the process of communicating with and evaluating media texts, the audience does not simply read information, but independently analyzes media texts. Elements of this theory are observed in media literacy and media education with an aesthetic orientation. The aesthetic theory of media studies and media education focuses on the artistic component of media. Its purpose is to understand the artistic component of information media, to develop aesthetic perception and taste.

**Conclusion.** It seems that supporters of the theoretical rules of development of critical thinking are more in the field of pedagogy. The theory of development of critical thinking is aimed at protecting the audience from the influence of possible

manipulation through the activities of the media through a comprehensive analysis of media products and developing the ability of students to "orient themselves in the flow of information".

The methodology recommended in the media literacy and media education models is usually based on the cycles of creative tasks successfully used by pedagogues in educational and extracurricular activities. The main rules of the theoretical approach to the development of critical thinking form the basis of educational and informational models of media literacy and media education

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## **THE NEED TO CONDUCT RESEARCH ON THE QUALITY OF LIFE IN ONCOLOGICAL PATIENTS**

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**Annotatsiya.** Ushbu maqolada onkologik bemorlarning hayot sifatini o'rganishga nazariy yondashuvlar, hayot sifati tushunchasi, uni o'lchashga qaratilgan psixologik usul va bugungi kunda davolash samaradorligining asosiy o'lchov mezonini hisoblanadigan uslubiy asoslar keltirilgan. onkologiyada. Shuningdek, yosh xususiyatlarining respondentlarning hayot sifati bilan bog'liqligi o'rganildi, natijalar tahlil qilindi va umumiy xulosalar chiqarildi.



**Kalit so'zlar.** Psixologiya, onkologiya, tibbiyot, hayot sifati, psixoemotsional holat, ijtimoiy faollik, kognitiv va rol o'ynash faoliyati, hissiy komponent

**Аннотация.** В данной статье представлены теоретические подходы к изучению качества жизни онкологических больных, понятие качества жизни, психологический метод, направленный на его измерение, и методологическая основа, которая на сегодняшний день считается основным критерием измерения эффективности лечения. в онкологии. Также была изучена взаимосвязь возрастных характеристик с качеством жизни респондентов, проанализированы результаты и сделаны общие выводы.

**Ключевые слова.** Психология, онкология, медицина, качество жизни, психоэмоциональное состояние, социальная активность, познавательно-ролевая деятельность, эмоциональный компонент

**Annotation.** This article presents theoretical approaches to the study of the quality of life of oncological patients, the concept of quality of life, the psychological method aimed at measuring it, and the methodological basis, which today is considered the main measurement criterion for the effectiveness of treatment in oncology. Also, the relationship of age characteristics with the quality of life of the respondents was studied, the results were analyzed and general conclusions were made.

**Key words.** Psychology, oncology, medicine, quality of life, psychoemotional state, social activity, cognitive and role-playing activity, emotional component

**Introduction.** Today, the detection of oncological diseases and the death rate are increasing all over the world. One of the most important criteria in world medical oncology in the treatment of tumor diseases is to improve the quality of life of patients. Because the characteristic feature of the disease is the long duration of the treatment process, the abstractness of the state of complete recovery, the high probability of the relapse (repetition) process, the uncertainty of the remission period, the quality of life of patients in this disease requires research. In oncology, quality of life studies play an important role in both clinical research and clinical practice. Changes in the quality of life systems occur in oncological patients in accordance with the development of the tumor process.

**Literature review.** The concept of quality of life applies not only to health care, but also to all areas of life in modern society, which serve for human well-being.

Quality of life is an integrated description of the physical, psychological, emotional and social functioning based on the subjective perception of a patient or a healthy person. (Novik A.A. et al. 1999) [2], [9], [10].

According to BSST experts, the quality of life is "the individual interaction of the state of community life in the context of culture and the value system of a specific individual's goals, plans, opportunities, and general level of development." [11], [12].

According to the opinion of a number of foreign scientists, the quality of life is a functional effect on the patient or the state of health during treatment [6], [8]. Hence, it is a subjective and multidimensional concept that encompasses physical and occupational functions, psychological state, social influence and somatic sensations. [8].

According to N.Yu. Senkevich and others, the quality of life is a person's comfort within his own internal and the society in which he lives. [3].

Russian scientists have studied the quality of life of patients with tumor diseases in various organs of the body. In particular, V.N. Jurman conducted quality-of-life studies in patients diagnosed with ovarian cancer [1].

E. B. Usmanova studied the psychological factors of the quality of life of patients with tumor diseases related to bone loss [4].

In the studies of V.A. Chulkova, the psychological status of oncogynecological patients during psychological rehabilitation was evaluated [5].

**Research Methodology.** The methodology aimed at evaluating the quality of life of oncological patients is the EORTC (The European Organization for Research and Treatment of cancer) QLQ-C 30 (Quality of life quality care-30) scale. In 1980, the Quality of Life Study Group was established within the European Organization for Research and Treatment of Cancer and in 1986, this group developed a scale aimed at researching the quality of life of patients diagnosed with tumor diseases and applied it to the field. [7; 3-6).

The scale includes multidimensional and single-dimensional measurement scale.

These are: mainly defined in the following 3 major dimensions:

I. Global health status/quality of life.

II. Functional scale: 1) physical activity; 2) role function; 3) emotional function; 4) cognitive function; 5) social function.

III. Symptom scale: 1) impotence; 2) vomiting; 3) pain; 4) shortness of breath; 5) insomnia; 6) loss of appetite; 7) constipation; 8) diarrhea; 9) financial difficulties.

**Analysis and results.** We approached the study by emphasizing that research on the quality of life of patients is an important criterion in medical oncology.

In order to study the quality of life of respondent patients, we used the QLQ-30 questionnaire and present the analysis of the results:

**Table 1**

**The difference in the quality of life indicators of the respondents (according to the Student-t criterion)**

Comparative analysis areas	Levin test for equality of variables		Student-t test for equality of means	
			t value	significance
	F	Sign.		
<b>Quality of life</b>	4,458	0,035	-3,7529	0,000
<b>Functional scale</b>	0,000	0,989	-3,944	0,000
<b>Symptom scale</b>	0,585	0,444	-1,978	0,048
<b>Total quality of life</b>	0,022	0,879	-3,797	0,000

Here, the functional scale, symptom scale and total quality of life indicators show that women are evaluated with a higher index in one way or another. And this high rate was proven to be statistically significant in the Manny Whitney test ( $U=26151/p\leq 0,0001$ ).

In the study, taking into account that quality of life indicators are related to age characteristics of patients, the effect of age on other characteristics was determined.

Table 2

## The effect of the age characteristic on other characteristics

Statistical expressions	Physical attractiveness	Physical attractiveness	Limited communication	Material damage	Quality of Life	Functional scale	Symptom scale	General quality of life
T test	-,362**	-,180**	-,362**	-,127**	-,201**	-,215**	-,164*	-,233**
Level of statistical significance	,000	,000	,000	,004	,000	,000	,000	,000

Note: \* significance  $p \leq 0.05$  and \*\* significance  $p \leq 0.01$ .

As shown in the table above, age characteristics showed negative correlations with decreased physical attractiveness, limited communication, material damage, global quality of life, patient functional, symptom scales, and overall quality of life. ( $p \leq 0,01$ ). It can be seen that physical attractiveness decreases as patients' age increases. Indeed, even in normal cases without disease conditions, physical attractiveness declines as biological age increases, especially in late-maturing and gerontological individuals. Even in the case of the disease, the aging of the patients showed a gradual increase in biological aging in the body and a decrease in external attractiveness. Also, the process of aging of patients leads to a decrease in the limitation of communication with others. In the study, it was observed that especially elderly patients have difficulties in communication, that is, they are tired, sometimes they do not want to communicate..

In addition, the age characteristic was shown to be inversely related to material damage, and the increasing age of the patient was negatively correlated with the decrease in the factor of material damage (0,01). It follows that material damage is relatively rare in elderly patients with the disease. Also, the age characteristic was inversely correlated with quality of life, functional, and symptom scales. In most cases, as the age of patients treated with targeted medical procedures (chemotherapy, radiation therapy, surgery) increases, the quality of life and functional characteristics decrease can be explained as follows: as ontogenetic development increases, especially when reaching late maturity and gerontological periods, the organism's viability characteristic decreases. Based on this ontogenetic law and the complications of long-term chemical and light therapy, there is a decrease in physical activity, role, emotional, cognitive and social function included in the functional scale in adult patients, as a result, patients do not feel as energetic as before, even light physical activities make them tire and tire easily, have difficulty doing tasks that require a lot of physical effort (for example, lifting a heavy shopping bag or a suitcase), have difficulty taking long or short walks on the street, spend most of the day in bed, while eating, dressing, bathing and going to the toilet, patients sometimes lose self-service skills, feel the need for help from others. Also, a decrease in role functions is observed in the following: there are some limits in the performance of their daily work, one or another limit is observed in engaging in favorite work or spending free time as desired. In the emotional scale, which is a part of the functional scale, a number of cases of decrease are observed: there is a difficulty in concentrating when reading a newspaper or watching television

in everyday life; observation of memory-related changes; experiencing a feeling of tension and anxiety; to enter into relations with others in a state of nervousness and in most cases to show a feeling of depression. Such cases sometimes have a significant impact on patients' relationships with family members. Most of the elderly patients who took part in the study are ashamed of their physical condition and shy away from public appearances (visiting guests and other places) due to the side effects caused by treatment procedures (partial or complete removal of a limb, hair loss, etc.).

In addition, a weak inverse relationship was observed between the age characteristics and the symptom scale of the patients participating in our study ( $p \leq 0,05$ ). A relative decrease in the symptom scale was also observed as the age of the patients increased, reflecting pain tolerance, vomiting, retching, dyspnea, and similar symptoms in older patients than in younger patients. This indicates an increase in the body's resistance. Thus, in general, we can observe that the quality of life of patients decreases as their age increases.

**Conclusion.** Therefore, it can be concluded from the above research aimed at studying the quality of life of oncology patients that the quality of life of patients differs depending on the level and stages of the disease. In particular, we can see that the physical activity component of the level of quality of life of patients depends on the stage and level of the disease, and the social, role, emotional component of the functional scale depends on the personality and individual characteristics of patients. In the center of psychological services for oncological patients, the final result is to improve the overall quality of life of the patient and thereby increase his ability to fight the disease.

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## ACTUAL PROBLEMS OF NATURAL SCIENCES

UDC: 5:57:022

### TERMITE INFESTATION IN HISTORICAL BUILDINGS JUMA MOSQUE IN ICHAN-KALA OF CITY KHIVA (UZBEKISTAN)

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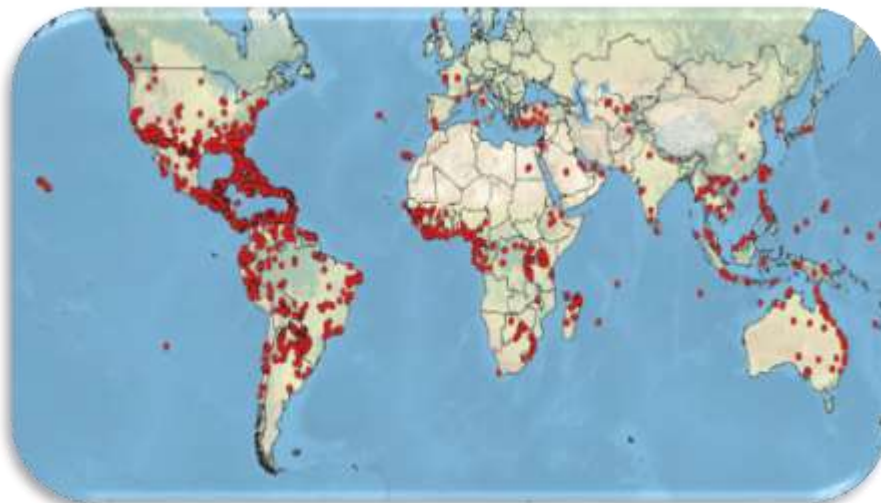
**Annotatsiya:** Xiva Ichan qal'a davlat muzeyi qo'riqxonasida va Xiva shahrida olib borilgan monitoring natijalariga ko'ra, yog'och ustunlar asosan quyidagi ikkita xususiyat bilan shikastlangan: mexanik shikastlanish (egilish, egilish, yoriqlar va boshqalar) va biologik shikastlanishlar (hasharotlar, termitlar, mog'or va boshqalar). Masjiddagi ustunlarning aksariyati termitlarning biologik zararlangan.

**Аннотация:** По результатам мониторинга, проведенного в Государственном музее-заповеднике «Хивинский замок Ичан» и г. Хива, деревянные колонны повреждаются в основном по следующим двум признакам: механические повреждения (изгибы, искривления, трещины и т. д.) и биологические повреждения (насекомые, термиты, плесень и др.). Большинство колонн мечети были поражены биологическими повреждениями термитов.

**Abstract:** According to the results of monitoring carried out in Khiva Ichan Castle State Museum Reserve and Khiva city, wooden columns are damaged mainly by the following two features: mechanical damage (bending, bending, cracks, etc.) and biological damage (insects, termites, mold, etc.). The majority of the columns in the mosque were infected by the biological damage of termites.

**Introduction.** Termites are ubiquitous insects in tropical, subtropical, and warm temperate regions and play an important role in ecosystems. Several termite species are also significant economic pests, mainly in urban areas where they attack human-made structures, but also in natural forest habitats (Acda, 2017; [Grzegorz Buczkowski & Cleo Bertelsmeier](#), 2017). Termites are recognized as insects that interact with the urban ecosystem in the most complex way (Ab Majid, et al., 2013; Fernandes, et al., 2018; Chand, et al., 2018). With approximately 3,105 described species in the world

(Krishna et al., 2013; Janowieck et al., 2019), of the registered 4 species in Central Asia, 2 species in Uzbekistan, are considered urban pests (Abdullaev, 2016). The termite family Kalotermitidae Froggatt 1897 is composed of nearly 500 extant species worldwide (Krishna et al., 2013; Ghesini & Marini, 2013; Scheffrahn & Postle, 2013; Ghesini, et al., 2014; Scheffrahn, 2014; Casalla, et al., 2016a, b; Scheffrahn, 2018; Scheffrahn, et al., 2018a).



### Termite distribution map

Isoptera (Termitidae) is an infraorder that includes social insects, widespread occurrence, predominantly in Neotropical regions. They include drywood termites, dampwood termites, subterranean termites, and more (Hu, et al., 2015).

The occurrence of termites in urban areas is seen as a complex that extrapolates the limit of economic damage to human populations. These insects can reach high levels of infestation in a short period of time, causing damage to the artistic, historic, and cultural patrimony (Engel, et al., 2015; Fernandes, et al., 2018). Currently, the annual cost of building repairs estimated in urban areas worldwide for treatment and replacement is in the order of 40 billion USD (Mello, et al., 2014; Abdullaev, 2016).

In Uzbekistan, termites of the genus *Anacanthotermes* are under consideration, the two species *A. turkestanicus* and *A. ahngerianus* are widespread in natural and urbanized ecosystems. They are noted in almost all regions of the republic (Abdullaev, et al., 2020).

The famous cities of Central Asia, such as Bukhara, Samarkand, and Khiva, situated on the territory of the Republic of Uzbekistan, are home to several historical monuments of great cultural importance. Most of the monuments in Khiva, located in the Khoresm province in the western part of Uzbekistan, damaged by termites, particularly the harvester termite, *Anacanthotermes ahngerianus* (Abdullaev, 2016).

Termites destroy all wooden elements in various constructions, such as architectural and cultural monuments, strategically important constructions, hydraulic structures and residential and administrative buildings. Consisting of 25 thousand members and occupying a space of 100 cm<sup>3</sup>. One family of termites consumes an average of 50,000 cm<sup>3</sup> of different types of cellulose.

Termites' hidden life and strong resistance to environmental factors, as well as the functional specialization of their castes and their ability to restore populations

within short periods, complicate the control. The impact of termites on buildings can be direct when wood used in these buildings is used as food by the termites, or it can be indirect when a material is not itself a food source but is destroyed during foraging. Having hard and strong jaws, the termites also damage materials such as adobe, brick, clay, gypsum, lime, heat-insulating and synthetic materials, fiber glass, aluminum foil, lead, and cables. Their galleries extend deep into the soil, in walls, heaters, ceiling layers, and roofs, thereby turning the whole house into a large nest. It is obvious, that the economic damage is rather significant.

The objective of this study was to survey the termite occurrences in historical monument Juma Mosque in the "Ichan Kala" museum reserve in Khiva (Uzbekistan), assessing the richness of species, examining the determining factors for infestation

### **Materials and Methods**

#### *A description of the study area*

The experiments were conducted in the Khorezm region. The region is located in the northern regions of Uzbekistan and differs from other regions in its unique soil and climatic conditions. The climate of the region is affected by the Kyzyl-Kum and Karakum deserts (Abdullaev, et al. 2020). The climate is sharply continental, with very cold winters (up to  $-25$ – $-30^{\circ}\text{C}$ ) and very hot summers (up to  $40$ – $45^{\circ}\text{C}$ ). The average annual temperature of the oasis is  $13.9^{\circ}\text{C}$ , and in the southern part of the oasis it is  $+15^{\circ}\text{C}$ . Due to its location in the desert zone, the climate is dry. In agriculture, cotton, rice, wheat, fruits, and vegetables are grown. It is mainly irrigated agriculture. Groundwater with saline soils is close to the soil surface and varies at a depth of 0.6-3 meters. There are special irrigation systems and a drainage system to drain the sewage. Such a farming system requires constant control of natural factors to obtain high yields from crops. As well as the classical methods are used for continuous monitoring.

#### *Regional studies*

Khiva is split into two parts. The outer town is called Dishan-Kala, and the inner town, Ichan-Kala. Ichan Kala is encircled by a clay wall (more than 2 km long, up to 10 m and 5–6 m in thickness), and has four gates on each corner of the earth. The old town retains more than 57 historic monuments and 379 old houses, mostly dating from the 18th or 19th centuries. In Ichan-Kala, there are unique historical monuments, such as the famous Juma Mosque. The Juma Mosque was founded in the 10th century and rebuilt in 1788. Juma mosque, with thousands of years of history, has a unique architectural composition, and the construction is unique among the other monuments in the "Ichan Kala" museum reserve in Khiva (Uzbekistan)

The total area of the Juma mosque is  $2530\text{ m}^2$ . The height of the walls is 5.0 meters, in some parts 4.1 meters. There are 213 columns inside the Juma mosque (Fig. 1).





**Figure 1. The Juma mosque and its columns**

Several of the columns in the XIII-XV centuries, the great majority of them in the XIX and XX centuries, were founded. At present, 12 of these columns, which were made in the oldest X-XII centuries, are stored.

In the 2010-2020 years, we observed technical monitoring of the 54 historical and architectural monuments located in the Ichan-Kala open museum reservation. We have written a number of scientific and research papers, including one on the Juma mosque. According to the results of the monitoring, wooden columns were damaged mainly by two of the following features: mechanical damage (bending, tilting, cracks, etc.) and biological damage (termites). The majority of the columns of the mosque were infected by the biological effects of the termites (30%) (Fig.2).



**Figure 2. The wooden columns affected by termites1. Mechanical damage (bent, tilted, cracked, and so on) 2. Biological damage (termites)**

**Methods.** The method of observation is used to collect the research materials. The coordination of the damaged object has been identified by the GPS method, and the collection of termites in buildings was carried out using the device Exterra (Fig. 3).



**Figure 3. GPS and Exterra devices**

Termite activity on the building's walls and wooden columns has been detected using a contemporary microwave instrument with a T-5 scanner. This equipment can detect termites in wood and walls up to 12 cm thick and can identify up to 99 percent of them (Fig. 4).



**Figure 4. Termite detector**

In studying the causes of termite damage to the building, special attention has been focused on the location, construction, and general technical condition of the building. The shape, structure, and functions of termite nest chambers in walls have been studied on the basis of data stored in cameras according to (Abdullaev, 2016) method. The influence of external factors on the spread and damage of termites in the historical monument of the Juma Mosque has also been studied. Changes in groundwater level and humidity, among other factors, have been taken into account. Studies on the seasonal distribution, migration, and phenology of termites at the Historical Monument Juma Mosque have been conducted on the basis of the method mentioned in (Mello, et al., 2014).

The mosque was separated into three levels based on the extent of termite damage to the wood elements. While the degree of serious damage is determined on the basis of many signs, such as the overgrowth of mud plasters of termite-specific, the density of their population, and the fact that the interior of the damaged wood materials remains hollow, the average degree of damage can be explained by the mobility of the termite

population, the presence of old clay plasters, and the damage of wood by termites (with loop holes), and the less damage was noted with a relatively small number of termites with the presence of fresh mud plasters moistened on the wood or walls of the mosque.

**Results.** Termites of the genus *Anacanthotermes* feed mainly on dry wood. According to the findings of our study, before feeding termites, the food and location to be consumed by workers and novices should be chosen, and the area should be protected with mud plaster. These clay plasters provide protection to termite layers from external factors and natural wreckers and facilitate free movement. Working termites under clay plaster can cause serious damage to wooden objects. As a result of the research at the Juma Masjid Museum situated in the Ichan-Kala Historical Monuments Complex, we found that in the early stages of damage to wooden columns, wood materials were covered with new clay plasters by working termites. They were found to penetrate into the wood and damage the loop. In the next stage, they damaged the inner part (core) of the wood and replaced it with mud in the final stages.

Termite damage to wooden elements at the Juma Mosque is divided into three categories, according to our research (A-low, B-average, and C-severe). In group C damage, the loose position of the wooden column core was filled with mud, the wood had a loop hole in group B damage, and the wood material on the outside was covered with mud plaster in group A damage (Fig. 5).



**Figure 5. Levels of damage to wood materials by termites in museums: A-low, B-average, C-strong**

We attempted to examine the causes of termite damage to wood components during our research at the Juma Mosque. The mosque's roof and wooden pillars have been renovated multiple times, according to our records. In particular, the current technical condition of the roof of the mosque is not satisfactory. The roof has water dropping from it. The roof came off to be repaired. The longitudinal and transverse wooden beams of a flat roof's top consist of a ramp with a 1-2% slope. In 1947, during the reconstruction works, part of the mosque's roof was not repaired as the original raw (archival documents). In 1986, it was opened in order to be repaired, and the roof structure of the mosque was as follows:

-wood cladding; A layer of reeds; Soil rosh (ceramic layer) layer; Over the years, many times I have brought bituminous straw and mud plaster (Durdyeva, 2017).

Improper repair of the roof of the building led to the accumulation of rainwater, increased humidity, and the decay of wood on the ceiling in some parts of the mosque.



Also, 7–10 cm of thick mud cladding over the roof of the Juma Mosque Museum, 5 cm of thick concrete cladding, and covering it with a ruberoid layer caused the increase of the termites' overgrowth and increased the level of damage due to the decay of wood. (Fig. 6).



**Figure 6. View of the roof and ceiling of the building of Juma Mosque**

The humidity on the roof of the Juma Mosque varied, and termites (70 to 85 percent). were active in regions with high humidity, according to our research conducted in the spring, summer, and fall of 2015–2020. Working termite layers, it was revealed, produce mounds of 1–1.5 meters in length as a sort of protection, and with their help, destroy wooden poles and roof timbers. Termites can cause substantial damage to timber poles to level 3 if such damage persists, according to studies.

According to the study of the characteristics of the damage of buildings associated with changes in groundwater level, the groundwater level in the area where the Friday mosque is located in 2010–2013 was 370.0/402.6 cm, in 2016–2019 it was 529.5/659.7 cm. By comparing this groundwater level's statistical data with the findings of our study, we discovered that the level of termite damage in the building (328/284 termites) in 2019 was higher than in 2010–2013 (370.0/402.6 cm). Also, the presence of overloads on the roof of the Juma Mosque caused the mechanical bending of some wooden pillars inside the building. When the causes of the biological damage were investigated, it was found that rainwater had accumulated on the roof of the mosque and the humidity had exceeded the norm (over 65%). The thickness of the soil layer on the roof had led to overgrowth and damage in various ways. In general, it was discovered that the technical condition of the building played a significant role in termite development.

The research showed that the proximity of the groundwater level, which was the basis for the spread and damage of termites in this area, was another reason for the termite damage of wooden materials in the historical monuments of the Ichan-Kala Complex. Based on statistical data obtained from current scientific research, we found out that the groundwater level was changed in wells in the Ichan-Kala area from 2010 to 2019, and the fluctuations in groundwater level caused the accelerated growth or decrease of the termite population activity in buildings. See Table 1.

**Table 1**

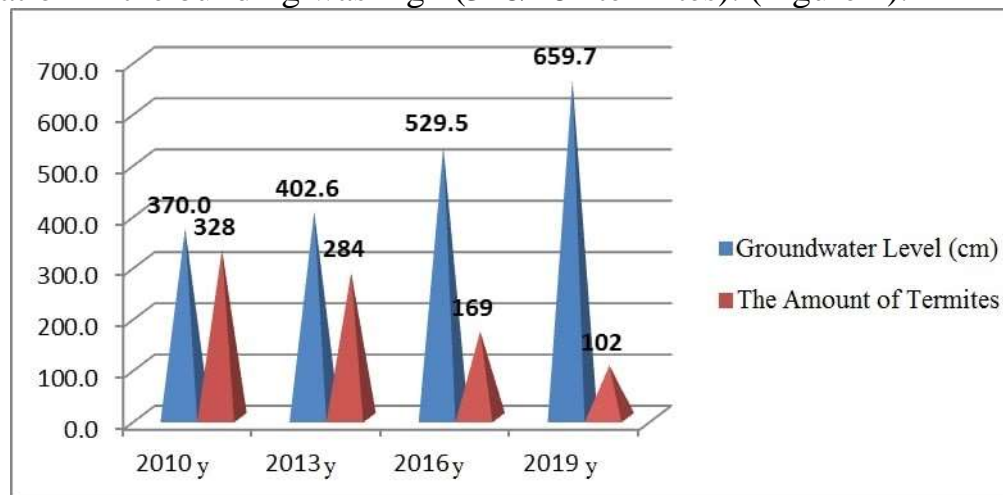


### Dynamic changes in groundwater level in the territory of Ichon-Kala State Reserve (n = 12, Khiva 2010-2019)

№	Historical museum	In 2010. (cm)	In 2013 (cm)	In 2016 (cm)	In 2019 (cm)
1	Juma Mosque	370.0±3.67	402.6±0.44	529.5±0.65	659.7±0.45
2	Pakhlavan Makhmud	370.0±3.67	402.6±0.44	529.5±0.65	659.7±0.45
3	Kutlugh Murod	138.8±0.38	230.6±0.30	310.8±0.23	610.0±0.40
4	Tosh Hovli	273.0±0.64	271.7±0.50	592.3±0.74	619.7±0.38
5	Kuhna Ark	227.8±0.32	317.7±0.29	517.7±0.33	779.6±0.40
6	Sherghozikhan	163.9±0.18	168.3±0.44	205.8±0.19	339.5±0.54

As it is illustrated in Table 1, according to 2010 statistics, the lowest of 370.0 cm and the highest in proximity of 138.8 cm groundwater level were observed in Juma Mosque and Pakhlavan Mahmud Complex in the territory of the Ichon-Kala State Reserve. And according to our research study in 2019, the lowest groundwater level was 779.6 cm in the Kuhna-Ark and the closest water level was 339.5 cm in Sherghozikhan. That is, in 2010, the proximity of groundwater levels caused termites to rise to the top of the buildings.

Taking it into account, the study was carried out in the Juma Mosque Museum on the peculiar features of termite damage associated with changes in groundwater levels. According to statistics and research, the groundwater level was 370.0/402.6 cm in 2010–2013 and 529.5/659.5 cm in 2016–2019 in the area where the Juma Mosque is located. When we compared this groundwater and Abdullaev, (2016) statistical data with the results of our research on the development and reproduction of termites in the mosque building and the characteristics of infestation, we discovered that the groundwater level in 2010-2013 was 370.0/402.6 cm and the degree of termite infestation in the building was high (328/284 termites). (Figure 1).



**Figure 1. The relationship between the number of termites and the groundwater level in the historical monument of the Juma Mosque**

As it can be seen from the chart, in 2010-2013, due to the rise in groundwater level (370.0/402.6 cm) in the area where the Juma mosque is located, a high increase in humidity in the termite nests under the foundation of the building, resulting in vertical migration of termite populations (328/284) led to an increase the number of the

termites. This in turn caused termites to build new nests between walls or on the surface of the soil and accumulate large amounts of reserve nutrients for the termite community and the new generation, eventually causing serious damage to the wood materials in the building. According to our findings in May, July, and September of 2016 and September of 2019, the groundwater level dropped to 529.5/659.7 cm as a result of the artificial discharge of groundwater from the Ichan-Kala area, resulting in the decrease number of termites to 169/102. It was noted that the level of termite damage to buildings also decreased by 2-3 times compared to 2010 and 2013. According to the results of the study, constant monitoring of groundwater level is important in preventing termite damage in the area of the Ichan-Kala Complex and in evaporation of moisture required for termites.

### Discussion

Technical circumstances and the impact of external factors are the primary sources of termite damage to hardwood components in the Juma mosque. In this case, termites have favorable conditions, such as enough food and moisture, proximity to groundwater, insufficient lighting in some areas, and a lack of ventilation system as a result of increased humidity caused by rainwater accumulating on the mosque's roof, which provided the basis for termite proliferation, development, and spread. The presence of an excessive layer of soil on the roof of the building is identified as one of the main causes of damage, as during the rainy season, moisture passes from the roof to the interior of the building to the wood, where micromycetes belonging to the genus *Alternaria*, *Cladosporium* and *Termitomyces* multiply, causing the wood to rot. As a result, they decomposed wood pulp, allowing termites to feed. It is known that termites fed on fungal activity can digest up to 50-60% of lignin from wood decomposed by fungi, while termites fed on undigested wood can digest up to 1.0-6.0% of lignin.

**Conclusion.** According to the findings of the research and discussions, it is recommended that soil be removed from the roof of the building in order to prevent the development and reproduction of termites on the roof and to prevent damage, light construction work be carried out, and a corrugated roof covering be laid so that it is not visible from below, in accordance with UNESCO requirements. This will prevent a sharp drop of water on the roof of the mosque and the formation of a new family of winged termites by flying elsewhere on the roof during the spring.

The roof of the Juma mosque must be repaired immediately, because the water in the atmosphere increases the influences of termite defection of wooden construction, as well as significantly influences longitude bending of columns. As a result, overloaded columns by the height load may bend, and may even fail to withstand the earthquake falling. We hope that in the future, global tourists from the seven climates of the world will be drawn to this unique architectural landmark and "Wood Museum," which is unique in Central Asia.

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## MODERN PROBLEMS OF PHILOLOGY AND LINGUISTICS

UDC: 81'1/4

### MERONYMY RELATIONS AND ITS TYPES

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**Annotatsiya:** Maqola ingliz va o'zbek tillaridagi meronimiya munosabati va turli nuqtai nazardan meronimiy munosabatlar turlariga bag'ishlangan.

**Kalit so'zlar:** meronimiya, partonimiya, butun-bo'lak munosabatlari, meronim.

**Аннотация.** Статья посвящена отношениям меронимов в английском и узбекском языках и видам отношений меронимов с разных точек зрения.

**Ключевые слова:** меронимия, партонимия, отношение часть-целое, мероним.

**Abstract:** The article is devoted to the meronymy relation in English and Uzbek Languages and the types of meronym relations from different point of view.

**Keywords:** meronymy, partonymy, part-whole relation, meronym.

**Introduction.** In linguistics words are classified according to their semantic relation. Meronymy (from Ancient Greek 'part', and 'name') is a semantic relation between a meronym which denotes a part and a holonym which denotes a whole. If we say in simpler terms, a meronym is in a part-of relationship with its



holonym. For example, hair is a meronym of head which is its holonym. Similarly, page is a meronym of a book which is its holonym.

The converse of meronymy is holonymy. These two categories always come together when we discuss the semantic relation of words.

In English language the study of mereology specifically deals with part-whole relations and is used in logic. It is formally expressed in terms of first-order logic. A meronymy can also be considered a partial order.

In Uzbek language this part-whole relation is called partonymy. Partonymy is the study of part-whole relation in semantic groups of lexemes representation. For example, computer (whole) - screen (part) - key board (part) and so on. Also: a tree (whole) - leaf (part) - branch (part) - root (part). In these the lexemes computer (first line) and tree (second line) are keywords.

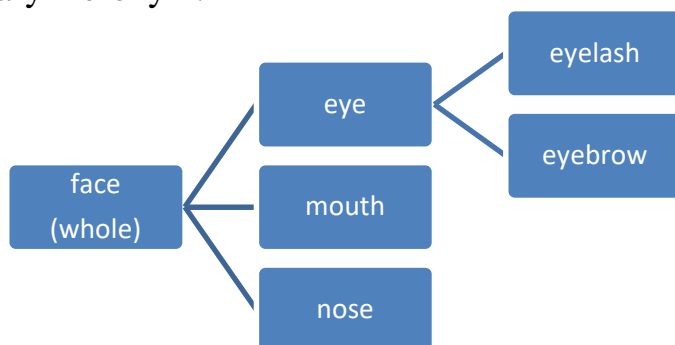
It is well known that in the sense of a lexeme, the events of existence are in the human mind reflection is expressed, that is, on the basis of the part-whole relationship in the system of meanings, in fact, there is a need to express in language the whole-individual relations of existence.

The study of the phenomenon of partonymy reveals the "secrets" of the vocabulary. It is important to have a clear and accurate interpretation of their meanings.

**Literature review.** There are such kind words which we can use as co-meronyms in one text. However some words can not be co-meronym to one whole. M.Lynne Murhpy points out that: "In one context finger is an appropriate meronym of hand, and in other cases flesh is an appropriate meronym of hand. Finger and flesh, however, are not co-meronyms of hand, since different relational criteria (functional part versus material) are applied in each case." [1]

**Research methodology.** Types of Meronym Relationships. The study of mereology shows that there should be several types of meronymy according to their relationships with its whole. Lyons and Cruse distinguished two types of meronyms and called them in accordance with their direction of study. "At one level meronyms can be divided into two types: 'necessary' and 'optional', otherwise called 'canonical' and 'facilitative'. An example of a necessary meronymy is eye <face. Having an eye is a necessary condition of a well-formed face, and even if it is removed, an eye is still a face part. Optional meronymy includes examples like cushion <chair—there are chairs without cushions and cushions that exist independently of chairs." [2]

Necessary meronym:



**Optional meronymy:** cellar (part) for house  
curtain (part) for window  
mouse (part) for laptop

Cellar, curtain and mouse are the optional meronyms, which carry out a function with their wholes. However they can be used independently without their holonyms.

John I. Seed analyses the types of meronyms in his "Semantics" and said: "Meronyms vary in how necessary the part is to the whole. Some are necessary for normal examples, for example, nose as a meronym of face; others are usual but not obligatory, like collar as a meronym of shirt; still, others are optional like cellar for house." [3]

**Analyses and results.** As above we said meronyms can be two types: necessary and optional. "In many ways, meronymy is significantly more complicated than hyponymy. The Wordnet databases specify three types of meronym relationships: [4]. Part meronym: a 'tire' is part of a 'car', a root is a part of a plant, a keyboard is a part of a computer and etc. Member meronym: a 'car' is a member of a 'traffic jam', a child is a member of a family, a region is a member of a republic. Substance (stuff) meronym: a 'wheel' is made from 'rubber', a ring is made of gold, bread is made of flour and etc. The studies about meronymy show that there is also difference between Synecdoche and Meronym/Holonymy as a learner may come across some arguments. Words as nouns the difference between meronym and synecdoche is that meronym is (semantics) a term used to denote a thing that is a part of something else while synecdoche is (figure of speech) a figure of speech that uses the name of a part of something to represent the whole. The two commonly acknowledged variants of synecdoche, part for the whole (and vice versa) and genus for species (and vice versa), find their correspondence in the linguistic concepts of meronymy/holonymy and hyponymy /hypernymy. A meronym denotes a word or other element that together with other elements constitutes a whole. Thus, 'bark,' 'leaf,' and 'branch' are meronyms of the holonym 'tree.' A hyponym, on the other hand, denotes a word that belongs to a subset whose elements are collectively summarized by a hypernym. Thus, 'tree,' 'flower,' 'bush' are hyponyms of the hypernym 'plant.' A first observation to be made here is that these two concepts describe relationships on different levels: meronymy /holonymy describes a relationship between elements of material objects. It is the referential object 'leaf' which in extralingual reality forms a part of the whole 'tree.' [5]

Meronymy has been studied not only in linguistic but also in specifically in engineering and ecological system. In linguistic the following classifications and definitions were developed. As a main feature of meronymy relation is that it is also referred to as part-whole relation and paronymy, and refers to the relation between a concept/entity and its constituent parts. The distinction between meronymy and hyponymy relations shows that it is clear for concrete concepts but uncertain for concepts which is abstract. Pribbenow analysed that meronymy and holonymy are logically asymmetric and transitive relations. Tversky defined that hyponyms inherit features from the hyperonyms but parts do not inherit features from the whole, though there is an upward inheritance for some attributes like color, material, and function. Lyons demonstrated that the part-whole relation is intransitive at the linguistic expression level:

The door has a handle.

The houses has a door?

The house has a handle.

Cruse attempted to resolve the problem by characterizing the functional context of the relation. He claimed that when we say X is a (functional) component of Y, we usually mean that X is a major component of Y. Cruse's conclusion was the following: The first conclusion of this paper is simple and not in any way astonishing: All binary parthood relations are transitive. The second conclusion is, as far as I know, quite new: Seemingly intransitive and non-transitive binary parthood predicates, both in everyday and in scientific language, are in every case hiding a reference to a third relatum, which explains their lack of transitivity. In appearance these predicates are binary predicates, in reality they are at least as complex as either relative-product-predicates or as ternary predicates. Together, these two conclusions imply a third, which can be phrased as a warning: be careful if you try to apply the transitivity axiom of binary mereology to parthood predicates found in areas outside mereology proper. Such predicates might very well be intransitive, non-transitive or fall outside the scope of any natural definition of transitivity. [6]

Iris, Litowitz, & Evens found that the part-whole relation is really a family of relations, divided into four main types:

1. Functional component of a whole (e.g. wheel of a bicycle)
2. The segmented whole (the whole divided into pieces like a pie)
3. Members of a collection of elements ( pictures in a gallery)
4. Subsets of sets (set inclusion, e.g. fruits and apples).

Winston, Chaffin & Herrmann identified six types of part-whole relations, including the following three additional types:

- stuff-object (steel-car),
- feature-activity (paying-shopping),
- place-area. ( district-region)

Gerstl & Pribbenow divided part-whole relations broadly into those relating to the natural structure of the whole (e.g. functional components of an object) and partitions of the whole by construction (i.e. artificial partitions based on attributes, e.g. dividing objects by color).

Other classifications of the part-whole relation have been developed by Barriere, Markowitz, Nutter & Evens, Sattler specifically for an engineering application, Uschold (1996) for ecological information systems, and Bernauer for the medical domain.[ 7]

**Conclusion.** As we discussed several classification of the category of meronymy it is a type of semantic relations which show part-whole relations between words and concepts. Meronymy can be given as a partial order which belongs to one whole. Meronymy and hyponymy always come together and connected with each other semantically.

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## SEMANTIC RELATIONS: SYNONYMY AND PLESIONYMY

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**Annotatsiya:** Barcha tillarda turli guruhlarga bo'lingan so'zlar mavjud. Bunga sinonimlar, antonimlar va paronimlar misol bo'la oladi. Maqolada sinonimlar va plesionimiyalarning o'xshash va turli nuqtalari muhokama qilinadi. Sinonimlar - o'xshash ma'noga ega va turli xil imloga ega bo'lgan so'zlar, nutqda muhim rol o'ynagan holda takrorlashni oldini olishga va nutqning uyg'unligini yaxshilashga yordam beradi. Plesionimiyalar sinonimlarga yaqin bo'lgan so'zlardir. Ular bir xil ma'noga ega emas, lekin ularni ko'p jihatdan bir-biri bilan almashtirish mumkin.

**Kalit so'zlar:** plesionimlar, sinonimiyaga yaqin, mutlaq sinonimiya

**Аннотация:** Во всех языках есть слова, которые делятся на разные группы. Примерами для них могут быть синонимы, антонимы и паронимы. В статье рассматриваются сходные и различные моменты синонимов и плезионимий. Синонимы — это слова, имеющие сходное значение и разное написание, которые помогают избежать повторения и улучшают связность речи, играя при этом важную роль в речи. Плезионимии — это слова, которые можно назвать близкими синонимами. Они не имеют одинакового значения, но могут во многом заменять друг друга.

**Ключевые слова:** плезионимы, околосинонимия, абсолютная синонимия.

**Abstract:** All languages have words that are divided into different groups. Examples for these can be synonyms, antonyms and paronyms. The article discusses similar and different points of synonyms and plesionymies. Synonyms are words that have similar meaning and different spelling which help to avoid repetition and improve the coherence of the speech while an important role in speech. Plesionymies are the words which can be called near synonyms. They do not have the same meaning but they can be replaced by each other in many ways.



**Key words:** plesionyms, near synonymy, absolute synonymy.

**Introduction.** As we know, synonyms are words that have different forms but have similar meanings. Words with several word forms that have the same meaning form synonyms. Synonymous phenomenon is the mutual meaning of words. A group of words with a common meaning is called a synonymous group. A synonymous line consists of two or more words. One word in each synonym line is a key word. This word can be used in all styles, so it is called "neutral word", "methodically neutral word", "dominant". For example, in the synonymous line of look, stair, glance, the main word is look; the main word, as a rule, differs from other words in the same line by its belonging to the current literary language, emotional color, stylistic neutrality, and similar properties, and is widely used in the language compared to others according to the same properties. For example ... In the synonym line, the word "beautiful" is considered to be the main word. The rest of the words differ from each other with their own character. It is important to use each of the synonyms in speech, taking into account their characteristic features.

**Literature review:** Researches show that while absolute synonymy-the interchangeability of pairs of words in any context it is rare at best, it is easy to find pairs or sets of words that are synonymous to the extent that they have the same denotation, while differing in other aspects of their usage. These differences consists of the collocation constraints of the words example groundhog and woodchuck denote the same set of animals; yet Groundhog Day, Woodchuck Day and the stylistic and interpersonal connotations of the words for example die, pass away, snuff it; slim, skinny; police officer, cop, pig.[1] As well as, many groups of words are plesionyms that is, nearly synonymous; forest and woods, for instance, or stared and gazed. The ideas of synonymy and plesionymy can be made more precise by means of a notion of semantic distance but this is problematic to formalize satisfactorily. [2]

**Research methodology:** "Plesionyms are distinguished from cognitive synonyms by the fact that they yield sentences with different truth-conditions: two sentences which differ only in respect of plesionyms in parallel syntactic positions are not mutually entailing, although if the lexical items are in a hyponymous relation there may well be unilateral entailment. There is always one member of a plesionymous pair which it is possible to assert, without paradox, while simultaneously denying the other member: It wasn't foggy last Friday — just misty. You did not thrash us at badminton — but I admit you beat us." Thus sidestep the long-debated question of exactly what degree of inter-substitutability should count as synonymy or near-synonymy For this work, synonymy and near-synonymy arise at the point in the conceptual network at which a language-independent concept diverges into the set of language-dependent lexical entries for the words that, in one way or another, denote that concept.[3]

**Analysis and results:** We consider two dimensions along which words can vary: semantic and stylistic, or, equivalently, denotative and connotative. When two words differ semantically Example: mist, fog, and then substituting one for the other in a sentence or discourse will not necessarily preserve truth conditions; the denotations are not identical. If two words differ solely in stylistic features example: frugal, stingy,

then inter substitution does preserve truth conditions, but the connotation the stylistic and interpersonal effect of the sentence is changed.

Many of the semantic distinctions between plesionyms do not lend themselves to neat, taxonomic differentiation; rather, they are fuzzy, with plesionyms often having an area of overlap. For example, the relation between forest and wood 'tract of trees' is vague, and there are some situations in which either word might be equally appropriate between two or more plesionyms cannot necessarily be made merely by a discrimination net-style sequence of ever-finer decisions as to denotation and connotation. Notice all the hedges in this explanation of the difference: "A 'wood' is smaller than a 'forest', is not so primitive, and is usually nearer to civilization. This means that a 'forest' is fairly extensive, is to some extent wild, and on the whole not near large towns or Similar problems occur with lexical transfer in translation: the word in the target language that is closest to that in the source text might be a plesionym rather than an exact synonym. For example, the German word Wald is close in meaning to the English word forest, but Wald can denote a rather smaller and more urban area of trees *than forest*; *that* is, Wald takes in some of the English word woods as well, and in some situations, woods will be a better translation of Wald than forest. We can think of Wald, forest, and woods as a cross-linguistic plesionym group. But the transition from the concepts in the knowledge base to the words that denote them has to be made somewhere.[4].

**Conclusion.** In conclusion, the attractive and varied use of words makes our speech more beautiful and what we say to the listener is understandable and interesting. But the synonym of the word we have chosen may not replace each other in any case in the context. for example, the word "aft" in Uzbek is synonymous with the word "bashara", but we should know the difference between them. Face means a beautiful appearance, and the word "aft" is used in a negative sense. In plesonymy, words are different from synonyms and can be used consecutively in the same sentence.

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## PARADIGMATICS OF LOCATIVE SYNTAXEMES REPRESENTED BY TOPONYMS IN THE FUNCTION OF ADVERBIAL MODIFIER OF PLACE IN THE UZBEK LANGUAGE

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**Annotation.** In this article, the fact that, in the Uzbek language, toponyms express allative, ablative, adhesive, allative adhesive, translative, directive start, terminative, qualitative comparative, instrumental syntaxemes within the scope of locativeness and characteristics of its connection with processual actional, stative, object, existential, modal, identifying syntaxemes, were analyzed through examples.

**Key words:** syntaxeme, toponym, locative, allative, ablative, adhesive, allative adhesive, translative, directive start, terminative, qualitative comparative, instrumental.

**Аннотация:** Ушбу мақолада ўзбек тилидаги гап қурилмаларда топонимларнинг локативлик доирасида аллатив, аблатив, адессив, аллатив адессив, транслатив, директив старт, терминатив, квалитатив компаратив, инструментал синтаксемаларни ифодалаш ва процессуал акционал, статив, объект, экзистенциал, модал, идентификацияловчи синтаксемалар билан боғланганини хусусиятлари мисоллар орқали таҳлил қилинган.

**Калит сўзлар:** синтаксема, топоним, локатив, аллатив, аблатив, адессив, аллатив адессив, транслатив, директив старт, терминатив, квалитатив компаратив, инструментал.

**Аннотация:** В данной статье анализируются характеристики выражения топонимов в узбекских речевых структурах в рамках локативной экспрессии аллативный, аблативный, адгезивный, аллативный адгезивный, транслативный, директивно-начальный, терминативный, качественно-сопоставительный, инструментальный синтаксем и связь с процессуально-акциональным, стативным, объектным синтаксисами, экзистенциальный, модальный, идентифицирующий синтаксис анализирован на примерах.

**Ключевые слова:** синтаксис, топоним, местный падеж, аллативный, аблативный, адгезивный, аллативный адгезивный, переводной, директивное начало, терминатив, качественный сравнительный, инструментальный.

**Introduction.** Toponyms in any language refer to the location of an object somewhere. A number of linguists call it “locative” [8], a second group of linguists call it as “oriented” [10], another group called “situational” [11], and the rest classifies as simple names indicating the location of the object [9].

Toponyms are studied in several groups according to the expression of space. Based on the functional-semantic field of toponyms, L.N. Fedoseeva distinguished the thematic groups as “eventual, landscape, dynamic, parametric” based on functional-thematic field of toponyms [13, 49-53] and revealed their lexical-semantic features. However, the scientist did not pay attention to the syntactic-semantic aspects of toponyms.

In analyzing the structure of the sentence, analyzing by separating into syntaxemes, identifying the differential syntactic-semantic signs of the identified components, their variants and the possibilities of combining them with other syntaxemes based on syntactic relations reveals the internal (deep) structure of the sentence. The comparative analysis of the syntaxemes in the case of adverbial modifier of place in the English and Uzbek languages shows the unique aspects of the toponyms.

**Literature revue.** N.J. Sulaymanova compared the locative syntaxemes in the Uzbek language with the English language and put their expression into the following models: “*S + da, S + oldida, S + lar + da, S + orasida, S + chetida, S + ichida ...*” [6, 76] and distinguished 21 types. In this work, the elements representing locativeness are studied in general. In our research, it is aimed to analyze the cases of locativeness represented by toponyms by separating them into syntaxemes, therefore, not all 21 models given by N.J. Sulaymanova are observed in the factual examples with the participation of toponyms.

1. *Boshqirdistonda ... “Kamaz” qo‘lga tushib qolgandi* (2, 156).

2. *... yosh-u qari Chinortog‘ etagida tong ottirdi* (3, 6).

3. *... mashina Nizomiy ko‘chasida paydo bo‘ldi* (2, 140).

The component “*Boshqirdistonda*”, which is represented by a toponym made from the name of the nation is subordinated to “*qo‘lga tushib qolgandi*” – processual actional syntaxeme and means the place of the action, i.e. the substantive adhesive syntaxeme.

In the second sentence, “*tong ottirdi*” – the processual stative syntaxeme is connected with “*yosh-u qari*” – the substantial agentive syntaxeme on the basis of nuclear predicative relationship, the syntactic unit based on the toponym “*Chinortog‘ etagida*” expresses the substantial locative adhesive syntaxeme and is connected to the nuclear predicating component on the basis of a subordinative relationship.

In the third sentence, the component “*Nizomiy ko‘chasida*”, represented by a toponym based on an anthroponym, also means an adhesive non-categorical sign, is subordinated to the actional stative syntaxeme (*paydo bo‘ldi*) and represents the space of existence of the agentive syntaxeme (*mashina*).

The syntaxeme model of sentences is as follows:

1) *Boshqirdistonda ... “Kamaz” qo‘lga tushib qolgandi* – SbLcAd · SbOb · PrAcDr;

2) *... yosh-u qari Chinortog‘ etagida tong ottirdi* – SbAg · SbLcAd · PrSt;

3) *... mashina Nizomiy ko‘chasida paydo bo‘ldi* – SbAg · SbLcAd · PrStExs.

It was observed that toponyms are associated with processual actional directive, stative and stative existential syntaxemes when they express locative adhesive syntax.

4. *Chinorqishloqda ham ... tahlika hukm surdi* (3, 5).

5. *U kishi Shodasoyda aravasiz edi* (3, 250).

6. *Senoritaning ota-onalari ... Oqqal‘a qabristoniga dafn etilgandi* (1, 201).

In the following examples, the locative adhesive syntaxeme (*Chinorqishloqda, Shodasoyda*) is connected with additive (*ham*), stative continuous (*hukm surdi*) and iterative collective (*aravasiz edi*) syntaxemes. In the sixth example, the toponym “*Oqqal‘a qabristoniga*” is connected with allative and “*dafn etilgandi*” – processual actional syntaxeme in the form of a dative case and incorporates adhesive non-



categorical signs, as a result, “*Oqqal’a qabristoniga*” is considered as the substantial locative allative adhesive syntaxeme.

The syntaxeme model of sentences is as follows:

4) *Chinorqishloqda ham ... tahlika hukm surdi* – SbLcAdAdd · SbSt · PrStCnt;

5) *U kishi Shodasoyda aravasiz edi* – SbId<sub>1</sub> · SbLcAd · SbItrId<sub>2</sub>;

6) *Senoritaning ota-onalari ... Oqqal’a qabristoniga dafn etilgandi* – SbPs · SbOb · SbLcAllAd · PrAcDr.

Metaphor and metonymy are widely used in the nomination of toponyms. In the following examples, the toponym “*Mirzacho’l*” is based on the derivative meaning of the word “*mirza*”, while the nomination “*Textako’prik*” is connected to the name of an object that exists in that area.

7. *Bola-baqra ... bir paytlar Mirzacho’lga surgun qilingan rus mujiklar bilan ham qolib ketishdi* (3, 144)

8. *Bu qishloqni ... Textako’prik deb nomladim* (5, 141).

Before performing the syntaxeme analysis of the sentences, we put the seventh sentence into the transformation of dropping and replacing, and restoring the eighth sentence.

7) *Bola-baqra ... bir paytlar Mirzacho’lga surgun qilingan rus mujiklar bilan qolib ham ketishdi* → 7a) *rus mujiklar Buxoroga surgun qilingan*.

8) *Bu qishloqni ... Textako’prik deb nomladim* → 8a) *Men bu qishloqni ... Textako’prik deb nomladim*.

In the sentence obtained as a result of the transformation, the toponym “*Mirzacho’l*” expresses the locative allative syntaxeme and subordinated to the processual actional directive syntaxeme – “*surgun qilingan*”. In the eighth sentence, the toponym “*Textako’prik*” is connected to the processual stative syntaxeme (*nomladim*) on the basis of a subordinate relation with the help of the component “*deb*” and expresses a substantial qualitative syntaxeme.

**Analysis and results.** We reflect the syntaxeme model of sentences as follows:

7a) *rus mujiklar Mirzacho’lga surgun qilingan* – SbQlt · SbOb · SbLcAll · PrAcDr;

8a) *Men bu qishloqni Textako’prik deb nomladim* – SbAg · SbAtr · SbOb · SbQlt · PrSt.

In the Uzbek language, as in the English language, translative syntaxemes are mainly formed by toponyms denoting settlements.

9. *Ular Chinorqishloqdan Shodisoygacha piyoda borishdi* (3, 172).

10. *Toshkentga qatnaydigan poyezdlar Orenburgdan o’tadi* (1, 97).

11. *Ular Zarafshon daryosi bo’yiga tushishdi* (1, 9).

In the given sentences, “*Chinorqishloqdan Shodisoygacha*” – (9) translative syntaxeme is subordinated with “*borishdi*” – actional syntaxeme, “*Toshkentga*” (10) – allative syntax → “*qatnaydigan*” – processual qualitative, “*Orenburgdan*” – locative instrumental syntaxeme → “*o’tadi*” – processual actional, “*Zarafshon daryosi bo’yiga*” – locative allative adhesive syntaxeme → “*tushishdi*” – processual actional syntaxeme. These syntactic-semantic relations are reflected in the following syntax models:



9) *Ular Chinorqishloqdan Shodisoygacha piyoda borishdi* – SbAg · SbLcTrns · PrMn · PrAc;

10) *Toshkentga qatnaydigan poyezdlar Orenburgdan o'tadi* – SbLcAll · PrQlt · SbAg · SbLcInst · PrAc;

11) *Ular Zarafshon daryosi bo'yiga tushishdi* – SbAg · SbLcAllAd · PrAc.

So, we have seen that toponyms can also express instrumentality within the framework of locativeness and can enter into a syntactic relationship with actional syntaxeme.

12. *Poyezdning Istambuldan yo'lga chiqqaniga yigirma soat bo'lgan edi* (1, 160).

13. ... *Jaloloboddan dahshatli xabar keldi* (4, 110).

14. *Bu xizmatni Bokudan boshlaysiz* (1, 128).

15. *Qaldirg'och Makkayu mukarramadan kelgan muqaddas qush* (7, 188).

In the following examples, we observe that toponyms express ablative syntaxeme within the locative framework. We preserve the main syntactic units by putting the twelfth sentence into the transformation of omitting:

12) *Poyezdning Istambuldan yo'lga chiqqaniga yigirma soat bo'lgan edi* → *Poyezd Istambuldan yo'lga chiqdi*.

Locative ablative syntaxemes in the sentences “*Istambuldan*” (12), “*Jaloloboddan*” (13), “*Bokudan*” (14), “*Makkayu mukarramadan*” (15) are connected with processual actional syntaxemes – “*yo'lga chiqdi*” (12), “*boshlaysiz*” (14), with processual stative syntaxeme – “*keldi*” (13), processual qualitative syntaxeme – “*kelgan*”. In the fifteenth sentence, the toponym that replaces the subordinated component is subordinated to another subordinated component, while in sentences 12-13-14, it is subordinated to the nuclear components. Also, in sentences 12 and 14, the toponyms reflect the locative ablative as well as the startive non-categorical signs. F.I. Piankov in his article “Функционально-семантическая категория адвербиальной локативности и система значений пространственных наречий (фрагмент лингводидактической модели русской грамматики)” distinguishes “directive-start and directive-finish” [12, 25] syntaxemes according to the nature of the locative landmark. Based on this, toponyms “*Istambuldan*” (12) and “*Bokudan*” (14) are locative ablative directive start syntaxemes.

The syntax model of sentences will look like this:

12) *Poyezd Istambuldan yo'lga chiqdi* – SbAg · SbLcAblDrStr · PrAc;

13) ... *Jaloloboddan dahshatli xabar keldi* – SbLcAbl · QlfQlt · SbOb · PrSt;

14) *Bu xizmatni Bokudan boshlaysiz* – SbExp · SbOb · SbLcAblDrStr · PrAcSt;

15) *Qaldirg'och Makkayu mukarramadan kelgan muqaddas qush* – SbId<sub>1</sub> · SbLcAbl · PrQlt · QlfQlt · SbId<sub>2</sub>.

Toponyms can express locativeness in the function of the adverbial modifier of degree and quantity besides in the function of the adverbial modifier of place.

16. *Bu Bakirko ydagidek xavfli ish emas* (1, 134).

17. *Qarsda bir tanishim bor...* (1, 160).

18. *Turkiyada hech kimi yo'q* (1, 138).

In the sentences, locative qualitative comparative syntaxeme – (*Bakirko ydagidek*) (16), locative adhesive syntaxemes (*Qarsda*) (17), (*Turkiyada*)



(18) are connected with qualificative qualitative negative syntaxeme (*xavfli emas*) (16), existential (*bor*) (17), existential negative syntaxeme (*yo 'q*) (18). Also, nuclear predicated components in the structure of sentences represent identified syntaxemes. We explain the syntaxeme model of sentences as follows:

16) *Bu Bakirko 'ydagidek xavfli ish emas* – SbDmId<sub>1</sub> · SbLcQltCmp · QlfQltNg · SbId<sub>2</sub>;

17) *Qarsda bir tanishim bor ...* – SbLcAd · QlfQunInd · SbId<sub>1</sub> · Exs;

18) *Turkiyada hech kimi yo 'q* – SbLcAd · SbNgId<sub>1</sub> · ExsNg.

**Conclusion.** From the analysis of the collected factual examples, it became clear that toponyms in the Uzbek language express allative, ablative, adhesive, allative adhesive, translative, directive start, terminative, qualitative comparative, instrumental syntaxemes within the framework of locativeness and are connected with processual actional, stative, object, existential, modal, identifying syntaxes.

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## LINGUOCULTURAL FEATURES OF TRANSLATION STUDIES

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**Annotatsiya.** Ushbu maqolada tilshunoslik va tarjimashunoslik kabi alohida fan sifatida o'rganilib kelinayotgan lingvomadaniyatshunoslik tushunchasi va uning qo'llanilishi xususida so'z yuritiladi. Shuning bilan birga tarjimashunoslikning lingvomadaniy xususiyatlari ba'zi sohalar kesimida tahlil etiladi va lingvomadaniy belgilar tarjimasini boshqa til madaniyati uchun qanday moslashtirish mumkinligi bir necha usullarda ochib beriladi.

**Kalit so'zlar:** tarjimashunoslik, lingvomadaniyatshunoslik, madaniy belgilar, til xususiyatlari, muqobil tarjima, adekvatlik.

**Annotation.** This article describes the concept of linguistics and its application, which is studied as a separate discipline such as linguistics and translation studies. At the same time, the linguistic and cultural features of translation studies are analyzed in the cross-section of some areas, and how the translation of linguistic and cultural signs can be adapted for another language culture is revealed in several ways.

**Key words:** translation studies, linguistic and cultural studies, cultural signs, language features, alternative translation, adequacy.

**Аннотация.** В данной статье описаны понятия лингвистики и культурологии, которое используется в языкознании и переводоведении, и его применении. При этом лингвокультурологические особенности переводоведения анализируются в разрезе некоторых направлений, и в нескольких направлениях раскрывается, как перевод лингвокультурных знаков может быть адаптирован к другой языковой культуре.

**Ключевые слова:** переводоведение, лингвокультурология, знаки культуры, языковые особенности, альтернативный перевод, адекватность.

**Introduction.** Linguistics, which analyzes the relationship between language and culture and cultural views in it, studies the expression of customs, traditions, values, cultural, ancient and modern worldviews of the peoples of the world in a certain language. Linguistics in linguistics is a product of the anthropocentric paradigm and has become one of the main directions of linguistics in the last 20 years. Linguistics (lat. *lingua* - language, *cultura* - processing, *logos* - doctrine), which is considered the leader in anthropocentric linguistics, studies the interaction of language with culture, tradition, ethnos, national mentality through the principles of the anthropocentric paradigm[1]. Relationships in different cultures are based on their individual characteristics. For example, Uzbeks are hospitable, Germans are meticulous and precise, Russians are risk-taking, Japanese and Chinese are hardworking and polite,





English are cold, Italians are curious, and French are emotional. Therefore, a person's knowledge of the world, objective knowledge of the environment is reflected in the language system. For example, when the Uzbek people think of a tree, first of all, an apple, almond, poplar or apricot tree comes to their mind, while the Russians think of oak, birch, and the Japanese think of sakura, Malay or Indian people think of bamboo, palm or banana tree. This means that different nations understand and see the same world differently. So, linguistic and cultural studies is a field that deeply studies the interaction and influence of language and culture in a generalized system.

**Literature review.** The words sun, sky and moon in Uzbek and English have their own connotative meanings. Touching on the issue of language and culture, O. Muminov mentioned the differences in the connotative meanings of colors and celestial bodies in Uzbek, English and Russian languages, the meaning of the Uzbek verb "to go" and the English equivalent of this verb "to go" do not fully match the meaning[2]. According to the scientist, the words "sun" and "moon" express the positive character of people in a connotative sense in different languages. People living in the northern regions understand the meaning of the word sun as a source of life, joy (*Моё солнышко* - my sun), while people living in the southern regions express the same connotative meaning with the word moon (My moon in the sky, a girl like the moon). Therefore, the differences in the culture of the peoples depend not only on the geographical location, but also on the people's thinking and the internal capabilities of the language[3]. To adapt a text to any culture, a translator can create several translation options and achieve local adaptation. The similarity of cultures usually leads to the parallelism of content, which greatly facilitates the process of adaptation compared to cases where cultures do not have a common basis. In the process of adaptation, the loss of national color, which can be successfully implemented in the language due to the lexical diversity of the text, is inevitable. One of the most serious problems in text adaptation is the issue of translating cultural elements, that is, world objects, historical events, customs and traditions. When translating cultural signs (linguistic and non-linguistic), it is necessary to use a method that meets the requirements of the discourse and its functions.

**Research Methodology.** There are several ways to determine how a given message can be adapted for another language culture.

1	the larger the message, the more successfully it can be adapted
2	the smaller and simpler the message, the easier it is to adapt
3	Adaptation is successful when the source culture and the target culture are similar
4	Adaptation is more successful when the source culture and the target culture are the same
5	When the third and fourth clauses are applied, the translator's lying friends should also be taken into account

6	the success of the adaptation may also depend on the expressive capabilities of the language
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**Analysis and results.** A match in the translation process above may contain more character sets than the types listed. Because cultural symbols and language units are different in different countries. Furthermore, in the process of adaptation, the receiver must recreate the sign, interpretation, and meaning in order to create his own personal framework in the restructured context. This type of need is manifested on four levels. including

a) the diversity of languages: language systems, their functions, and each sign of meaning depends on a differentiated relationship with other signs, and does not have an objective relationship that can be assumed to be equivalent. It excludes the same placement of characters in any language codes.

b) cultural diversity: each language has its own traditions, values and customs, which are transmitted and modified using language codes and conventions.

c) historical diversity: geographical. Historical differences have always existed in the process of translation, because the original precedes the translation. Communication methods and language systems are constantly changing and developing, and with it the contextual meaning or combinations of lexical items and communicative strategies.

g) interpretive diversity: this is a very important factor in the adaptation process and is the translator's knowledge of the culture of the source language and the culture of the target language.

The message cannot be considered as a static phenomenon, because it belongs to the author and it, in turn, is reshaped when translated into another culture. The dynamics of such a process confirms that there is no perfect translation and there will never be.

**Conclusion.** Cultural object - beliefs, customs and traditions are determined by the cultural history and values of this language community. According to M. Dagut, the causes of lacuna formation are community-specific referents that are not present in other communities[4]. The resulting lacunae are language-specific and easier to translate. In some cases, when an ad is adapted, it may be necessary to re-create the ad with the recipient's culture in mind, when a cultural element cannot be omitted or replaced[5]. The adaptation process also affects the communication process, because each element is determined by context: text, situation, culture; the adaptation process should focus not only on linguistics but also on cultural transposition[6]. According to D. Gorley, the interpreter performs two functions as a participant in the communication. It is both the recipient of the original message and the sender of the customized message. Thus, the main task is to eliminate certain cultural symbols and language differences. To achieve this goal, first of all, it is necessary to determine which symbols are used in the original message, what is their effect, why such symbols are chosen by the creators of advertising and whether they have equivalents, as well as what is the idea behind cultural units. All these tasks are an important resource for the translator of the advertising text and serve to ensure adaptation to the translation language and its culture.



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### **THE ROLE OF PHYTONYMS IN THE SYSTEM OF METAPHORICAL TRANSFER IN THE WORKS OF ALISHER NAVOI**

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**Abstract** – The role of the great poet and thinker Alisher Navoi is incomparable in the fact that the rich and colorful Uzbek language, which represents our national identity, is rich and wealthy with its unique lexicon among the sister Turkic languages, and occupies a worthy place among the developed world languages.

**Key words:** poet, Alisher Navoi, Turkic languages, Uzbek people's lifestyle, Uzbek linguistics, Turkic scholars, phytonyms.

**Аннотация** – Роль великого поэта и мыслителя Алишера Навои несравнима в том, что богатый и красочный узбекский язык, олицетворяющий нашу национальную самобытность, богат и богат своей уникальной лексикой среди родственных тюркских языков, занимает достойное место среди развитых языков мира.

**Ключевые слова:** поэт, Алишер Навои, тюркские языки, быт узбекского народа, узбекское языкознание, тюркологи, фитонимы.

**Annotatsiya** – Milliy o'zligimizni ifodalovchi boy va rang-barang o'zbek tilining qardosh turkiy tillar orasida o'ziga xos leksikasi bilan boy va boy bo'lib, munosib o'rin egallashida buyuk shoir va mutafakkir Alisher Navoiyning o'zni beqiyosdir. rivojlangan dunyo tillari qatoriga kiradi.

**Kalit so‘zlar:** shoir, Alisher Navoiy, turkiy tillar, o‘zbek xalqining turmush tarzi, o‘zbek tilshunosligi, turkiyshunos olimlar, fitonimlar.

**Introduction.** The poet's works contain words and phrases related to all aspects of the Uzbek people's lifestyle and outlook. Determining the essence of the lexical system, which is called the vocabulary of Navoi's works, the scope, size and limits of the words is of urgent importance for the science of Uzbek linguistics. Turkic scholars and Uzbek linguists conducted serious research on the in-depth study of its scientific and artistic heritage. V. Abdullaev, B. Valikho, who made a significant contribution to the study of the language of Navoi's works, due to the fact that the scope and amount of studies devoted to the language features of Navoi's works are large, and it is not possible to list them all. Jaev, H. Yaqubov, A. Qayumov, H. Rasulov, E. Ibrahimova, R. Majidiy, it is enough to mention only the names of scientists. The vocabulary of the language of Alisher Navoi's works, and the genealogical foundations of this wealth have been extensively studied by these scientists.

**Literature review.** In the study of linguist M. Usmanova, plant names in the language of the poet's works were collected, they were studied in geneological, lexical-semantic and semantic-stylistic directions, compound words containing names of plants and trees, semantic and stylistic aspects of word combinations, their role in art are partially analyzed. However, the features of the use of phytonyms in a metaphorical, figurative sense are an issue that needs a separate study. Obviously, a certain part of the lexical wealth of the language of Navoi's works is made up of words reflecting the world of plants. Taking this into account, in this research, the names of plants in Alisher Navoi's ghazals were collected, and their figurative and metaphorical meanings were studied.

**Analysis.** The figurative meaning of the names of plants in Alisher Navoi's ghazals, the fact that their scope of use is of actual importance for the science of Uzbek linguistics, compound words containing the names of plants and trees, the metaphorical properties of word combinations, their place in art were analyzed as follows:

*Meravad sarvi manu raftor memonad ba dil,  
V-az guli ruxsori o‘sad xor memonad ba dil.*

(Devoni forsiy, 161-162pp.)

*Mening sarvim ketdiyu, raftori ko‘ngilda qoladi,  
uning gulday ruxsoridan yuz tikan ko‘ngilda qoladi.*

Navoi uses phytonyms appropriately to describe the sweetheart, he reflects the lover's beautiful stature, beautiful face, eyes, and all her beauty with phytonyms, and these phytonym metaphors increase the artistry of the ghazal. For example, he compares the sweetheart to a cypress tree because of its upright stature, and now he directly calls it not my sweetheart, but my cypress.

Metaphor has such lexical power that if poets and writers can use it appropriately, the art of the work will increase even more. Because in describing the beauty and character of the sweetheart, without mentioning the appearance of the sweetheart, citing phytonyms with such characteristics serves to make the content of the ghazal more understandable. Whereas, Hegel wrote "a word used in its meaning is a self-explanatory expression, and a metaphor is a different expression." In Navoi's works, the metaphor is reflected in the upper levels:



*Gul kerakmastur menga, majlisda sahbo bo'lmasa,  
Naylayin sahboni bir gul majlisoro bo'lmasa.*

In the next verse, the poet does not mention the flower itself, but calls it a flower and tells us all the beauty and beauty of a flower.

Another phytonym given in Navoi's ghazals is violet. **Violet** is a perennial plant belonging to the family of violets. The constant swaying and fragrance of violet flowers express various poetic images and meanings, and are used in visual literature as the meaning of divine wisdom, which the human mind is unable to understand. In Navoi's poetry, the twisted hair of the sweetheart and the ring-ring ringlet are like violets, so hair and ringlet are used instead.

*Shikanj turrasidinkim girih yozilmaydur,  
Binafsha durur, ammo hanuz ochilmaydur.*

(“Navodir un-nihoya”, 204-ghazal)

If it were not for the great miracle of nature, the metaphors reflected in the poems of poets and writers would not have gained so much appeal. If the poet had no skill, he would not have been able to see the beauty and would not have conveyed the emotion at a high level. Without metaphor, such a beautiful ghazal would not have been created. Known and famous for all ghazals, “*Qaro ko'zim radifli g'azal*” is a product of the poet's youthful lyrics, written on a romantic-philosophical theme. In the ghazal, we use the words flower, gulshan, nihol, chaman, hina, garden, gardener, thorn and rose. The words flower, sprout, and hino are phytonyms, and the words gardener and rose are composed by the method of composition, and the words chaman and the words sprout and flowers are a place where flowers grow.

*Yuzung guliga ko'ngil ravzasin yasa gulshan,  
Qading niholig'a jon gulshanin chaman qilg'il.*

Analyzing this stanza, we can see that the face is represented by a flower, and the waist is represented by the phytonym of a plant. Indeed, the ghazal would not have been so clear to us if another symbol had been used to emphasize the height of the sweetheart. We know that sprout is distinguished from other phytonyms by its subtlety and originality. The verse in Navoi's ghazal is as delicate and delicate as a sprout. It is not for nothing that the face is likened to a flower, because one of the most beautiful plants created by nature is a flower, and because of this, the poet likens the face to a flower.

*Tutti ko'k feruzagun jomini shingarfi bulut,  
Soqiyo, nilufari jom ichra gulgun boda tut.*

(“Badoe ul-bidoya”, 70-ghazal)

**Lily** of the valley - a group of perennial plants that grow in water belonging to the lily family. The lily is widely used as a symbol in Chinese, Indian, Japanese, and Egyptian art and literature. The lily is a symbol of the world, awakening, beauty, life, happiness, purity and spirituality. In Eastern literature, the lily represents innocence and simple beauty. In Navoi's works, the blue lily is mainly depicted.

*Ko'zung shamoyilini nargis ar ko'ra olmas,  
Sanga ne fikr ko'zi chiqsun ulki bo'ldi hasus.*

(“Nabodir ush-shabob”, 122-ghazal)

**Discussion.** In classic literature, we often meet the phytonym **narcissus**. **Narcissus** is a domesticated yellow and white spring flower belonging to the chuchmoma family. Narcissus is also used as an image and symbol in ancient times, in Greek mythology, this flower was named after Persephone, goddess of the underworld, who returns in spring. In the legends, it is connected with a story about a young man with a beautiful face who dies as a lover. The image of a young man named *Nargiz* has become a symbol of pride and arrogance. In the language of flowers, *Nargiz* represents desire and selfishness. In Eastern literature, the *Nargiz* flower is compared to the eyes of a lover, along with witches, Hindus, infidels, blasphemers, executioners, plagues, almonds, istelabs. In another ghazal, it is said that the poet's mistress is dressed in a *savsan* (gulsapsar) color dress, which makes her look like a *shamshod* tree covered in purple leaves:

*Savsani to 'n birla ul qad savsani ozod erur,  
Yo binafsha bargidin zeb aylagan shamshod erur.*

**Savsan** is a plant belonging to the coniferous family. The flowers are white, yellow and blue. There are also names such as *filgosh* and *zanbak*. **Savsan** is a *symbol of freedom in the language of symbols*. In Navoi's poetry, all types of savsan were used in their place and served to fulfill various moral and aesthetic tasks. In the 399th ghazal of "Badoe ul-vasat" divan, the image of *savsan* is used in each stanza and attention is paid to its various aspects.

*Bu chaman kayfiyatin  
Ozoda ekim qildi fahm,  
O'n tilli savsande o'lsa  
Hayrat aylar lol ani*

*Sandalwood* is an evergreen plant belonging to the family of coral grasses, a tree that emits a pleasant smell. A. In chapter 356 of Navoi's work "Nabodir ush-shabob" the following ghazal is given with the participation of sandal phytonym.

*Gul parishon o'ldiyu sarvi  
sihiy topti shikast,  
Bog' aro gulgash ul sarvi  
gulandom aylagach.*

#### (“Favoyid ul-kibar”, 97-ghazal )

Hazrat Navoi not only used phytonyms to emphasize the mistress, but also used phytonyms to describe the state of being in love. For example, the poet says that the lover's red face like a tulip turned yellow due to the pain of *hijran*, and his dry body was like straw.

*O'rtabon ushshoq jismin, g'ofil o'lma ohdin  
Kim zararliq dud zohir aylar o't tushgan somon.*

In another place, he compares a lover to a phytonym of a tree and says:

*Quruq shoxedurur jismimki, ko'z davrida kiprikdin –  
Xayoling qushlarig'a anda ikki oshiyon bo'lmish.*

There are wounds on the lover's body caused by the arrows (eyelashes) of the sweetheart, and the poet sometimes compares them to the patchwork coat of the gado, and sometimes to the leaves on the trees.

*Zaif tanda g'amingdin yuz eski o'lg'on dog',*



*Har eski dog' bu shox uzra bir quruq yafrog'.*

In another ghazal of Navoi, the phytonym of the bud is analyzed as follows.

1. *Ochilmagan gul, gulg'uncha.*

*Qiliptur guli otashin g'unchasi,*

*Ko'ngulni o'kush so'zi hijron manga.*

**(“Navodir ush-shabob”)**

2. An immature or secretly (hidden) glimpse of divine beauty, a divine mystery sent to the heart of a lover.

*Gul kibi soch xurdakim,*

*Yel yirtibon toroj etar*

*G'unchakim, o'z naqdini og'zida*

*pinhon aylamish.*

**(Garoyib us-sig'ar)**

3. Sweetheart's red and closed lips, which do not invite a lover, are compared to a red ruby, mute, and a red flower (rose) bud.

*Gulzori jamolidagi paydo emas og'zi,*

*Ul nav gul ochildiki,*

*bir g'uncha topilmas.*

**(“Navodir ush-shabob”)**

4. The lover's heart filled with blood from the wounds of love, migration, and suffering.

*Ochilur ko'nglim samandi sayridin,*

*G'uncha yanglig'kim sabodin ochilur*

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## MODERN PROBLEMS OF TOURISM AND ECONOMICS

UDC: 330.1

### NEW OPPORTUNITIES OF SMALL BUSINESS AND ENTREPRENEURSHIP IN NEW UZBEKISTAN

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**Annotatsiya.** Mazkur maqolada bugungi kunda O'zbekiston Respublikasida kichik biznes va xususiy tadbirkorlik (KBXT)ni rivojlantirish asosida aholini ish bilan band qilish, kambag'allikni qisqartirish, tadbirkorlikni yanada keng rivojlantirish uchun davlatimiz tomonidan qabul qilinayotgan qaror va farmonlar, qo'llab-quvvatlash, rag'batlantirish shart-sharoitlari, imkoniyatlar va to'siqlar, boshqarishning ustuvor yo'nalishlari yoritilgan. O'tkazilgan tadqiqotlarimiz natijalarga ko'ra, KBXTni yanada rivojlantirish orqali aholi bandligini va daromadlarini oshirish, fermer, dehqon xo'jaliklari, tomorqa yer egalari va o'z-o'zini band qilish orqali tadbirkorlik bilan shug'ullanish yo'nalishlari borasidagi imkoniyatlar, yengilliklar va imtiyozlar bayon etilgan..

**Kalit so'zlar.** Kichik biznes, tadbirkorlik, subsidiya, fermer xo'jaliklari, dehqon xo'jaliklari, tomorqa yer egalari, o'z-o'zini band qilish, aholi bandligi.

**Аннотация.** В статье освещаются принятые нашим государством решения и указы, поддержка, стимулирующие условия, возможности и барьеры, приоритеты управления по обеспечению занятости населения, сокращению бедности, дальнейшему развитию предпринимательства на основе развития малого бизнеса и частного предпринимательства в Республике Узбекистан. По результатам проведенных нами исследований возможно повышение занятости и доходов населения за счет дальнейшего развития фермерских, крестьянских хозяйств, намечаются возможности, легкость и выгоды в сферах предпринимательства через землевладельцами и само занятостью.

**Ключевые слова.** Малый бизнес, предпринимательство, субсидия, фермерские хозяйства, крестьянские хозяйства, собственники приусадебных участков, самозанятые, занятость населения.

**Annotation.** This article covers the decisions and decrees adopted by our state, support, incentive conditions, opportunities and barriers, management priorities for employment of the population, poverty reduction, further development of entrepreneurship on the basis of the development of small business and private entrepreneurship in the Republic of Uzbekistan. According to the results of our research conducted, it is possible to increase employment and income of the population through the further development of SBPE, farms, peasant farms, opportunities, lightness and benefits in the areas of entrepreneurship through landowners and self-employment are outlined.



**Keywords.** Small business, entrepreneurship, subsidy, farms, peasant farms, farmland owners, self-employed, employment of the population.

**Introduction.** Small business and private entrepreneurship (SBPE) occupy a special place in the sustainable development of the economy, increasing employment and reducing poverty in the world. According to the UN, in 2022, 90% of the development of the world economy is micro, small and medium enterprises, which provide 70% of jobs, and the share in world GDP is 50% [24]. According to the organization for Economic Cooperation and Development (OECD), the share of SBPE in GDP in the economy of Japan and China is 60 percent, in France – 56 percent, in the USA and Great Britain – 51 percent[25].

**Literature review.** Scientific, theoretical foundations and methods of research of the development of SBPE covered in the research of foreign scientists such as: A.Smith, Y.Schumpeter, X.Gross, R.Bruksbeng, V.Hyubner, R.Khizrich, M.Peters, A.Hosking, G.Jaunz, L.Abalkin, V.Abchuk, A.Busigin, Yu.Asipav, M.Balashevich, K.Dougerty, A.Webster, E.Vigdorchik, A.Khachatryan, S.Ayvazyan, A.V.Tkach, I.A.Minakov.

In the context of the transition to a market economy in our republic, the Universal, regional and sectorial problems of the development of SBPE are widely covered in the scientific work of a number of scientists of our republic [5,6,9,11,12,13,15,16].

Another well-known scientists who conducted research on the development of socio-economic processes and direct SBPE in our country studied theoretical and practical aspects of modeling regional, sectorial, infrastructure objects of the economy in their scientific works [4, 7,8,10,14,17,19,21].

However, while the work of the above scientists serves as important scientific sources in covering the general theoretical and methodological foundations of the development of SBPE, the issues of developing sbpe in the country, as well as scientifically based proposals and recommendations for increasing employment and income of the population, getting out of poverty, in-depth research of various aspects of the organization This served as the basis for determining the direction of research.

Therefore, with the help of methods and models that are currently being effectively used in the classification of small business and private entrepreneurship in our republic, identifying and evaluating development trends, improving and prioritizing mechanisms for Sustainable Entrepreneurship Development, researching advanced experiences of entrepreneurship development and poverty reduction in developed countries, ensuring, monitoring sustainable and proportional development of entrepreneurship in our republic, there is a real need for solving and practical implementation of scientific and practical problems of prolonging their "life cycle", identifying trends in the development of entrepreneurship.

**Research methodology.** The methodological basis of the study is the legislative and regulatory legal acts in the field of development of the SBPE, in particular the decree of the president of the Republic of Uzbekistan dated March 2, 2020 "Strategy of actions in five priority areas of development of the Republic of Uzbekistan in 2017 — 2021 Decree of PF-5953 «on the state program on implementation in the year of science, enlightenment and development of the digital economy»" [1], Decree of the

president of the Republic of Uzbekistan dated January 28, 2022 No. 60 "on the development strategy of New Uzbekistan for 2022-2026" [2], Resolution of the president of the Republic of Uzbekistan "on measures to reduce the share of informal employment and form the balance of labor resources on the basis of modern approaches" dated August 30, 2022 PQ-366 [3], PP-4227 of March 5, 2019 "on the state order for employment of the population and the organization of new jobs in 2019" were adopted.

The decrees and resolutions also widely use modern statistical methods and observations, comparative and systematic, analysis and synthesis, induction and deduction methods in the collection and processing of relevant statistical data, as well as proposals and recommendations on the main directions of continuing institutional and structural reforms aimed at reducing state participation in the economy, protecting private property rights and further strengthening its priority.

**Analysis and results.** At the end of 2021 in the economy of our country, the share of SBPE in the country's GDP was 54.9% [26]. As the third priority of the New Uzbekistan development strategy in 2022-2026 "development of the national economy, its growth rates at the level of modern requirements on the basis of further support of entrepreneurial activity, reducing the tax burden, creating a business environment and the necessary infrastructure" [2] the necessary opportunities for further development of SBPE are being created.

These include: the benefits provided to entrepreneurs from taxes, the provision of subsidies and benefits for young people to start their entrepreneurial activities, the introduction of the procedure for subsidizing students and graduates of the University, the expansion of the types of activities that self-employed persons can engage in, the creation of a council of entrepreneurs under the authorities can be considered.

In order to improve the order of formation of the balance of labor resources, to ensure employment of unemployed citizens, especially women and graduates entering the labor market for the first time, and to widely attract entrepreneurship, as well as to introduce impressive new mechanisms for reducing informal employment, the following opportunities and mitigations are being introduced:

1. Since November 1, 2022, the following 10 types of activities listed in Table 1 have been included in the list of types of activities (works, services) that self-employed individuals can engage in.
2. Since January 1, 2023, the minimum amount of Social tax for individuals in labor relations with individual entrepreneurs is reduced from 50% of the amount of base calculation per month to one time of the amount of base calculation per year.
3. In the event that from January 1, 2023, a social tax has been paid by citizens engaged in the types of activities indicated in Table 2 on the land plot of their personal plot in the amount of at least one time of the amount of the base calculation per year, they are included in the category of officially employed population, and this period is added to their length of Service.

Since November 1, 2022, at the expense of the state fund for employment assistance to business entities that have occupied the owners of household land plots on the basis of cooperation and labor:

**Table 1**

List of additional types of activities (works, services) that self-employed individuals can engage in[3]

N/a	Types of activities
1.	Intermediary service in the markets of pets (cattle ,sheep, goats, horses, etc.)
2.	Intermediary service in car markets
3.	Provision of realtor service (assistance in finding a house for rent ,buying and selling a house)
4.	Service for the processing and sale of milk and dairy products at home
5.	Service for renting household items (table-chair, dishes, equipment, etc.)
6.	Making items from plaster and ganch (making household appliances, sculptures of fairy-tale heroes)
7.	Making Souvenirs, Souvenirs and decorative items from stone and stone products
8.	Weaving baskets from wood products, special containers for bakery products and other items
9.	Growing cocoons at home, growing mulberry fruit, sprout and seedling on a personal farm land plot, weaving and selling silk fabrics, silk carpets at home
10.	Ceramics

- a) poultry (chicken, quail, duck, goose, turkey), cage for keeping poultry, products for feeding and medicines;
- b) grape seedling and Vine sapling;
- c) Bee Family, box and feed for bee nest;
- d) rabbit, rabbit cage and feed;
- e) a subsidy is allocated for the purchase of small fish, an artificial pond and feed, as well as for the subsequent provision of the farm to landowners.

In this case, this subsidy will be allocated to the owner of one household plot in the amount of up to 20 times the amount of the base calculation according to the recommendation of the governor's assistants.

4. From May 1, 2021 to January 1, 2023, the amount of Social tax paid by employers (except for budgetary organizations, state enterprises, legal entities with a state share of 50 percent or more in the authorized fund (capital) is fully refunded from the state budget by them for employees under the age of 25. At the same time, the amount of Social tax is returned from the seventh month, provided that young employees carry out continuous labor activities for six months.

**Table 2**

List of additional types of activities carried out on private farm land plots[3]

N/a	Types of activities
1.	Livestock (cattle, sheep, goats, horses, etc.)
2.	Greenhouse



3.	Poultry (quail, turkey, goose, duck)
4.	Rabbit breeding
5.	Beekeeping
6.	Fishing
7.	Gardening
8.	Lemon production
9.	Floriculture

5. From May 1, 2021, young people included in the "youth book" will be provided with a subsidy at the expense of "youth book" funds for the start of entrepreneurial activity and the purchase of equipment and labor weapons necessary for self-employment in an amount not exceeding 40 times of amount of base calculation.

6. On May 1, 2021, entrepreneurs who have hired unemployed youth included in the "youth book" will be provided with benefits from rental payments when renting state property.

7. Since June 1, 2021, 30% of the annual rental costs for young entrepreneurs who rent buildings and structures for the start of entrepreneurial activity included in the "youth book", but up to 25 times the amount of the base calculation is compensated at the expense of the "youth book" funds.

8. Young people included in the "youth book" studying in Professional educational organizations are allocated a monthly subsidy in the amount of twice the amount of the base calculation at the expense of the state budget by professional educational organizations at the time of their internship at production or service enterprises, but not more than six months.

9. "National bank" implements the project "hundred thousand women entrepreneurs" in order to attract women to entrepreneurship in the regions, prepare them for business, provide advice and ensure employment. Within the framework of the project, taking into account the socio-economic potential, specialization and other characteristics of the regions, a Bank of ready-made business plans will be created, the cost of which is up to 33 million rubles. Based on the interests of women under the age of thirty, master classes and training trainings are organized with the participation of qualified specialists in suitable areas (cooking, confectionery, hairdressing, etc.)

10. From May 1, 2021, a system of patronage of young people engaged in agricultural activities by the heads of sectors, clusters and farms will be introduced. In this case, the heads of sectors, clusters and farms provide assistance in the development of land plots allocated to young people on the principle of "teacher-Apprentice", conducting agro technical measures, increasing the yield of land, realism of the grown product and other issues.

Also, young people engaged in peasant farming activities included in the "youth book" are allocated a subsidy of up to 8 times the amount of the base calculation for



the purchase of seeds and seedlings at the expense of the savings" youth book", "Iron notebook" and "women's notebook".

Based on the above research, we think that the decisions and decrees taken by the state to develop entrepreneurship and increase employment and reduce informal employment, the benefits and wide opportunities provided will pave the way for the further development of small business and entrepreneurship in our country.

### **Conclusions and suggestions.**

The system of formation on a scientific basis of the development of small business and private entrepreneurship and increasing employment, as well as reducing the share of informal employment, allows not only to switch to new forms of economic activity that can meet the demand of the time, but also to ensure the provision of goods and services through self-employment.

Such an approach to the formation of a system of reducing the share of informal employment, self-employed in our opinion, provides for the solution of the following tasks:

- Organization of production and service, justification of the form of self-employment of entrepreneurship;
- self-employment development of principles for the organization and implementation of areas of activity;
- to establish directions for the organization of production and service circles in places where there is a high demand for self-employment areas.

The role of foreign experience in the formation of the mechanism of self-employment in the formal form of forms of entrepreneurship in informal sectors in our republic is incomparable. In particular, the Chinese experience is extremely significant. In addition, in European countries, the possibility of applying the experience of self-employment forms of entrepreneurship in Uzbekistan is high, which is important in the more effective organization of entrepreneurship in the regions and in reducing the share of informal employment and employment of the population.

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## ASSESSMENT OF THE INFLUENCE OF FACTORS ON THE QUALITY MANAGEMENT PROCESS OF HEAT SUPPLY ENTERPRISES

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**Abstract.** The market for heat supply services, which is developing in the field of social services, and its efficiency is characterized by the presence of demand for the volume of services offered and its characteristics.

**Key words:** heat supply, service market, economic efficiency, entrepreneurship, housing and communal services.

**Annotatsiya.** Ijtimoiy xizmatlar sohasida rivojlanayotgan issiqlik ta'minoti xizmatlari bozori va uning samaradorligi taklif etilayotgan xizmatlar hajmiga talabning mavjudligi va uning xususiyatlari bilan tavsiflanadi.

**Kalit so'zlar:** issiqlik ta'minoti, xizmat ko'rsatish bozori, iqtisodiy samaradorlik, tadbirkorlik, uy-joy kommunal xo'jaligi.

**Аннотация.** Рынок услуг теплоснабжения, развивающийся в сфере социальных услуг, и его эффективность характеризуется наличием спроса на объем предлагаемых услуг и его характеристики.

**Ключевые слова:** теплоснабжение, рынок услуг, экономическая эффективность, предпринимательство, жилищно-коммунальное хозяйство.

**Introduction.** The formation of real demand for heat supply services is directly influenced by such consumer characteristics as quality, price and ease of use of the services offered. The state of consumer characteristics of these services is directly related to the factors that arise in the process of creating and providing services to the consumer.

The purpose of the study is to assess the socio-economic structure of the market, to develop the theoretical foundations for increasing the economic efficiency of economic activity in the region's heat supply system based on the development of a methodology and algorithm.

The implementation of this goal determined the formation and solution of the following main **tasks**:

- to study and clarify the essence and theoretical aspects of the development of business structures in the market of heat supply systems;
- to define features of the market of systems of heating;
- assessment of the market for boiler equipment, as well as the definition of the import component in the market. analyze the state of housing and communal services and determine the main directions for increasing the economic efficiency of the transition to a decentralized heat supply system as a necessary condition for the development of entrepreneurship in this area;
- to determine the main factors of the business environment of the heating network of the region;

- improvement of methodological approaches to forecasting socio-economic activities in the field of entrepreneurship in the target market of thermal services;
- development of a methodology and algorithm for analyzing and forecasting the demand of the population for heat supply services and the level of their implementation, taking into account the changing conditions of the business environment;
- development of a model for the formation of the competitiveness of an enterprise in a changing competitive environment in the market of heat supply systems.

**Literature review.** The subject of the study is the economic processes that determine the level of development of entrepreneurship in the system of the market of thermal services in the region.

The object of the study is the business structures of the heating equipment market operating in the Republic of Uzbekistan.

When studying the factors affecting the activities of enterprises operating in the heat supply services market and the processes of quality management of the services provided, it is important to single out these factors into separate types in accordance with the impact process. At the same time, depending on the process of influence of factors, 3 types are distinguished:

- factors affecting the efficiency of the industry's enterprises;
- factors influencing the development of the heat supply services management system;
- it is desirable to study the quality of services provided, dividing them into factors that affect management.

**Research methodology.** Factors of the first type, that is, factors affecting the efficiency of existing enterprises, can be assessed as factors affecting the competitiveness of an enterprise.

The concept of competitiveness is an economic category with a complex content, this concept is found in all parts of economic relations, and there are very comprehensive indicators for measuring this category. In the studies of A.A. Alekseev, E.V. Borisova, S.A. Egorychev, S.V. Zakharova and many other researchers, the factors of enterprise competitiveness were studied in different ways.

Let us consider in more detail the groups of factors of macro-, micro- and internal environment of enterprises proposed by A. A. Alekseev (Table 1).

**Table 1.**

**Factors of macro-, micro- and internal environment of enterprises**

Environment	Factor groups	Factors
	Political	International political situation, domestic political situation, state policy, state strategies and goals, national interests, state regulation of the industry, political parties, actions and activities of blocs.
	Economic	The level of development of the world economy, the state of the national economy, the level of inflation, the main macroeconomic indicators, sectoral and regional structural changes, government regulation of





Macro environment		the economy
	Scientific and technical	The level and pace of scientific and technological development, the volume of investments in science and technology, the level of development of scientific and technical infrastructure, information base and telecommunications
	Thematic and legal	Tax legislation, legal documents, licensing, standardization, certification, consumer protection
	Socio-demographic	Demographic status, literacy rate of the population, professional composition, age composition, migration rate, birth rate, life expectancy of the population, income and expenses of the population, cost of living index
	Cultural and historical	Social and national values, public opinion, corporate and entrepreneurial culture.
Microenvironment	Competitors and competitive environment	Characteristics of competition, number of competitors, composition of competition, activity of foreign investment in the country, market share, range of services, competitiveness of services, price, discount system, price level of competitors, quality of services, system for measuring and assessing customer needs, image.
Internal environment	Consumers	International market, domestic market, effective demand, number of buyers, composition of buyers.
	Business infrastructure	Financial institutions, banks, investment companies, joint-stock companies, insurance companies, communications, advertising, sales promotion, information support.
	Labor market	Employment, the composition of the labor market, the structure of the labor market.
	Legal framework	Laws, taxation, regulation, licensing, attestation, certification of services.
	Ишлаб чиқариш	The volume of services, the cost of production, the type of services, the quality of services, the level of technology use
	Employees	Number of employees, labor productivity, qualifications of employees, professional competence, effectiveness of personnel management, personnel policy, recruitment, education and training, advanced training
	Organizational management	Organizational structure, flexibility, economy, management level, licensing, certification,



		standardization, information support
	Marketing	Marketing expenses, organization of marketing research, marketing activity policy (innovation policy, pricing policy, quality policy, competitiveness of services).
	Financial	Financial condition, composition and structure of financial resources, proportionality of financial resources, efficient use of financial resources.

**Analysis and results.** Using the approaches and classification analyzed above, it is proposed to classify the factors affecting the competitiveness and performance of enterprises operating in the heat supply services sector in Uzbekistan in Table 2.

The conducted analyzes allow clarifying the factors influencing the efficiency of enterprises. In general, factors affecting the efficiency of heat supply enterprises are managed housing stock or a system of indicators that positively or negatively affect the process of providing services to consumers by heat supply enterprises.

**Table 2.**

**Classification of factors affecting the efficiency of heat supply enterprises**

Degree	Factor groups	Factors
Macro level	Financial	The possibility of using financial resources in the field of heat supply at the national level
	Innovative	Application of information systems and technologies in the field of heat supply throughout the country
	Logistics	The degree of automation of business processes in the field of heat supply on a national scale
	Organizational and economic	Qualification of employees and the level of their motivation in the field of heat supply of the republic, standardization, structure of the management level system.
	Labor	Social policy in the field of heat supply at the republican level
	Legal	Tax legislation in the field of heat supply
Meso level	Financial	The possibility of using financial resources at the regional level in the field of heat supply
	Innovative	Application of information systems and technologies at the regional level in the field of heat supply
	Logistics	The degree of automation of business processes at the regional level in the field of heat supply
	Organizational and economic	Qualification of workers at the regional level in the field of heat supply and the level of their motivation, standardization, the structure of the management level system
	Labor	Social policy in the field of housing and communal services at the regional level



	Legal	Regulation of the region's heat supply industry through tax legislation
Micro level	Financial	The possibility of using financial resources at the level of the heat supply company
	Innovative	Application of information systems and technologies at the level of a heat supply enterprise
	Logistics	The degree of automation of business processes at a heat supply enterprise
	Organizational and economic	Qualification of employees of the heat supply enterprise and the level of their motivation, standardization, structure of the management level system
	Labor	Social policy at heat supply enterprises
	Legal	Optimization of the tax burden on enterprises

**Conclusions and suggestions.** Based on the above study, we believe that structural changes in the heat supply sector in the future should be carried out in the following areas:

- replacement in heat supply enterprises of worn-out equipment and parts of networks, leading to the loss of a resource;
- reducing the level of losses and reducing the level of use of energy resources to an acceptable level based on the distribution of heat and hot water among modern types of metering devices;
- increase the thermal protection of networks and buildings;
- professional development of the company's employees on energy saving and expansion of advertising work among consumers;
- carrying out activities aimed at achieving a positive effect through an accurate assessment of the factors affecting the efficiency of heat supply enterprises, their management processes and the quality of services.

The full implementation of the proposed directions in the field of heat supply in the future will allow in a short time to deepen market relations at enterprises operating in the field of heat supply, effectively manage and link the existing factors of their development and management, as well as reduce the level of possible risks.

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## **THE VALUE OF THE HEAT SUPPLY SERVICES SECTOR IN THE SOCIO-ECONOMIC LIFE OF SOCIETY**

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**Annotatsiya.** Issiqlik ta'minoti sohasida amalga oshirilayotgan islohotlarning asosiy maqsadi aholi farovonligini oshirish, jumladan, aholining real daromadlarini oshirish, turli ijtimoiy ehtiyojlarni to'liq qondirish, taqdim etilayotgan imtiyozlar sifatini oshirish, aholiga xizmat ko'rsatishni ta'minlashdan iborat. daromadlar ehtiyojlariga mos keladi. Ushbu maqolada islohotlarning maqsadli va samarali amalga oshirilishini ta'minlash maqsadida jamiyat a'zolarining yuqoridagi ehtiyojlari bilan bog'liq munosabatlarni huquqiy tartibga soluvchi qonunchilik bazasini yaratish zarurligi ko'rsatilgan.

**Kalit so'zlar:** Issiqlik tizimi, issiqlik energetikasi infratuzilmasi, real daromadlar, ijtimoiy talab, ijtimoiy xizmatlar, innovatsiyalar, kommunal resurslar, muhandislik infratuzilmasi.

**Аннотация.** В сфере услуг по теплоснабжению основной целью проводимых реформ является повышение благосостояния населения, в том числе повышение реальных доходов населения, полное удовлетворение различных социальных потребностей, повышение качества предлагаемых льгот, обеспечение доходы соответствуют потребностям. В целях обеспечения целенаправленного и эффективного проведения реформ в данной статье подчеркивается необходимость создания правовой базы, юридически регулирующей отношения, связанные с вышеуказанными потребностями членов общества.

**Ключевые слова:** Тепловая система, теплоэнергетическая инфраструктура, реальные доходы, социальный спрос, социальные услуги, инновации, коммунальные ресурсы, инженерная инфраструктура.

**Abstract.** In the sphere of heat supply services, the main goal of the ongoing reforms is to improve the welfare of the population, including increasing the real incomes of the population, fully satisfying various social needs, improving the quality of the benefits offered, and ensuring that incomes are commensurate with needs. In order to ensure the targeted and effective implementation of reforms, this article



highlights the need to create a legal framework that legally regulates relations related to the above needs of members of society.

**Key words:** Thermal system, thermal power infrastructure, real incomes, social demand, social services, innovations, communal resources, engineering infrastructure.

**Introduction.** From world experience it is known that the level of development of any society is increased by developing "human resources" by improving the standard of living and well-being of its citizens. Today, the indicators of international assessment structures that assess the state of development of countries are based not only on economic indicators, but indicators of the social development of society come to the fore. Because indicators of social development reflect changes as a result of the economic development of the country, and through these indicators it is possible to assess the general state of its development.

**Literature review.** The market for heat supply services provides services offered by the market for heat supply and hot water supply services to consumers (population).

The implementation of this goal determined the formation and solution of the following main **tasks**:

- services for the operation of the heat supply fund;
  - services for the maintenance, maintenance and current repair of the heat supply fund;
  - excellent services for the repair of internal heating networks of residential buildings;
  - heat supply services;
  - hot water supply services;
- Services provided by the housing and communal services market:
- housing stock management services;
  - utilities.

**Research methodology.** The article deals with the scientific work of economists in the field of heat supply. Comparative analysis of literature and methods of substantiating hypotheses were used as research methodology.

Recently, the issues of heat supply efficiency have become the object of many studies. To study the economic essence of the heat supply system, including the issues of ensuring its efficient operation, such scientists as E.M. Chernyaeva, I.R. Abdullina, I.A. Bashmakov, V.N. Papushkin, A.S. Nekrasov and others. At the same time, the topic of scientific research is largely devoted to economic and technical problems of the efficiency of the heat supply system.

According to the Russian economist A. R. Abdullina, "Heat supply of the economy" is considered as a necessary engineering infrastructure of the economy and is interpreted as one of the basic industries that provide the population with vital services. At the same time, the researcher defines the heat supply industry as follows: "The heat supply industry is an industry that ensures the operation of engineering infrastructure in various settlements, ensuring living comfort through the provision of comprehensive services for the heat supply of citizens". Such an interpretation can also be seen in the Strategy for the Development of the Heat Supply Industry of the Russian Federation until 2020.

In theoretical studies, E.M. Chernyaeva defines this term as follows: "Heat supply is a reliable and reliable system that provides comfortable living conditions in residential buildings for citizens in the direction of heat supply and hot water supply by state and local governments. self-government bodies are a sphere of economic activity, carrying out stable activity".

In the works of some researchers, the heat supply services sector is interpreted as a mixed public good of high social value with the characteristics of indivisibility and non-selectivity, cooperative consumption, technical and economic non-excludability, generation density and efficiency. Based on the foregoing, we can conclude that there are many problems in this area, that is, such problems as the lack of provision of quality heat supply services, in practice, the lack of innovation in the field, high wear and tear of heat networks, increased losses, high heat tariffs, have been resolved for many years.

**Analysis and results.** The field of heat supply services, based on the study of the significance and characteristics of the services provided by enterprises, economic relations in this area, relations of production, supply, distribution and consumption of special goods in the form of services related to the private and cooperative consumption sector, which fully reflect the structural relations of production, it is important to emphasize that this is an integral part of production relations.

The study of the importance of the heat supply services sector in the socio-economic life of society allows us to single out the following two main features of he sphere:

1. In economic terms, heat supply services are a factor that indirectly affects the reproduction of the labor force, the creation of gross national product and national income, ensuring economic growth and raising the level of economic development.

2. From a social point of view, the services provided by the industry are considered as an effective factor in stabilizing the level of well-being of the population during the introduction of market relations and increasing this indicator in the future, improving the quality of life. and fully implement the principle of social justice.

Both of these features clearly show that the importance of the heat supply services sector in the development of society is no less than the importance of other industries and sectors of the national economy. Because the benefits created at the present stage of development are aimed at meeting the various needs of the "human factor" at a high level, and the sphere we are studying provides services aimed at meeting the basic vital needs of the population. It is advisable to classify heat supply services according to individual characteristics and characteristics as follows (table 1.1):

**Table 1.1.**

**Classification of heat supply services**

<b>Character and characteristics</b>	<b>Services</b>
By the nature of the subject of production of services and the subject of consumption	Intangible services (security, cleaning and other services) Material services (repair of heating networks, sanitary equipment and others)



According to the functional content of the services provided	Personal services (maintenance and current repair of networks and other services). Services for the creation of new products (services for heat supply, hot water supply and other services based on orders). Services for the restoration of consumer properties of products during operation (services for the provision of thermal energy to residential and non-residential buildings) Intellectual services (advertising, design and other services)
In relation to consumption and accumulation	Paid services (payment for services by consumers) Free services (services implemented at the expense of budgetary funds)
According to the form of consumption	Individual Services Utilities (hot water supply, heat supply and so on)
By service level	Standard services of social housing (municipal). (social-private) services to ensure the comfort of living High quality services

The fact that the demand for services offered by the heat supply market has a very low elasticity, that is, there are limited options for choosing these types of services or limiting the volume of consumption, requires a structural study of the market for the services offered.

**Conclusions and suggestions.** In our country, in parallel with the ongoing structural changes, the process of formation of the market for heat supply services and enterprises operating in this market and managing their activities is underway. However, reforms in this area are proceeding more slowly than structural transformations in other industries and sectors of the national economy. The main reason for this situation is that the services provided in the field of heat supply services and the price of supplied heat energy are relatively low-income based on the socio-economic situation of service consumers. Under the influence of these factors, market relations in the industry are implemented at a low pace, since the level of involvement in the industry of private enterprises operating on a competitive basis and their activity affect the pace of reforms.

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## MODERN PROBLEMS OF TECHNICAL SCIENCES

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### EXTRACTION OF IRON FROM COPPER SMELTER WASTE

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**Annotatsiya.** Maqolada boyitish fabrikasi chiqindilaridan temir metalini ajratib olish texnologiyasi bo'yicha olib borilgan tadqiqotlar natijalari taqdim etilgan. Bunga ko'ra, boyitish fabrikalari chiqindilarini qayta ishlash bo'yicha mahalliy hamda xorijiy adabiyotlarni tahlil qilish asosida chiqindilar tarkibidan temir va uning birikmalarini ajratib olishning pirometallurgik va gidrometallurgik texnologiyalari o'rganib chiqilib, ularning yutuq va kamchiliklari aniqlandi. Mis ishlab chiqarishda sulfidli mis-molibden rudalarini flotatsion boyitish davrida va temir rudalarini magnitli usulda boyitishdan so'ng oksidlangan birikmalardan iborat katta miqdorda chiqindi hosil bo'lishi aniqlandi. Bu chiqindilarni kimyoviy analizi uning tarkibida ko'p miqdorda oksidlangan temir birikmalari borligini ko'rsatdi.





**Kalit so'zlar:** Mis, chiqindi, boyitma, flotatsiya, shlak, koks, eritma, kek, sulfat kislota, tanlab eritish, shixta.

**Аннотация.** В статье представлены результаты исследований технологии извлечения черных металлов из отходов обогатительных фабрик. Соответственно, на основе анализа отечественной и зарубежной литературы по переработке концентратов изучены классические пирометаллургическая и гидрометаллургическая технологии выделения железа и его соединений из отходов и выявлены их преимущества и недостатки. Показано, что производство меди приводит к образованию большого количества окисленных отходов при флотационном обогащении сульфидных медно-молибденовых руд и после магнитного обогащения железных руд. Химический анализ отходов показал, что они содержат большое количество окисленных соединений железа.

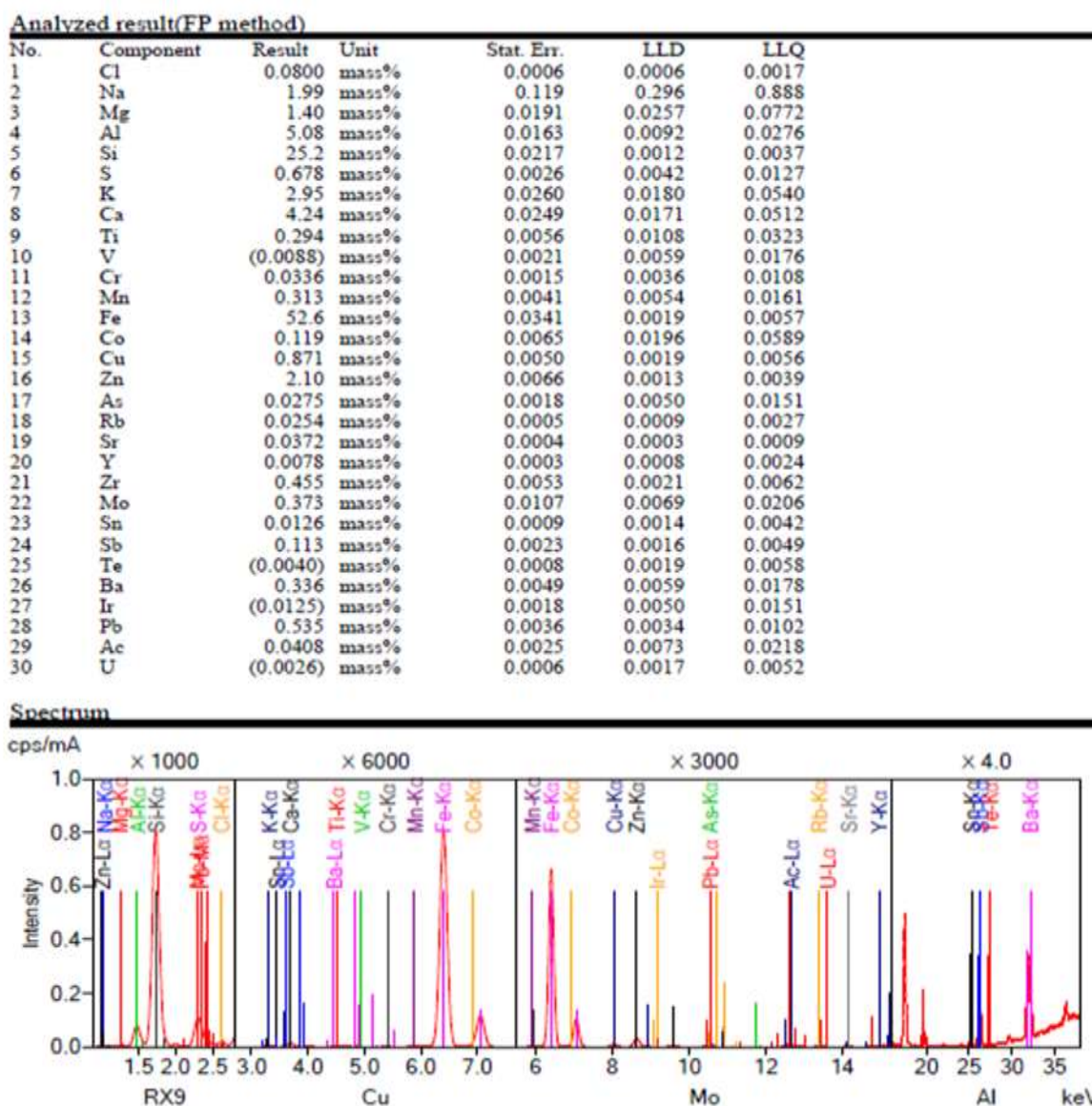
**Ключевые слова:** Медь, отходы, концентрат, флотация, шлак, кокс, раствор, kek, серная кислота, выщелачивание, шихта.

**Abstract.** The article presents the results of research on the technology of extraction of ferrous metals from concentrator waste. Accordingly, based on the analysis of local and foreign literature on the processing of concentrators, the classical pyrometallurgical and hydrometallurgical technologies for the separation of iron and its compounds from the waste were studied and their advantages and disadvantages were identified. Copper production has been shown to generate large amounts of oxidized waste during flotation enrichment of sulfide copper-molybdenum ores and after magnetic enrichment of iron ores. Chemical analysis of the waste showed that it contained large amounts of oxidized iron compounds.

**Key words:** Copper, waste, concentrate, flotation, slag, coke, solution, cake, sulfuric acid, leaching, charge.

**Introduction:** The analysis of world copper production and its consumption shows rapid growth, if at the beginning of the 20th century copper production was 0.4 mln. was a little more than tons, but at the beginning of the 21st century it exceeded 21 million tons.[4] At the same time, the decrease in the amount of copper in the ore from 0.5-5% in the last century to 0.20-0.40% at the present time leads to an increase in the comprehensive use of raw materials, the use of resource and energy-saving technologies using man-made waste of metallurgical production, the development of science paying special attention to integration with output is a topical issue today. In this regard, the copper industry in developed countries is paying special attention to new technologies that allow to significantly expand the base of raw materials by extracting valuable components from man-made waste. In the world, scientific research in the field of non-ferrous metallurgy is aimed at involving industrial man-made waste in the main production in order to increase the production of non-ferrous metals. It should be noted that the production of copper is associated with the release of a large amount of man-made waste, which is much higher than the amount of copper produced.[3.5.] Wastes from concentrators, man-made wastes, copper slags and gases from the smelting of sulphide copper concentrates are produced. The scientific research conducted in the field of copper production in our republic is focused on the development of technology for the processing of metallurgical slag, dust and man-made waste containing metal. [8]

**Research Methodology: 1) Preparation of slides:** A Struers Labopol-5 semi-automatic machine for preparing metallographic samples with Laboforce equipment was used for preparing the slides. The rotation speed of the grinding wheel is adjustable and 0-500 rpm. The range of pressing force of grinders: 0-40 N. Interchangeable sanders and grinding discs are fixed by means of a magnet. Samples are cast in epoxy resin, (1.3 and 9  $\mu\text{m}$ ) surface is polished on Struers grinding wheels with different dispersion diamond grinding.



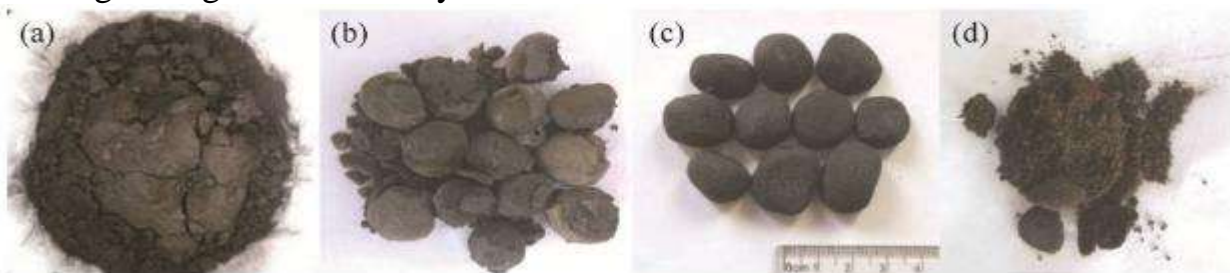
### Chemical composition of copper smelter waste

**2) Light microscopy:** Light microscopy was used to obtain a general understanding of the structure of the samples, porosity, sulfide distribution, and preparation for solution microscopy studies. For these studies, an Olympus GX71F-5 microscope, equipped with a high-quality image processing system, zooming from 12.5 to 1000 times, was used.



**1-Picture.** Light microscope Olympus GX71F-5

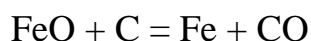
**Analysis and results:** The highest level of recovery from waste was achieved at 20% consumption of regenerant, at 900-1000 °C temperature and 120 minutes isothermal holding in slag waste recovery.



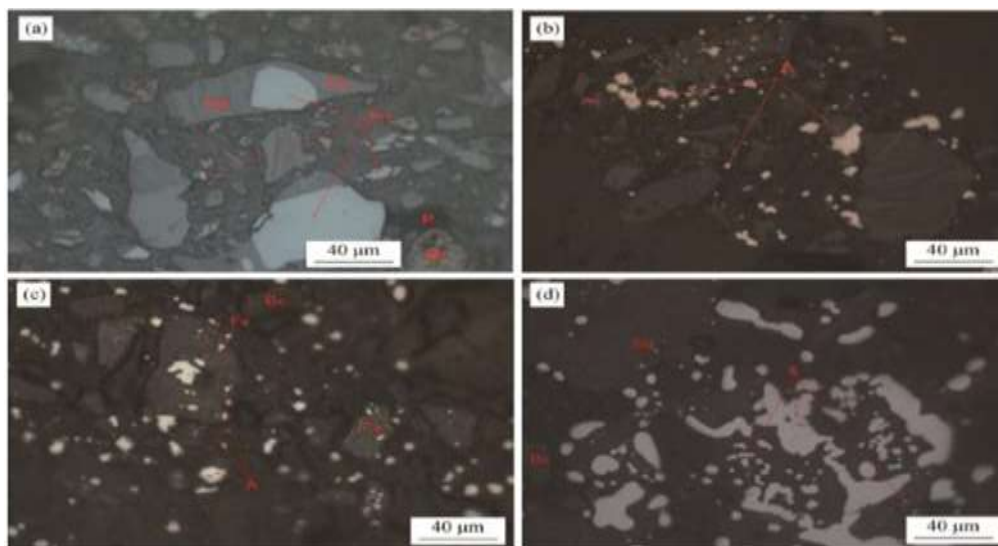
**2-Picture.** At different temperatures: (a) 600 °C; (b) 800 °C; (c) 900 °C; (d)

Photographs of 1000 °C regenerated granular particles

6 samples of the least, intermediate and high levels of recovery were selected for further research. These samples were subjected to additional crushing and magnetic separation in a laboratory mill. [9] The obtained high-grade metallized product was remelted in a laboratory furnace at  $t=1500^{\circ}\text{C}$  in an inert atmosphere, and the obtained metal alloy was analyzed for its main components. Picture 2 presents pictures of samples recovered at different temperatures. Granular particles regenerated at  $1000^{\circ}\text{C}$  showed the best physico-mechanical properties, such as dense surface, good strength and high antioxidant properties (Picture 2). However, at a further increase in temperature ( $1200^{\circ}\text{C}$ ), the recovered precipitates coalesce and become semi-melts, which interferes with normal operation under industrial conditions. For example, in the case of a rotary kiln, which is a typical equipment for the recovery of metals such as nickel and iron, the heated material easily adheres to the wall of the rotary kiln, which can cause difficulties in the smooth passage of the recovered material. In addition, after the samples were quenched with water, the sample recovered at  $1200^{\circ}\text{C}$  is easily oxidized in the environment. [10] Based on these results, the optimal recovery temperature was determined to be  $1000^{\circ}\text{C}$  [2; s. 404-413]. The effect of coal dosage on the reduction was investigated in mass ratios of coal: 15–25% of the sample (according to the carbon content of the coal 15% of coal in the reaction was 0.9 times higher than theoretical).

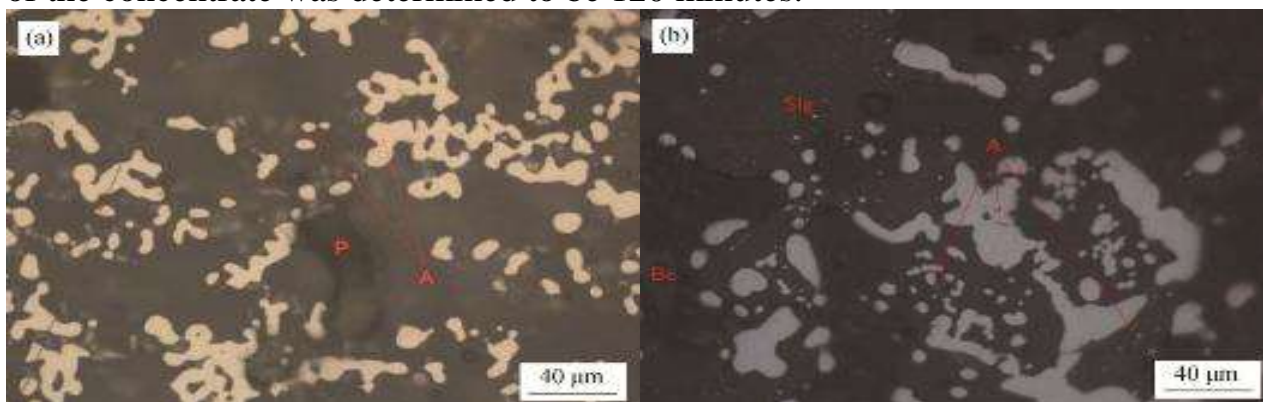




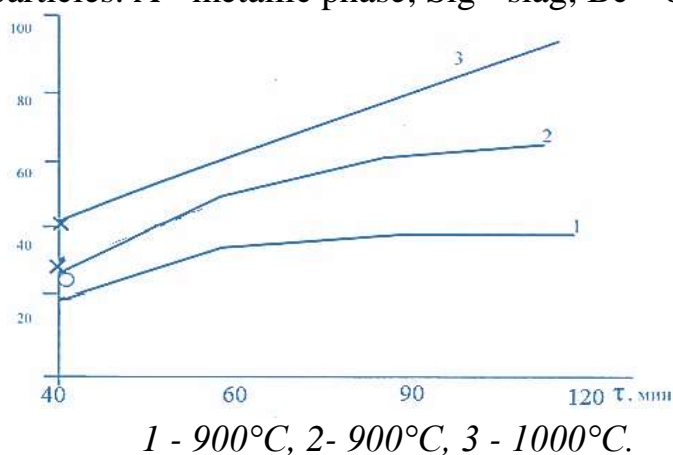


**3-Picture.** At different temperatures: (a) 600 °C; (b) 800 °C; (c) 900 °C; (d) Optical microscopy of granular particles recovered at 1000 °C A - metallic phase; Bc – black coal; Frr - ferrite; Fa - activity; P - holes; Slg - slag; Hd is hedenbergite

The influence of isothermal storage time for waste on the level of recovery was determined in laboratory experiments at the following dimensions: temperature 900-1000°C, recovery consumption in the amount of 20% of the mass of ferrous waste and slag, isothermal storage time 90, 120 minutes. [11] The amount of iron in the concentrate increased with increasing recovery time and reached a peak after 120 min, while the extraction was almost unchanged. The optimal time to ensure the high quality of the concentrate was determined to be 120 minutes.

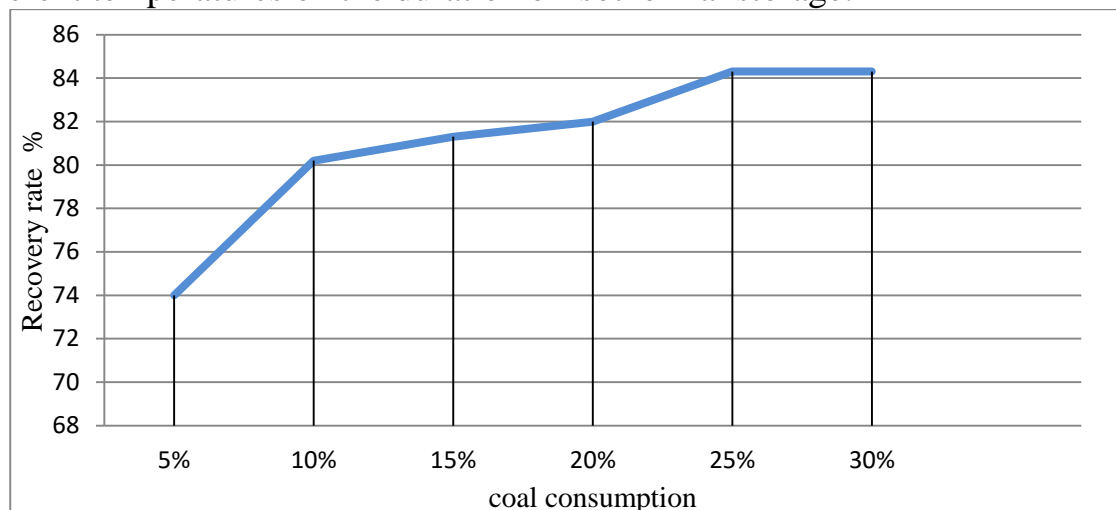


**4-Picture.** In different doses of coal: a) 15%; (b) Optical microscopic images of 25% recovered granular particles. A - metallic phase; Slg - slag; Bc – black coal; P – holes





**5-Picture.** The dependence of the change in the degree of recovery of iron in slag at different temperatures on the duration of isothermal storage.



**1-diagram.** The effect of the consumption of the regenerating substance on the recovery process

**Tablet 1.**

**Consumption of the restorative substance**

Recovery cost, %	Temperature, C	Magnetic fraction %	Non-magnetic fraction %
5	900	74	26
10	900	80,2	19,8
15	900	81,3	18,7
20	900	82	18
25	900	84,3	15,7
30	900	84,3	15,7

**Literature review:** In world practice, a large number of studies have been conducted on the extraction of valuable components from metallurgical production waste, in particular, A.N. Zelikman, G.I. Gazaleeva, S.V. Mamonov, E.V. Bratygin, A.M. Klyushnikov, M.N. Sabanova, T.M. Vovnova, B.P. Rudnev, A.R. Bakirov, D. Yu. Voronin, L. A. Voropanova, A. V. Vanyukov, V. Yu. Gusev, V. Ya. Zaitsev, M. G. Sagdieva, K. S. Sanakulov, S. A. Abdurakhmanov, A.S. Khasanov, M.M. Yakubov and others paid attention. [1] As a result of the conducted research, it was found that in the complex extraction of valuable components from the technological waste of copper production, one of the difficult problems is related to the composition of many components with similar properties, which leads to the difficulty of their selective extraction. [2] At the same time, scientific and research work is being carried out on the improvement of technological processes aimed at the use of technological waste in order to extract valuable components for the main technological production. There is a lot of information in the literature about the possibilities of processing technological waste, using them as sources of metals, but there is very little information about the extraction of valuable components and their additional separation from technological

waste. This direction is currently becoming more relevant in the creation of new high-yield technologies in copper metallurgy.[6.7.]

**Conclusion/Recommendations:** 1)  $\text{FeO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{Fe}_3\text{O}_4$  contained in the wastes of the copper beneficiation factory were reduced to iron by restorative incineration; 2) Using a magnetic separator, a magnetic fraction was obtained from the soot; 3. The non-magnetic fraction was selectively dissolved in sulfuric acid and precipitation of the metals contained in the solution was achieved using the cementation method; 4. As a result of selective melting, it was possible to extract gold and silver metals from the solid cake that did not melt;

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UDC: 621

## CURRENT STATUS OF PROBLEMS AND ISSUES IN RESEARCH AND DEVELOPMENT OF EFFECTIVE ENGINEERING MODIFIED COMPOSITE MATERIALS AND COATINGS

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**Annotatsiya:** Maqolada paxta xom ashyosi bilan o'zaro ta'sir qilishda eng yaxshi fizik, mexanik va tribotexnik xususiyatlar organo-mineral plomba moddalarini bilan to'ldirilgan kompozit termoset polimer materiallar ekanligi, bu elektr va paxta kuchini oshirish orqali aloqa o'zaro ta'sir qilish sharoitlarini yaxshilash bilan bog'liq bo'lgan tadqiqotlarga adabiyotlar sharhi berilgan va kompozitsiyaning termal xususiyatlari o'rganilgan.

**Kalit so'zlari:** mashina, mexanizm, detal, paxta xomashyosi, ishqalanish, koeffitsient, polimer kompozit materiallar, qatlamli tuzilishga ega bo'lgan talk, kaolin kabi mineral plomba moddalar ishqalanish koeffitsientini kamaytiradi, lekin kompozit polimer materiallarning eskirish tezligini oshiradi.

**Аннотация:** В статье приведён литературный обзор исследований что наилучшие физико-механические и триботехнические свойства при взаимодействии с хлопком-сырцом имеют композиционные термореактивные полимерные материалы наполненные органоминеральными наполнителями, что связано с улучшением условий контактного взаимодействия за счет повышения прочностных электро- и теплофизических свойств композиции.

**Ключевые слова:** машина, механизм, деталь, хлопок-сырец, трение, коэффициент, полимерные композиционные материалы, минеральные наполнители типа тальк, каолин, имеющих пластинчатую структуру, снижают коэффициент трения, но увеличивают интенсивность изнашивания композиционных полимерных материалов.

**Abstract:** The article provides a literature review of studies that the best physical, mechanical and tribotechnical properties when interacting with raw cotton have composite thermosetting polymeric materials filled with organomineral fillers, which is associated with improved contact interaction conditions by increasing the strength electrical and thermal properties of the composition.

**Keywords:** machine, mechanism, detail, raw cotton, friction, coefficient, polymer composite materials, mineral fillers such as talc, kaolin, having a lamellar structure, reduce the coefficient of friction, but increase the wear rate of composite polymer materials.

**Introduction.** The state of the effect of friction of raw cotton with metal surfaces.

Raw cotton was and remains the main crop of our country, therefore, high-efficiency technologies are required for its cultivation, harvesting and processing.

It is known that the use of highly efficient modern technologies is determined by a high level of mechanization and automation, and one of the most important problems is related to the transition to new spinning methods, raw cotton interacting with the metal bodies of machines and mechanisms. is to reduce the damage to the material. Since damage to cotton fibers and seeds mainly occurs due to friction of raw cotton with the surfaces of the main working bodies of machinery and its processing mechanisms, one of the main factors determining the tribotechnical properties of coatings is their interaction during friction. illuminated works

**Literature review.** In the theory of friction, there are studies on the physics and mechanics of the interaction of two bodies, taking into account many factors and the properties of materials. There is work devoted to the study of friction of fibrous materials with solids, but the mechanism of friction of cotton with solids has not been sufficiently elucidated.

The friction of cotton and other fibrous materials with various materials was first studied by I.V. It was studied by Kragelsky where the effect of various factors on the coefficient of friction of cotton to metal was investigated. As the speed increases from zero to a certain value, an increase in the friction coefficient was observed, then a decrease was observed with a further increase in speed. This situation, as the author explained, is due to the fact that the elastic properties of the fibrous mass at low speed are given the time required to absorb it into the mating surface. harvest is observed with And later, with an increase in speed, such access is not provided.

The effect of the shear rate is mainly explained by the elastic viscosity property of the bond between the cotton and the metal surface and the corresponding interaction mechanisms in this system.

[1-5] the author studied the mechanisms of interactions of a single fiber with a rigid body. A filament fiber moving on a rough rough surface with roughness along the length of the fiber was observed and represented by this equation:

$$U = A(l\pi + \coth \pi x) \quad (1.1)$$

Here A is the speed (amplitude) or height of encountering irregularities;

n is the speed or step of unevenness In his works G.I. Miroshnichenko studied the friction of raw cotton with steel and conveyor belt surfaces, as well as wood, asphalt, concrete, and brick surfaces. As a result of the research, it was found that the type of material of the counter substance interacting with the cotton raw material has a significant effect on the value of the coefficient of friction. It was found that regardless of the cotton's friction surface, humidity, type and method of its collection, with the increase of the normal pressure, a regular decrease in the coefficient of friction is observed. The author also found that when rubbing cotton on steel and rubber conveyor belts, the coefficient of friction increases sharply with the increase in moisture content of the transported material and decreases with the increase of normal pressure from 0.005 to 0.025 MPa. At low pressure of 0.0001-0.0002 MPa and humidity of 8% and 55% respectively,  $f = 0.71-0.68$  and  $1.69 - 1.60$ .

The increase in the coefficient of friction with the increase in the moisture content of raw cotton is explained by the author as an increase in the interaction of



water molecules with the contacting surface molecules. The decrease in the coefficient of friction with the increase in pressure is explained by the increase in the density of cotton, as a result of which a grid is formed that lies in the debris of the contacting surface of the solid body and moves more easily.

It is shown that the coefficient of friction depends on the method of cotton picking and the type of cotton raw material. Thus, the coefficient of friction of machine-picked raw cotton is always higher than that of hand-picked cotton. For a pressure of 0.0001-0.0002 MPa, there is a tendency for the friction coefficient to decrease with a decrease in the grade of cotton, and for large values of the pressure to increase it.

When the speed increases from zero to 2.0-2.5 m / s, the coefficient of friction increases. A further increase in speed did not significantly affect the change in the friction coefficient. Depending on the shear rate at high pressure, the friction coefficient changes less than at low pressure. Moisture, type, collection method and pressure of cotton did not change the general nature of the increase in friction force with an increase in the sliding speed, but affected the value of the coefficient of friction. Based on his well-known theoretical rules, Kragel'sky explains the connection of cotton with a metal surface by the elastic viscosity.

A manifestation of this nature of the relationship is a decrease in the coefficient of friction with the increase of the maximum speed from zero to a certain value, then with an increase in speed.

F.X. Khojaev [6] studied the friction of cotton raw material on iron mesh and found that the coefficient of friction in this case was from 0.8 to 1.2. All other things being equal, the sliding of raw cotton on a smooth steel surface is twice as high. I.I. Novitsky [7] studied the friction of cotton seeds on the surface of various materials.

Cotton seeds had 10-14% fiber cover and physical and mechanical properties were similar to raw cotton. As a result of the research, it was found that the friction coefficients for raw cotton and its seeds are different, but they depend on similar parameters. The disadvantages of these studies are that they covered an insufficiently wide variation of speed and load regimes and did not study the dependence of the friction force of cotton raw materials on other factors, for example, roughness parameters, temperature parameters, etc.

The author showed that when determining the pulling force of the free part of the fiber touching the spindle, with the increase of the friction coefficient, the tension of the free part of the fiber increases, that is, the probability of breaking the cotton fibers increases when they are removed from the box. As the roughness of the surface increases, the coefficient of friction increases. Consequently, large surface roughness damages the fiber and cotton seeds.

The interaction of cotton raw materials with the surface of constructive materials was studied by Makhkamov academician from the point of view of optimizing the roughness of the surfaces of the opposite body and reducing the mechanical damage of cotton fibers. And here, the mechanics of the interaction between the rough surface of the cotton ginning machines and the raw cotton was studied. A cotton mass model is used in the form of a thin mesh of longitudinal and transverse fibers that are compressed into a rough surface with forces defined by the properties of the cotton mass. The conditions for the fibrous mass to move along the surface without mechanical capture

of irregularities were determined.

The author showed that the force of interaction of cotton raw material with metal surfaces increases due to micro-shearing of cotton fibers through micropores or due to the increase of adhesion interactions with increasing moisture content of cotton raw material. According to him, intensive micro-cutting of fibers into rounding ends occurs when the radius is less than 100 microns.

The author recommended the following formula for creating conditions of non-seizure formation with a rough surface with a jagged micro-saw.

$$\frac{2Rz}{S} \leq \frac{[N(\mu_2 - \mu_1) + B_2][N(1 + \mu_1\mu_2) + B^*\mu_1] - \sqrt{(1 + \mu_1^2)[N^*\mu_2 + B_2]^2 + N^2} - B_1^2}{[N(1 + \mu_1\mu_2) + B_2\mu_1] - B_1^2} \quad (1.2)$$

Here  $\mu_1$  – coefficient of friction of the fiber with the metal surface

$V_1$  - adhesion between the fiber and the metal surface, which is mainly represented by adhesion forces;

$\mu_2$  - coefficient of internal friction of fibers;

Optimum values (100-200 microns) of the radius of rounding of the main bodies of the material (titanium and chromium) that allow to reduce the friction force when interacting with cotton raw materials are suggested. R. G. Makhkamov showed that paraffins in the waxy (cuticular) part of the surface layer of cotton fiber, which play the role of boundary lubricating oil, also have an effect on their interaction with rubbing surfaces. At the same time, it was noted that the most effective lubrication effect provides a temperature in the contact zone of 60-70 ° C under severe conditions of friction (high pressure indicators and sliding speed). With the same phenomena, the author explains the increase in the efficiency of sawing gins in difficult conditions, as they provide favorable conditions for the interaction of cotton raw materials with the surfaces of the working bodies of the machines. However, R.G. Technological treatment of the working surfaces of machine parts with a rounding radius of 110-200 microns of unevenness recommended by Makhkamov and others, laying metal coatings of titanium and chrome, providing heated air, working parts of cotton cleaning machines with large sizes due to some technical problems. In addition, chromium and titanium are rare and expensive materials.

Also, these technological methods do not eliminate the shortcomings of the working bodies of cotton and cotton ginning machines, for example, a fire can occur from a spark when there are solid additives in the cotton raw material and collisions with the hard metal surfaces of the working bodies.

One of the ways to optimize the process of interaction of raw cotton with the metal-working bodies of machines and mechanisms is to cover their surface with polymer materials that have a number of positive properties, for example, low stiffness, elasticity, low cost. and others.

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## **ANALYSIS OF TECHNICAL SOLUTIONS FOR THE PRODUCTION OF MULTIFUNCTIONAL MACHINES**

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**Annotatsiya:** Jahonda, xususan AQSH, Germaniya, Shvetsiya, Yaponiya, Janubiy Koreya, Xitoy, Rossiya, Ukraina, Belorussiya va boshqa rivojlangan davlatlarda yo‘l qurilishi va qishloq xo‘jaligi sohalarida traktorlar va mobil mashinalar gidravlik tizimlarini rivojlantirishga alohida etibor qaratilmoqda. Shu bilan birga, ko‘p maqsadli mashina gidravlik tizimini yagona tizimga keltirishda tezlik va mavjudlik masshtab koeffitsiyentlarini qo‘llash orqali gidroyuritmalarga o‘rnatilgan jihozlarning (cho‘mich, otval, burg‘u, kran) biriktiruvchi qismlari universalligiga asoslangan grafoanalitik, differensial va analitik usullarini ishlab chiqish, ko‘p maqsadli mashina gidroyuritmasi dinamik modeli va harakat tenglamalarining statik hamda kinematik parametrlarini aniqlovchi usullarni takomillashtirish dolzarb masalalardan biri hisoblanmoqda. Shu jihatdan, har bir rivojlangan mamlakatda ko‘p maqsadga mo‘ljallangan mashina gidravlik yuritmalarini yagona gidravlik tizimga keltirish muhim ahamiyatga ega. Ushbu maqolada jahon davlatlarida ishlab chiqilgan ko‘p maqsadli mashinalar tahlili va uni yurtimiz sharoitiga moslashtirish masalalari tahlil qilingan.

**Kalit so‘zlar:** ekskavator, gidroyuritma, ekskavator modellari, osma jihoz, xorij

**Аннотация:** В мире, особенно в США, Германии, Швеции, Японии, Южной Кореи, Китае, России, Украине, Белоруссии и других развитых странах особое внимание уделяется разработке гидравлических систем тракторов и мобильных машин в области дорожного хозяйства. строительство и сельское хозяйство. В то же время разработка графоаналитических, дифференциальных и аналитических методов, основанных на универсальности соединения частей

оборудования, устанавливаемого в гидросистемы (ковша, затирочной машины, бура, крана), за счет использования масштабных коэффициентов скорости и готовности при приведении гидросистемы в многоцелевой машины в единую систему, динамическая модель гидросистемы многоцелевой машины и совершенствование методов определения статических и кинематических параметров уравнений движения считается одним из актуальных вопросов. В связи с этим важно привести многоцелевую машинную гидравлику в единую гидросистему каждой развитой страны. В данной статье анализируются машины многоцелевого назначения, разработанные в странах мира и вопросы их адаптации к условиям нашей страны.

**Ключевые слова:** экскаватор, гидропривод, модели экскаваторов, подвесные оборудование, зарубежные.

**Abstract:** In the world, especially in the USA, Germany, Sweden, Japan, South Korea, China, Russia, Ukraine, Belarus and other developed countries, special attention is paid to the development of hydraulic systems of tractors and mobile machines in the field of road facilities. construction and agriculture. At the same time, the development of graphic-analytical, differential and analytical methods based on the universality of connecting parts of equipment installed in hydraulic systems (bucket, trowel, drill, crane), through the use of scale factors of speed and readiness when bringing the hydraulic system into a multi-purpose machine into a single system, the dynamic model of the hydraulic system of a multi-purpose machine and the improvement of methods for determining the static and kinematic parameters of the equations of motion are considered one of the topical issues. In this regard, it is important to bring multi-purpose machine hydraulics into a single hydraulic system in every developed country. This article analyzes multi-purpose machines developed in the countries of the world and the issues of their adaptation to the conditions of our country.

**Keywords:** excavator, hydraulic drive, excavator models, suspension, foreign.

**Introduction.** In the world, research work is underway aimed at developing a single hydraulic system that meets the requirements of the technological process of multi-purpose machines. In this regard, the development of a full-scale method for calculating the hydraulic cylinders of the hydraulic drive of modern road-building machines, the development of mathematical models of the dynamic characteristics of the hydraulic systems of multi-purpose excavators, the calculation of hydraulic drives, each link (platform, boom, stick, bucket)) is considered one of the main necessary theoretical and practical issues. research on improving the methodology for calculating the elements of individual joints, developing a methodology for calculating normal digging trajectories and limited digging force. At the same time, the issues of improving the mathematical model of the subsystem designed to calculate the technological process of the hydraulic system of a multi-purpose machine, quick-change equipment (bucket, roller, drill, lifting and lowering) are of great importance. importance.

One of the important and complex tasks in the field of road and rural construction is the optimal control of technological parameters and power distribution under the available loads in the working body of the hydraulic system. Optimal distribution of

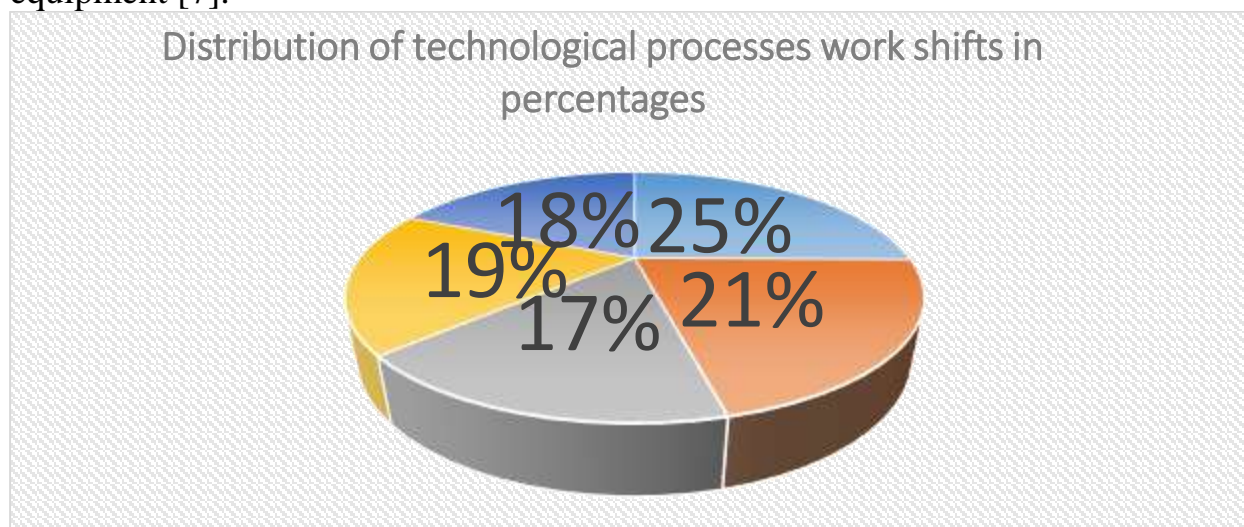


hydraulic drive power between moving elements, as well as reuse of energy spent on overcoming resistance forces and own masses during excavation, allows minimizing energy costs and increasing the efficiency of the hydraulic system and efficiency.

**Research Methodology.** The theoretical studies used the theory of mechanisms and machines, the science of hydromechanics, as well as the methods of computational mathematics. When conducting research in this area, modern equipment was used, as well as statistical and mathematical methods for planning and processing experimental work. Moreover, there are various types of computational work, as well as the MATLAB programming language. Mathematical modeling allows you to move from a real object to its mathematical model, that is, to idealize the object, to distinguish abstraction from its specific properties and functions, which seem to be the most important for solving problems. The mathematical model can be represented by a system of differential equations for analyzing the dependence of the main design parameters of the EG on the interaction coefficients and time constants.

Direct analytical solution of a system of differential equations is very difficult and cannot be performed efficiently enough. Therefore, a more promising way of studying the kinematic and dynamic properties of the EG is its computer simulation by numerically solving the equations of motion [3, 4]. The mathematical model of the EG, written in the form of a system of equations, can also be used to determine the static properties of the EG if all the products of common coordinates are equal to zero. Theoretical studies were carried out on a 9th generation Intel I5 computer using the Matlab 7.0 software package [1], the visually-oriented Simulink program (creating a model from a ready-made component block in a structured program) and HL and HT modeling [2] (design and computational analysis).

**Analysis and results.** The first non-rotating excavators were developed at the design bureau of the Krasny Excavator plant (now ATEK) in Kyiv. The heaviest and most reliable tractors MTZ-2 "Belarus" were chosen for the installation of excavator equipment [7].



**Figure 1. Quantities of multi-purpose hydraulic machines in the use of NQM and national economy.**

where:

excavators – 25-35%;  
bulldozers – 25-35%;  
drilling equipment – 15-20%;  
other equipment – 15-25%.

The first such excavator E-153 did not have a cab, the control panel was located behind the driver's seat. Flat hydraulic tanks are installed on both sides of the driver's seat. Straight (or inverted) bucket mounted on a gantry boom, with dozer hydraulic suspension at the front, outriggered when the excavator is in operation.

Resetting to dig a bucket allowed it to run in bootloader mode. This is the only model of a hydraulic excavator on a wheeled tractor since 1955, mass-produced, used in road construction in collective farms, state farms, improvement trusts, and warehouses.

Over the years, tractor models have changed: the MTZ-2 was followed by the MTZ-5L / 5M, LS / MS with a cab and a canvas awning. The size of the excavator bucket has increased, supports of a different shape have been installed. Instead of E-153, E-1514, E-2515 appeared. These machines were replaced by other generations (Table 1.1) [73].

Their complete review [5, 6, 8, 9, 10, 11, 12] is presented in domestic and foreign literature as well.

An analysis of the trend of scientific and technological development and the achievements of industrial construction technology makes it possible to single out the main directions in the development of multi-purpose machines. They depend on the general trends in the development of mechanical engineering, the scientific and technological revolution (STR) and the needs of the country's national economy. The current state of scientific and technological revolution is determined by the development of microprocessor, robotic, automated and biotechnological areas. The use of microprocessor technologies in mechanical engineering has led to the emergence of a generation of computers with artificial intelligence. Such computers allow input and output of data in the form of images and sounds, as well as self-programming of operations (electronic control unit). Robotization of production is based on the implementation of the achievements of mechanical engineering, microprocessor technologies and computer technology in automation and robotics. This leads to the intellectualization of robots and the possibility of their effective use in construction.

**Table 1. Full-revolving excavators and backhoe loaders manufactured in the CIS**

Model	Base tractor	Backhoe bucket capacity	Digging depth	Maximum digging radius	Maximum dumping height	Bulldozer blade width	Mass kg	Manufacturer
EO-2621V2	YUMZ-611KL/ KM/KLN/KLM	0,28	3,5	5	3,3	2	6100	SAREKS, BOREKS, ATEK
EO-2621	MTZ-102	0,28	4	5,4	3	2,1	6600	SAREKS



EO-2626, EO-2626A, EO-2625,	MTZ-82	0,28 (0,32)	4,15 (3,9)	5,3 (5,4)	3,2 (3,5)	2,1	7500	AMKO-DOR
EO-2628, EO-2201	MTZ-80/82, YUMZ-611,	0,25	4,3	5,5	3,6	2,1	6500	BOREKS
EO-2101	YUMZ-6AKL, 650/652	0,25	4,25	5,5	3,55	-	6600	BOREKS
EO-2106	MTZ-80/82	0,25	4,25	5,3	3,55	-	6700	BOREKS
EO-2102 (BOREKS 2102)	YUMZ- 6KLN/6KLM	0,25	4,25	5,3	3,5	2	6100	BOREKS
BOREKS 2103, BOREKS 2106	YUMZ- 6AKL/6AKM	0,28	4,25	5,3	3,5	2,4	6100	BOREKS
EO-2202	MTZ-82UK, YUMZ-6KLN	0,25 (0,28)	4,25	5,3	3,55	2	6100	INTER-EKS
EO-2629	YUMZ- 6KLN/6KLM	0,25	4,25	5,3	3,5	2	6100	SAREKS
EO-2621V3(EO- 2301)	LTZ-60AV/55A, YUMZ-611KLN	0,28	4,25	5,3	3,55	2	6100	INTER-EKS, SAREKS
TO-49-40	MTZ-82UK	0,28	4	4	3,5	2,49	6300	AMKO-DOR, MZKM
EO-2621V3	LTZ-60AV/55A	0,28	4,25	5,3	3,55	2	6250	TOO (AOOT) “Gidro--sila”
PK-301 “Muromes”	Integrated chassis	0,48	4,1	5,6	3,5	-	12000	OAo “MuroKMash- zavod”
LEX EO-2621MST	LTZ-60AV	0,28	4,3	5,6	3,7	2	6100	LEX

Excavation work is one of the most expensive, but at the same time promising construction works. Their participation in the evaluation is more than 30-40%. When carrying out road construction works, soil processing machines with a bucket capacity of 45 ... 75 kW are mainly required. Most of them correspond to ground works of 2 and 3 categories, in which buckets with a volume of 0.15 and 0.4 m<sup>3</sup> are mainly used.

**Conclusion.** World researchers (Prasanna Kumar, V. Matikainen, Javad Tarighi) concluded that the resistance forces during excavation depend on the rheological properties of the ground, but also on the construction and kinematic properties of the working body.

In the CIS countries, R.A. Kabashev, V.N. Kuznetsova, A.S. Rebrov, Yu.G. Berengarda, M.M. Gaisgori, Ye.Yu.Malinovsky, T.M.Bashta, D.A.Chudakov, A.D.Altshul, M.I.Zhilevich, A.B.Lurye, S.V.Molokonov and other scientists have conducted research in this regard. calculated separately in determining energy efficiency. These factors create unsatisfactory workflow dynamics that significantly reduce bucket fill factor values during the load cycle.

Similar machines are produced in our republic [7, 13]. The KM-1 machine is made on the basis of the TTZ-80.10. VK tractor with a special set, it is designed for working and increasing soil types I-III and has a bucket with a reverse shovel and a tipper.

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## **PROSPECTS FOR USE OF ELECTROMAGNETIC DUMP TRUCKS IN QUARIES**

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**Annotatsiya:** Mustaqillik yillarida respublikamizda ekskavator-avtomobil komplekslarining maksimal samaradorligiga erishish, muayyan togʻ-kon korxonasining konchilik, iqlim va tashkiliy sharoitlarini, samosvallardan foydalanish paytida avtomobilning karyer yoʻllari boʻylab harakatlanishi va qazish paytida rudani yuklash usullarini takomillashtirish va nazariy hisoblashga qaratilgan keng koʻlamli chora-tadbirlar amalga oshirilmoqda. “Kon-metallurgiya sanoati va unga bogʻliq sohalarni rivojlantirish boʻyicha qoʻshimcha chora-tadbirlar toʻgʻrisida”gi Oʻzbekiston Respublikasi Prezidenti Qarorida, jumladan “Kon-metallurgiya sanoati mahsulotlari negizida ilgʻor jahon amaliyoti asosida yuqori qoʻshilgan qiymatli tayyor mahsulotlar ishlab chiqarish quvvatlarini tashkil etish, unga bogʻliq boʻlgan tarmoqlarni rivojlantirish...” [1] ustuvor vazifa sifatida belgilangan. Mazkur maqolada ushbu dolzarb vazifani amalga oshirish, ochiq usulda ishlaydigan transport vositalarining ish unumdorligini oshirish, transport xarajatlarini kamaytirish, natijada togʻ-kon massasini tashish xarajatlarini kamaytirish hamda minimal kapital qoʻyilmalar bilan iqtisodiy samara olishning takomillashtirilgan avtomobil karyerlarida tashishni modellashtirish masalalari koʻrib chiqilgan.

**Kalit soʻzlar:** kon texnikasi, avtomobil transporti, MDH mamlakatlari, samosval, avtopark.

**Аннотация:** В годы независимости был проведен широкий комплекс мероприятий, направленных на достижение максимальной эффективности экскаваторно-автомобильных комплексов, усовершенствование и теоретический расчет горноклиматических и организационных условий конкретного горнодобывающего предприятия, движение автомобиля по карьерным дорогам вовремя внедряются использование самосвалов, способы погрузки руды при копании. Согласно Указу Президента Республики Узбекистан «О дополнительных мерах по развитию горно-металлургической промышленности и смежных отраслей», в том числе «Организация мощностей по производству готовой продукции с высокой добавленной стоимостью на базе продукции горно-металлургическая промышленность на основе передовой мировой практики, развитие смежных отраслей...» [1]. В данной статье рассмотрена реализация этой актуальной задачи, повышение производительности карьерных машин, снижение транспортных расходов, как следствие снижение себестоимости перевозки горной массы и получение экономического эффекта при минимальных капитальных вложениях, моделирование перевозок в усовершенствованных автомобильных карьерах.



**Ключевые слова:** горнодобывающая техника, автомобильный транспорт, страны СНГ, самосвал, автопарк.

**Abstract:** During the years of independence, large-scale measures were launched in our republic aimed at achieving the maximum efficiency of excavator-automobile complexes, improving and theoretically calculating the mountain-climatic and organizational conditions of a particular mining enterprise, moving a car along a quarry road using dump trucks, and implementing methods for loading ore while digging. According to the Decree of the President of the Republic of Uzbekistan “On additional measures for the development of the mining and metallurgical industry and related industries”, including “Organization of capacities for the production of finished products with high added value based on the products of the mining and metallurgical industry based on the best world experience, development related industries...” [1]. This article discusses one of the important tasks - increasing the productivity of mining machines, reducing transportation costs, as a result, reducing the cost of transporting rock mass and obtaining an economic effect with minimal capital investment.

**Keywords:** mining equipment, road transport, CIS countries, dump truck, vehicle fleet.

**Introduction.** In the world, especially in the USA, Germany, Sweden, Japan, South Korea, China, Russia, Ukraine, Belarus and other developed countries, the mining industry largely determines the economic performance of most other industries, and the ore mass is the most important link in the unified technological process of mining minerals, transportation in quarries is given special attention. At the same time, in modern conditions, in order to increase the efficiency of the transport process at low cost, one of the topical issues is to achieve an increase in the efficiency of road transport by optimizing the number of dump trucks due to the rational placement of dump trucks along routes in various conditions, and at the same time the influence of a number of operational factors and improving the design. In this regard, it is important to reduce transportation costs, improve the technical and operational characteristics of open-pit equipment, and improve the environmental situation at the mine in every developed country.

In the world, the trend of continuous growth in the carrying capacity of vehicles leads to research and development aimed at expanding the areas of its effective application. In this regard, one of the main necessary issues of theoretical and practical research is the development of solutions that solve the problems of improving the working conditions of modern cars, affecting the reliability of vehicles, increasing the requirements associated with the durability of the metal structures of dump trucks by increasing the depth of quarries. At the same time, it is important to determine the analytical dependence of the influence of operational factors on the operation of dump trucks and the possibility and necessity of improving the efficiency of mining dump trucks by developing a loading complex, which significantly increases the durability of dump truck metal structures.

**Literature survey.** Production of various stepless, stationary, electrified mining trucks, the transformer system of dump trucks helps to maintain the long-term operation of dump trucks and industrial suspended equipment, increase productivity, as well as increase operational injuries and work efficiency of dump trucks studied by



S.Fidelev, V.V.Krivd, A.A.Kuleshov, P.V.Artmanov, I.V.Zyryanov, V.P.Smirnov, M.V.Dadonov, A.V.Buyankin, D.V.Krivd, V.V.Osipov, A.V.Kuleshov, D.B.Gelfman, B.V.Gold, V.A.Oshnokov, M.B.Shkolnikov, N.N.Yatsenko, L.I.Dobrikh, A.V.Zotov and others.

Among the scientists of the republics A.A.Shermukhamedov conducted scientific research on the hydraulic systems of the BelAZ dump truck and achieved certain results.

when performing work, help in the production and management of freight transporters, the production of cars and other equipment, etc.

**Research Methodology.** In the course of the study, regression-correlation analysis, operational statistical analysis of data, construction of graphical dependencies in Microsoft Excel, simulation of the stress-strain state of a dump truck frame using Autodesk Inventor Professional software were carried out; The program of the universal mechanism uses methods for studying the dynamics of the process of loading onto dump trucks.

**Analysis and results.** The consumption of diesel fuel for cars at mining and processing enterprises, the consumption of fuels and lubricants in mining is 65-75%. Conventional (organizational) methods of reducing fuel consumption, which do not require technical support and costs, cannot have a significant impact on reducing diesel fuel consumption. This can be achieved by allocating funds and making changes to the process of extraction and transportation of minerals [2].

With the modern development of quarries, the depth of the quarry has been increased (more than 350 m). As a result, the efficiency of vehicles decreases, open pits are saturated with poisonous gases, and energy costs for the transportation of extracted raw materials increase.

These issues raise the question of reducing fuel consumption and increasing mining productivity.

The 21st century is a period when development began to accelerate. Year after year, new products are created. As in other areas, various projects and experiments are being carried out in the mining industry. One of them is a diesel transformer. This is a heavy vehicle (car or truck in the form of a tractor and semi-trailer) equipped with a diesel generator, traction motors and current collectors that receive electricity from the transformer network [3].

Such machines are also called "DTEM". The ancestor of DTEM is a transformer, more precisely, an electric truck, which was designed and demonstrated in 1882 by Siemens in Berlin. On April 29, 1882, the first electric dump truck ran over a 540-meter test track in the Halenze district near Berlin.

It was powered by two 550 II DC wires, and the current drawn from a mast mounted on a carriage provided a 2.2 kW electric motor.

For the first time, electrified mining dump trucks were proposed by A.S. Fidelev in 1949. Trucks with motor-wheels and a load capacity of 75 tons were developed in 1959. The world's first DTEM was designed and assembled in 1967 at the Bearus automobile plant. It has a wheel formula 6x4 and a load capacity of 60 tons. BelAZ was 524-792. Engine power 510 hp (375 kW) and worked from a 1200 V network [4].

From the second half of the 20th century to this day, diesel transformers and trucks without internal combustion engines have been used in various quarries around the world.

From 1956 to 1971, Riverside Cement LLC used a TE-762 electric motor with a capacity of 350 hp in the loading area. without IEOD, electric traction, electric cable.

From 1970 to 1977, the first Unit Rig M100 with a transformer system was put into operation at the Quebec Cartilr Mine. Economic evaluation shows that DTEM increases the productivity of mineral transportation. As a result, labor productivity increased by 21%, and fuel consumption decreased by 85% over the seven years of operation of the machine [5].

DTEMs were later used in various quarries around the world from 1980 to 2001 at Palabora Mining in South Africa. Two wires were used to supply current through the transformation system:

- one for negative current receiver. The entire DTEM supply system is built by analogy with modern transport;

- 5000 kW DC pantographs at 1200 V. From 1982 to 2001, ISCOR Mining in South Africa used electrified pantograph trucks different from their predecessors. Seagen's system uses a variety of pantographs to allow the truck to exit the road under a high-voltage power grid if necessary, bypass the barrier, and return and continue at any time, powered by a transformer.

Picture 1 shows one of the machines, the Marathon Le Toumeau 2200S. ISCOR regularly develops innovations in overhead lines, substations and pantographs and applies them to its other quarries.



**Pic. 1. Truck Marathon - Le Toumean 2200S**



In turn, various pantographs have been developed by Nehanda Mine in Zambia. In 1983, when the diesel fleet had outgrown, "transformer diesels" began to be used, which brought GE electricity to the car through wires.

Due to the inconvenient connection and disconnection of the contact wire, this system was decommissioned after some time. In 1994, the Barrick Gold mine in Nevada commissioned DTEMs based on feasibility studies. The substation and VP were supplied by Siemens. The pantographs were sourced from Trans Tech. Their "half-scissor" design is different from the "full scissor" design used in PalaBora [6].

In 1986, BelAZ plant engineers again started designing a diesel transformer. In the same year, DTEM BelAZ-75195 with a carrying capacity of 110 tons was created and two cars were produced. Tests carried out at the mine showed good fuel and energy performance during the commissioning of diesel transformers. The management of the BelAZ plant decided to create diesel transformers for work in quarries.

The essence of the above developments is based on the "Trolley Assist Barrick Gold strike" system. A pantograph is installed on the front of the machine, as well as additional equipment for the correct operation of DTEM. When using this innovation, energy and diesel fuel are saved, and the speed of a loaded car is also increased.

With an increase in the load of a diesel vehicle weighing 190 tons to 7%, its speed reaches 24 km/s, and in the transformer network - 44.1 km/s. This corresponds to a 75% increase in speed.

As a result, it will be possible to reduce the number of trucks in operation, which will save the cost of purchasing vehicles.

When the price of diesel rises, the idea to design a diesel transformer comes up again. JSC "BelAZ" raised the issue of work in this direction and presented an overview scheme. (Pic. 2):

- creation of "DTEM" with a carrying capacity of 210-230 and 310-350 tons;
- development of the power supply system;
- design of high-quality road surface.



**Pic. 2. General view of BelAZ**

The construction of quarries of transformer systems is the main one:



- in economic terms, this means saving diesel fuel compared to electricity, increasing the efficiency of machines due to traction and dynamic characteristics when supplying the transport system with current when lifting a loaded vehicle uphill.

### **Conclusion.**

The machine is a heavy-duty truck with an electromechanical transmission, which includes receiving equipment, electrical equipment controlled by the operator, which regulates the power of the machine's drive motors. When powered from a contact network, the operation of the dump truck occurs at close to constant speed, increased to 100-120 rpm, so that the hydraulic systems of the dump truck are suitable for work. The operation of the energy receiving device is carried out with the help of hydraulic cylinders, and the onboard system of the dump trucks transmits the current. Switching from the transport system to the ICE and back occurs automatically, without stopping the dump truck [7].

Benefits of using "DTEM":

- fuel consumption is reduced by 65-75%;
- the service park of diesel engines will decrease;
- the speed of the car going uphill increases;
- transport productivity increases by 9-18%;
- emissions of harmful factors into the environment are reduced;
- the need to improve the quality of the road surface;
- additional costs for the provision of transport network services;
- an increase in the mass of the car.

The working volume in the diesel-transformer mode is 60% [2], i.e., the start of the "DTEM" in the recuperative mode, the stop of the internal combustion engine when the trolley is operating in the contact network, and the costs are reduced. Siemens compared the performance of a 190 t electrified dump truck system with an internal combustion engine system.

For safety reasons, two relays are used to control the ignition network, which helps to automatically start the diesel engine. It is also equipped with an electrical heating device for the truck engine, an additional electric motor, and a hydraulic belt drive clutch.

Typically, a dump truck operates in a quarry for about 22 hours a day, 55% of which is in transport mode, consuming 37.4 liters of diesel fuel per hour. With such a structural restructuring, approximately 432.34 liters of fuel are saved from one car, and 164,188.2 liters of fuel per year from one diesel transformer. When working in the "Contact" network, at the beginning of the year, fuel and lubricant products expenses are saved at a price of 460,000 soums and 75,981,4660 soums of fuel per year.

In conclusion, it can be said that diesel transport remains an important mode of transport for the transport of minerals in quarries. In addition to saving fuel, replacing conventional dump trucks with DTEM will increase the productivity of cargo transportation and improve environmental performance in the quarry. When the internal combustion engine car is turned off and the work is connected to the power grid, the environmental indicators in the quarries will increase, the overhaul of individual parts of the machine will be reduced, and the economic indicators will improve [8].



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**MODERN DIRECTIONS OF EDUCATION AND VOCATIONAL TRAINING  
FOR YOUNG PEOPLE**

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**Annotatsiya.** Maqolada oliy ta'lim muassasalarida talabalar bandligini ta'minlash bo'yicha yangidan tashkil etilayotgan Kar'era markazlari va kovorking ofislarining tashkil qilinishi hamda faoliyati haqida so'z yuritiladi. Kar'era markazlari va kovorking ofislari asosan yoshlarni bo'sh vaqtini mazmunli o'tkazish, o'zlarini qiziqtirgan kasb-hunar bilan shug'ullanishga imkoniyat beradi. Kelajakda talabalar o'zlarini qiziqtirgan kasb-hunar bilan shug'ullanishlari hamda daromat topishlari mumkin. Shuningdek, maqolada yoshlarni ish bilan ta'minlashning eng yangi zamonaviy usuli va shakli bilan tanishtiriladi, bugungi kunda mehnat bozorida yoshlar uchun berilayotgan imkoniyatlar va qulayliklar to'g'risida bayon qilingan. Rivojlanib borayotgan davrda egallagan zamonaviy kasb-hunariga mos ish topishning yangi zamonaviy usullari to'g'risida ham so'z etiladi.

**Kalit so'zlar:** Kar'era markazi, mehnat yarmarkasi, bandlik, kovorking ofislari, WorldSkills standartlari, mehnat bozori, kasbiy ko'nikma, biznes akselerator.

**Аннотация.** В статье рассматривается создание и деятельность созданных Центров карьеры и коворкинг-офисов для обеспечения трудоустройства студентов в высших учебных заведениях. Центр карьера и коворкинг-офисы в основном позволяют молодёжи значительно проводить свободное время, заниматься интересующей их профессией. В будущем студенты смогут заниматься интересующей их профессией и получать доход. Поэтому в статье представлены новейшие современные методы и формы занятости молодежи. Рассказывается возможности и удобства, предоставляемые молодёжи на рынке труда сегодня. Также говорят о новых современных способах поиска работы в соответствии с современной профессией, приобретенной в период развития.

**Ключевые слова:** Центр карьеры, трудовая ярмарка, трудоустройство, коворкинг офисы, стандарты WorldSkills, рынок труда, профессиональные навыки, бизнес акселератор.

**Abstract.** The article discusses the creation and activities of the established Career Centers and coworking offices to ensure the employment of students in higher education institutions. The career center and coworking offices basically allow young



people to spend their free time significantly, to engage in a profession that interests them. In the future, students will be able to engage in a profession that interests them and earn income. Therefore, the article presents the latest modern methods and forms of youth employment. It tells about the opportunities and conveniences provided to young people in the labor market today. There is also talk of new modern ways of finding work in line with the modern profession acquired in the developing period.

**Key words:** Career Center, job fair, employment, co-working offices, WorldSkills standards, labor market, professional skills, business accelerator.

**Introduction.** Our state creates a number of opportunities and facilities for young people. At present, opportunities have been created for the employment of students of higher education institutions, the effective organization of leisure time, and the pursuit of the profession in which they are interested.

The “Development Strategy of New Uzbekistan for 2022-2026 and the effective organization of leisure time of students by our government” [1.] and in order to ensure the implementation of the state program for implementation in 2022, of March 4, 2022, the President of the Republic of Uzbekistan Sh.Mirziyoyev according to the statement №19 and the tasks of Annex 3 of the video conference held under the leadership of Mirziyoyev, the deadlines and responsible persons for the implementation of action plans and tasks to ensure the employment of students of higher education institutions of the republic «Йўл харитаси» («The Road Map») has been confirmed. In order to ensure the employment of students, inventory the job vacancies in their institutions, allocate them for free use to students who want to start their own business and provide other paid services, as well as from the educational institution itself, to open 10 paid courses (tourism, men’s hairdressing salon, women’s beauty salon, design service, business plan development, design estimates, car service, TV and radio equipment, printing, accounting) to ensure the employment of students assignments were given to organize services.

In particular, students studying in the field of pedagogy have the opportunity to teach in schools from the 2<sup>nd</sup> year. The Karakalpak Institute of Agriculture and Agrotechnology has accepted 24 students for vacancies and currently working here.

In addition, in order to open places and provide paid services together with students, job vacancies were allocated at the institute, in the vacancies were established a sewing workshop, a photo studio, men’s and women’s hairdressing salons and other services. After all, among our students, the students who are interested in them are allocated land on the territory of the institute, and they are engaged in planting and cultivating crops. As well as, places for sheep and goats were allocated from vacant rooms for students studying in the field of veterinary education. Today, the process of raising sheep and goats is underway. Also, 4 students were hired for the scientific-innovative paid Project of the Karakalpak Institute of Agriculture and Agrotechnology U3-202010131 “Development of technology for the production of pheromone seizures against the melon flies”.

The next issue is to develop knowledge, experience and skills in young people, the ability to work with students and gain experience. How to become an integral worker. It gives a lot of benefits, bonuses and most importantly – helps in career growth. Employees who can’t change later become leaders and often start their own



businesses. It's not easy to work with, and who promised it would be easy? But the income from productive labor is enormous. Satisfaction from an effective work day is incomparable. Every deal you make is worth its weight in gold. Getting tired of your favorite job is the most enjoyable. Yes, and the close people of a successful worker are valued and respected. What else is needed for happiness? Love? Of course! Everyone loves an important worker! We all want to succeed in our professional activities, make a career, and earn a million. What does it take? Talent and hard work are the foundation of career growth. But a successful working life is impossible without knowing business ethics, the psychology of bosses, the ability to build relationships with colleagues and negotiate with business partners. This and many other things are covered in this book. Managers and psychologists point out those employees who want to succeed are often inseparable. They are always in shape, don't complain about overload, and are willing to help colleagues and the boss. Of course, professional knowledge and experience also play an important role. That's why in our book we focus on ways to be self-motivated, how to be a leader, and talk about team spirit. A consistent employee knows how to combine work and personal life. For this you need to find time for important and urgent work. The last chapter of the book explores these concepts and provides advice to entrepreneurs and those who often have to stand up for colleagues and leaders. You can become an integral worker! Keep in mind that you are unique and deserve more! Who is an integral worker? Since ancient times, philosophers have asked the main question – what is the meaning of life? And everyone will think about it sooner or later. For many, the answer lies on the surface – the meaning of family life, children, relatives, their well-being and their own happiness. That's right. However, think about what the material well-being of every family and any person depends on in the first place. Right – it is very rare to find enough money for an unemployed, beautiful life. Without material wealth, life will not be happy. We are working hard here. We keep our work like a salmon that saves in difficult times. But no matter how hard we try, we want more – a higher salary, a prestigious position, the ability to make decisions, and disobedience to the orders of others. In general, we all strive for career growth. A useful skill that is useful to anyone who travels the career ladder is the ability to be an integral worker. If you are considered integral, the attitude towards you is respect, esteem, awards and other signs [2.].

**Analysis.** Career centers are currently being established in universities. This is due to the fact that young people need practical assistance in finding modern jobs that are suitable for them. It is no secret that often good relationships help solve all problems. This may also apply to employment, admission to an educational institution, and non-queuing services and discounts at certain institutions. But many people don't know how to make these acquaintances, knowing about the benefits of meeting the right people. They succeed in establishing mutually beneficial business relationships and decide to share their experiences. For example, Ferrazi could find a way out of any situation because of the thousands of contacts in his catalog.

Along with giving recommendations, he recounts some interesting experiences he had along the way. The practice of setting up successful acquaintances will be beneficial not only for managers of big ideas, but for everyone. Every day we face problems that can be solved with the help of friends, family members or friends

acquaintances. Mutually beneficial communication involves the exchange of services, even if it is not always immediate and always equivalent. If you want to be a network expert, figure out how you can serve others. Perhaps you are an expert in any field, possessing unique knowledge or skills. In a sense, this will be your self-promotion. You need to know who and how will be useful to you, and people need to know what you can do for them. The authors give assignments to the reader, which gradually become more difficult. They will definitely help you master the skills. The big advantage of the network is the opportunity to meet many interesting people, make new friends and gain knowledge related to different areas of life. This book will be useful for anyone who wants to expand their circle of acquaintances and learn how to keep in touch. Career orientation of students with the involvement of advanced specialties and experts of the economy, the current and future situation in the labor market, acquaintance with modern information about a particular profession, workplaces and employers, prospective enterprises and labor authorities, The task is to organize job fairs, career days with the participation of educational institutions, interested agencies and organizations, and to prepare and publish other analytical materials on the future professional activity (career) of students and in this area [3.].

**Discussion.** Involve students in paid public works, including sociological research, surveys and censuses throughout the country, support students in higher education institutions to engage in formal employment activities, including the provision of tax benefits easing or completely removing the imposed restrictions, creating an electronic platform aimed at offering decent jobs, allowing them to work full-time from the first year of the master's degree, ensuring the employment of students in higher education one of the main tasks of the institutions.

What is the main purpose of the center?

The purpose of the center is to provide part-time employment for job-seeking students, professional growth, and development of relationships with employers. His responsibilities include holding job fairs and training seminars at the university, organizing professional tests for students and directing them to the profession, cooperation with employers. The main task of the center is to inform students about the knowledge, skills and qualifications required for vacancies. This service provides students with tips for future career choices, interviews, and time-saving tips. In addition, a set of tests will be introduced to determine the attitudes and approaches of young people to work.

A model regulation on the operation of career centers has been approved, with the task of promoting the employment of students studying in educational institutions, assisting them in meeting the requirements of the labor market and labor legislation and skills on a monthly basis to organize regular career days twice, to organize official visits to enterprises, to organize master classes with representatives of successful business and civil service.

Sooner or later the specialist will have to grow. If your choice is vertical growth, then the book will help you make fewer mistakes in this hurdle race. The ideal leader is a wonderful single horn that does not exist in nature, but it is also important to try to become it. The book discusses the four functions of a leader, teaches how to create and work in an effective team, and offers to direct conflicts in a constructive direction [4.].

The costs associated with the establishment and maintenance of the career center are planned to be covered by extra-budgetary funds of the higher education institution. The centers are managed by the general manager, who is equated to the status of the dean of the faculty of the higher education institution, and the managers, who are equated to the status of the deputy dean of the higher education institution and determined by the number of full-time students. Coordination of the centers, monitoring and control of their effectiveness, as well as methodological support is entrusted to the first vice-rectors (deputy directors of branches) of higher education institutions for youth affairs and spiritual and educational work.

Now, do you know how long it will take to review your resume? According to statistics - 8 seconds. Were you surprised? This book will help make your resume as attractive as possible to the employer. You will get acquainted with the standard directions of the employer, learn how to promote your personal brand in the labor market and build relationships with companies. The “chip” of the book is simple and effective scenarios for communicating with employers, examples of alternative letters, self-promotion methods that will help you succeed in your job search [5.].

In addition, the task of establishing co-working offices at higher education institutions “Career Center” can be considered as a modern image of education and vocational training of students. At the co-working center, students can work on interesting architectural projects, share experiences and develop their ideas independently or in groups, and engage in community work. The center is equipped with transformer furniture, presentation equipment, marker boards, computer rooms and all the necessary equipment.

Work plays an increasingly important role in modern human life. In addition, it is not limited to daily visits to the workplace and payment. Most people who come to work for a particular organization don’t stay in the same position for long, but move up the career ladder as quickly as possible [6.].

Notably, new terms have recently emerged in various documents and regulations. Yesterday we talked about block chain and today we will explain co-working in simple words. In recent years, remote work has become increasingly popular. Imagine how great it would be to prepare reports, edit texts, or create advertising banners while sitting on a soft couch at home. There is no need to get up at 7am, stand in a crowd in traffic or on the subway, and sit in the office from 10am to 6pm. All you need for work is a laptop or computer and internet. Not a job, but a dream.

Co-working – when translated from English (co-working). Simply put, co-working is a group of free and independent people of different professions who gather in one room to do a certain job. Web designers, programmers, copywriters, freelancers, entrepreneurs, as well as employees of small companies who find it useless to rent the whole office work side by side in one place. So co-working is a novelty in the organization of work. Co-working centers should be equipped with everything necessary to carry out full-fledged work. As a rule, in addition to the workplace, they should include a recreation area, a kitchen or vending machines for food and beverages, a meeting room and a personal library. However, such opportunities will be limited in co-working offices set up near Career Centers in higher education institutions. Only in an atmosphere of youth employment do students work together in different fields.

Going back to the history of co-working a bit In 2005, young American programmer Brad Nyunberg started his first co-working space, which brought together several like-minded freelancers under his roof.

The idea was to create a workplace between a simple office and a home. The idea was successful and brought world fame to the founder. Since then, co-working has become very popular.

It should be noted that the opening of co-working offices in Uzbekistan and mainly in higher education institutions is developing much more slowly than abroad. The reasons for this lie in the fact that a defined work charter has not yet been developed and the architectural complexity of office design. It is not easy to build an office that meets several important parameters at once. The layout of the room should be atypical. Under no circumstances should companies create a unique creative space that people can enjoy without copying their offices. The most important thing is a stable internet – this is a necessary condition, without which the center cannot work normally.

We return to the central point of the scheme proposed by Kovi: first, you have to create your own character – first there will be a personal victory, then a victory in the field of interactions [8.].

**Conclusion.** In short, under the leadership of President Mirziyoyev, the issue of youth employment has come to the fore, and the policy pursued by the state in this direction is showing positive results. Of course, such events and opportunities give young people a strong motivation and a great experience in choosing a profession and discovering themselves in the labor market.

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## LAWS OF SOCIAL AND SPIRITUAL DEVELOPMENT OF BIOTECHNOLOGICAL PROCESSES

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**Annotatsiya.** Maqolada biotexnologik jarayonlarning asoslaridan birini tashkil etuvchi ijtimoiy-ma'naviy ishlab chiqarish qonuniyatlarini tasniflash moxiyatini tushuntirish va amaliy ahamiyatining falsafiy qirralari yoritib berilgan.

**Kalit so'zlar:** biotexnologik jarayonlar, moddiy ishlab chiqarish, ma'naviy ishlab chiqarish, taraqqiyot, modernizasiya, diversifikasiya, barqaror rivojlanish, inson va jamiyat, jamiyat va tabiat.

**Аннотация.** В статье разъясняется сущность классификации социально-духовных законов производства, являющихся одной из основ биотехнологических процессов, и освещаются философские аспекты их практического значения.

**Ключевые слова:** биотехнологические процессы, материальное производство, духовное производство, развитие, модернизация, диверсификация, устойчивое развитие, человек и общество, общество и природа.

**Abstract.** The article explains the essence of the classification of socio-spiritual laws of production, which is one of the bases of biotechnological processes, and the philosophical aspects of their practical significance are highlighted.

**Key words:** biotechnological processes, material production, spiritual production, development, modernization, diversification, sustainable development, man and society, society and nature.

**Introduction.** Today, in the world, humanity needs radical socio-spiritual renewal, essential purification, scientific and moral perfection in the field of production. After various repressions and colonization, it has become the need of the country and its own life for a person who has become distant from spirituality, materialized and rationalized to realize where he made a mistake. Philosophically analyzing the process of material and spiritual production in social development in order to fill the gaps in the psyche, morals and spirituality of a person, referring to the lives, thoughts, wise words, and writings of our ancestors and seeing the solution of the problem on a universal basis based on the output, the concept of creating a healthy competitive social environment by directing the principle of harmony of "materiality and spirituality" to the modernization of the educational system was proposed.

**Analysis of literature on the topic.** In Eastern philosophical thinking, studying the mysteries of the human psyche in relation to the materiality of a person is considered one of the most urgent and important problems. In particular, Abu Nasr Farabi said, "People create society according to their characteristics and natural needs. Their actions and characteristic traits are initially determined by natural abilities that gradually become habits" [5]. There are also some approaches towards this issue in Western philosophy. A new interpretation of the human psyche began in the middle of

the 20th century and was founded by F. Nissche [6]. A. Bergson [Bergson A. 1908.], O. Spengler [7] developed it and focused on the understanding of the essence of the human life from the person himself (personality). Today, the country's economic liberalization, widespread implementation of innovative ideas, "...the transition of our country's economy to market reforms opened the way to new approaches to the development of scientific and innovative activities" [1]. This paves the way for harmonizing material and spiritual factors in social development, creating theoretical and fundamental bases for development of competitiveness in production. Therefore, by the new century, there is not enough literature aimed at revealing the laws of social and spiritual production, which have not been solved by humanity at the current stage of biotechnological development.

**Research methodology.** In this study, the interaction between nature-society-man is of great importance for all mankind. The process of renewal and development that takes place in it creates an ecological situation that has a great impact on nature, that is, it implies contradictions within the framework of nature-society-human interaction on a global scale. It is possible to get rid of new dangers and threats by having high moral values and realizing one's human essence.

One of the controversial issues of modern philosophy is to solve the problem of the relationship between material and spiritual production of biotechnological development, which is one of the foundations of the process of social development. A serious approach to this issue began in the 70s of the last XX century, and although the tradition of materialist dialectics, which was the ideological basis of the former socialist system, prevailed, however, the analysis of material and spiritual production different unique views and approaches were formed and many debates took place around them. [8.4. 9.6. 10.7.]

Apparently this issue cannot be solved by directly transferring the results of the analysis of one of the forms of realization of the dialectic of material production and spiritual production to its other forms. Nevertheless, a number of effective ideas expressed by various researchers allow us to determine that the system of relations between materiality and spirituality is actually multifaceted. [11,104. 12.32. 13,32.] But, even from this point of view, things have only just begun. Many aspects of the interaction (relationship) between materiality and spirituality in various spheres of human activity have not yet been explored. They include, among other things, the dialectic of materiality and spirituality factors in social development.

**Analysis and results.** Continuous rapid progress of social development cannot be realized without philosophical research of the material and spiritual production process taking place in life and without taking into account its results. Regarding the theoretical and practical analysis and results of this work, President Shavkat Mirziyoev said, "...If the body of society is the economy, then its soul and spirit is spirituality, ... - We have decided to build a new Uzbekistan, we rely on two strong pillars. The first is a strong economy based on market principles. The second is the rich heritage of our ancestors and strong spirituality based on national values" [2], they showed the effectiveness of our research.

Therefore, the vital foundations of any society are formed by biotechnological development in the process of material and spiritual production. In this case, material

production usually means the creation of material products - food, clothing, housing, etc., as well as the provision of services that are necessary for production [14].

The development of biotechnological processes in the era of globalization is the main characteristics of the social development of countries: That is;

1) effective usage of natural resources based on new modern techniques and technologies;

2) productive usage of all advantages of the market economy, organization of production on the basis of initiative and entrepreneurship;

3) economic activity on the basis of multi-ownership and strengthening of property saving activities on the basis of strengthening people's sense of ownership of their property;

4) the status of economic independence is given to each entity that creates material wealth;

5) continuous modernization and diversification of production sectors and industries;

6) it is represented by the involvement of innovations in the main branches of production.

In this regard, President Sh. Mirziyoev said "...materials with unique properties, nanotechnologies, renewable energy sources, new chemical and biotechnological fields that are important and promising for the economy of our country should be identified as priority areas of fundamental and applied research"[3,176] with the opinions that the socio-spiritual production processes carried out in our country have their own characteristics, and they are, firstly, a healthy generation, creating a healthy generation has been consistently implemented; secondly, that in order to educate the healthy generation that has come into the world, they are being taught the secrets of secular knowledge through the organization of educational institutions; thirdly, on the basis of strong social protection, conditions are being created for decent marriages of all low-income families, disabled people and the elderly; fourthly, it is expressed by the fact that the work of providing information and communication tools necessary for mastering the peaks of modern knowledge is being carried out on a regular basis, in other words, 60% of the state budget is being spent for the development of the sphere of spiritual production.

As a confirmation of this, " it is appropriate to develop the list of promising priority areas of cooperation in the field of science and technology, to think about the mechanisms of their financing and implementation. One of the important directions is to combine the strengths and capabilities of leading scientific research institutions, first of all, in the fields of biotechnology, genetic engineering, alternative energy, including solar, wind power, biogas, and small hydropower. [3,424]

So, under any circumstances, the stable development of our country depends on the harmonious organization of the material and spiritual production processes, which are two sides of this whole, and the issue of harmonizing these two factors in the conditions of globalization shows the results.

**Conclusions and suggestions.** Summarizing the given points, the following conclusions can be reached. The solution to the issue of laws of socio-spiritual

production of biotechnological processes is related to the solution of three global issues.

The first is to moderate the harmony of relations between "nature-society-man", which basically requires each individual to act according to the laws of dialectics in accordance with the interests and needs of nature-society.

The second is the harmonization of the relationship between "nature-society-man", which is to take reasonable actions to decide the future destiny of each human being based on the present day, that is, to bring humanity not to the brink of destruction, but to a bright future. represents the beginning towards the future. In this case, the main issue is to save humanity from the calamities that arise on the basis of various social conflicts.

The third is the harmonization of "nature-society-man", in which the main issue is to find a reasonable solution to environmental problems.

These global problems require, on the one hand, the harmonization of material and spiritual production processes, and on the other hand, these problems cannot be solved without them, the main issue is that materiality and spirituality are inseparable from each other, that they are two wings of a bird, i.e. means that without one, the second cannot fly to high heights. [4]

Therefore, social philosophical analysis and research of this problem is necessary.

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## PROBLEMS OF HUMAN HEALTH AND BIOETHICS IN ISLAMIC THEOLOGY

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**Annotasiya:** Islom ta'limotiga ko'ra har bir inson o'z umri davomida bir qancha sinovlardan o'tadi. Hosildorlik, qurg'oqchilik, befarzandlik, boylik va boshqa yo'llar bilan insonlar sinovdan o'tadilar. Alloh tomonidan yuborilgan eng katta sinovlardan biri bu inson salomatligi va bemorligidir. Bu kabi sinovli kasalliklardan biri vabo bo'lib, bu kasallik insoniyat tarixida katta jamiyatlarga ulkan tahdidlar solgan. XXI asrga kelib, Yer yuzida solib turgan COVID-19 ham shu kabi vabo kasalligidandir.

**Kalit so'zlar:** islom, vabo, tibb an-Nabaviy, Sahihi Buxoriy, Kitob at-tibb, ruh, qalb, poklik.

**Аннотация:** Согласно учению Ислама, каждый человек в течение своей жизни проходит ряд испытаний. Плодородием, засухой, бездетностью, богатством и другими способами люди испытываются. Одним из величайших испытаний, посланных Богом, является здоровье и болезнь человека. Одной из таких тестовых болезней является чума, болезнь, которая на протяжении всей истории человечества представляла огромную угрозу для больших обществ. К 21 веку COVID-19, который распространяется по Земле, является одной из таких чум.

**Ключевые слова:** Ислам, чума, тибб ан-Набави, Сахиhi Бухари, Китаб ат-тибб, душа, сердце, чистота.

**Abstract:** According to the teaching of Islam, every person goes through a number of tests during his life. Through fertility, drought, childlessness, wealth, and other ways, people are tested. One of the greatest tests sent by God is human health and illness. One such test disease is the plague, a disease that has posed enormous threats to large societies throughout human history. By the 21st century, COVID-19, which is spreading across the Earth, is one such plague.

**Key words:** Islam, plague, tibb al-Nabawi, Sahihi Bukhari, Kitab at-tibb, soul, heart, purity.

**Introduction.** In the teachings of Islam, the solution to all the problems encountered during human life is clearly stated. Also, just as the disease is given by Allah, so also the cure and treatment is given by Allah. It is mentioned in the Holy Qur'an: "When I am sick, it is He who heals me." Also, the ways to avoid the disease are clearly explained by Muhammad (pbuh) in Tibb al-Nabawi. It is narrated from Jabir ibn Abdullah: I heard the Messenger of Allah (pbuh) say: "Cover the dishes, close the mouths of the water nets, because the plague will fall on one night of the year. It will definitely fall into open-mouthed dishes and open-mouthed dishes. Narrated by Imam Muslim and Imam Bayhaqi.

**Literature Review.** According to Tibb al-Nabawi, a Muslim should always take measures to prevent an illness before it occurs. Most of the hadiths in Tibb al-Nabawi

focus on disease prevention rather than treatment. The following hadith is narrated from Muhammad (pbuh): In the narration of Imam Bayhaqi and Imam Hakim, the Messenger of Allah, may God bless him and grant him peace, said:

إِغْنَيْكُمْ خَمْسًا قَبْلَ خَمْسٍ: شَبَابَكُمْ قَبْلَ هَرَمِكُمْ وَصِحَّتَكُمْ قَبْلَ سَقَمِكُمْ وَغِنَاكُمْ قَبْلَ فَقْرِكُمْ وَفَرَاغَكُمْ قَبْلَ شُغْلِكُمْ وَحَيَاتَكُمْ قَبْلَ مَوْتِكُمْ (رواه البيهقي والحاكم)

"Treasure five things before five things: your youth before your old age, your health before your illness, your wealth before your poverty, your free time before you become busy, and the time of your life before your death [1].

**Analysis.** A Muslim must take all necessary measures to protect himself and his family against illness. At the same time, it is emphasized that the human body should keep all things clean, follow hygiene, and protect them from external influences.

Also, Muhammad (pbuh) gave clear instructions about the contagious nature of plague and what measures should be taken to prevent it from spreading.

In the study of Nadezhda Nikolaevna Bazelyuk, "It should be recognized that recently there has been an increased interest in researches that influence the philosophical and social aspects of valeology, the formation of a healthy lifestyle to one degree or another. However, socio-philosophical analysis of individual human health, its valeological aspect, despite its importance, has not been given due attention for various reasons.

**Discussion.** Thus, it is important to explain the socio-philosophical problems of a healthy lifestyle and individual (valeological) health, the principles of motivating a person and the entire population to form a healthy lifestyle." [2].

Ikrima ibn Khalid narrates from his father: The Messenger of God (peace be upon him) said in Tabuk Ghazat: "If a cloud falls somewhere and you are there, do not leave it." If the plague has spread anywhere other than you, do not go near it!" (Narrated by Imam Ahmed). Imam Bukhari, Imam Muslim, and Imam Tahawi narrated this hadith. This hadith is also narrated in Imam Tirmidhi's "Sunan":

It is narrated from Usama bin Zayd: The Prophet (PBUH) was asked about Tun. He said: "Tun is a disease or punishment sent to a group of Bani Israel. If there is a crowd in a place and you are in that place, do not leave it. If the plague has spread anywhere other than you, do not go near it!" (Narrated by Imam Tirmidhi and Imam Nasa'i).

Based on the above hadith, it is emphasized that modern quarantine is the best way to stop the spread of cholera. All representatives of modern medicine emphasize that the most primary and precautionary measure in the case of cholera is quarantine. According to Islamic teachings, deserting the homeland during war is one of the seven deadly sins. This is how non-observance of the quarantine rule, leaving the place where the plague is spreading, is expressed.

Prophet Muhammad (pbuh) said about the plague: "Indeed, this plague is a punishment with which Allah destroyed the peoples before you. There is little of it left on earth. Sometimes it comes, sometimes it goes. If the plague appears in a place, do not leave it. If you hear that there is plague in a place, do not go there" (Narrated by Imam Ahmad).

The Prophet (pbuh) said about Muslims who died due to plague and pestilence, epidemics in general: "Plague is martyrdom for every Muslim" (narrations of Imam Bukhari).

In Islamic teachings, healing and taking care of a sick person is not only an approved act, but it is also an obligatory act.

Physical healing begins with cleansing the soul and healing the soul. With the view that mental health is related to physical health, it is necessary to turn to God first to treat the sick. Evidence from the Qur'an and hadiths indicate that diseases are a test of God and a path to spiritual purification [3].

In medieval Islamic medical texts, special attention is paid to the issue of body and soul. Ibn Sina writes that mind, soul and body influence each other. Although he believed that the mind was superior, he said that without the interaction of mind, spirit and body, it is impossible to have total body health or to cure disease separately. Writing about mental health, she says, "The mind and the body are simultaneously preserved in protecting the emotions." [4].

In Islam, the first method of treatment is physical, the second is spiritual treatment, and in some cases, spiritual treatment is recommended over physical treatment. First, patients feel the sting of medication as they seek to heal a disease in the body, like the pain of burning a wound, and spending huge sums of money on treatment and care. On the other hand, the care and purification of the soul is very important [5]. Second, if the disease is caused by demons and evil, ordinary medical treatments will not work. Because mental illness is caused by lack of faith and poverty of heart. In this case, the mental illness is treated by psychological treatment.

Muslims have paid special attention to the purification of the human body, first of all, to the purification of the soul and the morals.

Following the Sunnah of the Prophet (pbuh), applying them to life, and purifying, educating and behaving the heart, soul and spirit have been studied by Sufism scholars. This science is called "Tibbul Qulub", that is, the healing of hearts, and it has its own commentary.

Medicine consists of two parts: medicine of body and soul. Physiotherapy is the study of the health of a person's body and organs in order to maintain its health or cure it from illness. In cardiology, the state of the human heart is studied in terms of its recovery, disorder or illness.

According to Islamic concepts, the soul is manifested in two ways: external and internal. The apparent heart is a cone-shaped piece of flesh located inside the human chest. And the inner soul is something that is enlightened, gentle, contemplative, and reveals the qualities of humanity.

In Islamic medicine, there are a number of specific guidelines for physical health along with spiritual healing and mental health.

In particular, as in other medical systems, honey is considered a healing drink. Imam Bukhari named the fourth chapter of his "Kitab al-Tibb" (Book of Medicine) as "ad-Dawa'bi al-asal wa qawlih ta'ala fihi shifa li an-nas". Here, Imam al-Bukhari mentioned three hadiths about honey along with its value which is emphasized in many verses of the Qur'an. In verses 68-69 of Surah Nahl, your Lord revealed (ordered) to the bees: "Build on mountains, trees and things that (people) build.

Then eat of various fruits and walk in the paths that your Lord has made easy (for you)!" From their bellies flow different colored juice (honey) which is healing for people. Indeed, there is a sign in this for a thinking people." Based on this benefit, one

of the most famous hadiths mentioned by Imam Bukhari in "Kitab al-Tibb" (Book of Medicine) about the healing benefits of honey is "Bab ad-Dawa bi al-`Asal wa qawl Allah Ta`ala fih Shifa li an-Nas (Chapter of treatment with honey and Allah's statement: healing for people) and the Prophet (pbuh) said: "A man came to the Prophet and said: 'My brother has a little stomach problem.'

The Messenger of God (pbuh) replied to him: "Let him drink honey." The man came a second time and the Prophet (pbuh) said to him, "Let him drink honey." He came for the third time, and the Prophet (pbuh) said: "Let him drink honey." He came back again and said, "I did it." Then the Prophet (pbuh) said: "Allah spoke the truth, but your brother's stomach lied." They said give him honey to drink. So he gave his brother honey to drink and he was cured." [6].

Many hadiths related to medicine are recorded in "Kitab at-tibb" of "Sahihi Bukhari". They are written from the eleventh to the fifteenth chapter of "Kitab al-tibb". One of these five chapters is Bab al-hijama min al-da' (as a cure for illness). Imam Bukhari mentioned in this chapter that Jabir ibn Abdullah narrated that he visited al-Muqanna during his illness. Jabir (r.a.) said: "I will not leave until I cover it, because I heard the Messenger of Allah say: "There is healing in the exit."

Secondly, as narrated by Imam Bukhari, "the Messenger of Allah used to wear hijama in the middle of his head in a place called Lahy Jamal while he was going to Makkah." Thirdly, Imam Bukhari narrates: "The Messenger of God, may God's prayers and peace be upon him, drew blood from his head." Also, Imam Bukhari narrates: "The Prophet, may God's prayers and peace be upon him, said that there is no treatment equivalent to hijama and bloodletting." [7].

As a result of the development of treatment methods, people have observed that the use of leech as a means of sucking blood from the affected parts of the human body is similar to hijama. In Greco-Arabic medicine, leech therapy played an important role. For example, Ibn Sina and al-Baghdadi wrote a separate section for leeches in their works "al-Qanun fi at-tibb" and "al-Mukhtar fi at-tibb". Ibn Sina states that the use of leeches is more beneficial than hijama in drawing blood from deep parts of the body. It is advisable to treat skin diseases with the help of leech.

For al-Baghdadi, the use of leech was considered the best method for skin diseases, wet and chronic wounds. Leech is also used to reduce the weight of fat and meaty people. They can be used repeatedly, but the risk of cross-infection increases. Leech can also be used as a tissue cleaner, especially after microsurgical operations. Because of the dangers of using leeches, al-Baghdadi and other Muslim physicians emphasized the necessity of cleaning leeches.

For this purpose, it is necessary to wipe off the dust stuck to the leech before use. Salt should be sprinkled on the affected part of the human body when the leech tends to suck blood and go down. Al-Baghdadi says about leeches: "If they are to be used, they should first be kept for a day and then used. If the leech does not stick, fresh blood is poured or it is finely ground and sprinkled with crushed clay, and if there is no wound in the damaged area, it is rubbed until it turns red [8].

**Conclusion.** In conclusion, it can be said that in order to fully understand at-tibb an-Nabawi, it is necessary to fully understand the meaning of medicinal plants, environmental changes, as well as linguistic terms. In the first century of the Hijra,



such treatment methods and prescribed practices may not correspond to today's conditions. Therefore, in order to have complete information about at-tibb an-Nabawi, it is not enough to refer to the sources of scholars in the field, but also to refer to new discoveries made by researchers after the death of the Prophet (pbuh).

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## THE NEED FOR THE FORMATION OF ECO-ETHICAL THINKING IN THE SYSTEM OF SOCIETY AND NATURE RELATIONS

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**Annotatsiya:** Ushbu maqolada ekologik mas'uliyatni rivojlantirishda axloqiy qadriyatlarning ijtimoiy ahamiyati tahlil qilinadi.

**Kalit so'zlar:** ekologik qadriyatlar, ekologik faoliyat, ijtimoiy javobgarlik, ekologik mas'uliyat, ijtimoiy munosabatlar, ijtimoiy ong, ekologik missiya, burch va majburiyat.

**Аннотация:** В данной статье анализируется социальная значимость нравственных ценностей в развитии экологической ответственности.

**Ключевые слова:** экологические ценности, экологическая деятельность, социальная ответственность, экологическая ответственность, социальные отношения, общественное сознание, экологическая миссия, долг и обязанность.

**Abstract:** This article analyzes the social importance of moral values in the development of environmental responsibility.

**Key words:** ecological values, ecological activity, social responsibility, ecological responsibility, social relations, social consciousness, ecological mission, duty and obligation.

**Introduction.** In the society-nature complex, each person has the opportunity to voluntarily choose ecological and ethical norms based on his needs and interests. It is related to the issue of personal freedom and represents the rise of environmental moral norms to the level of faith. Any form and level of education is aimed at fulfilling the task of turning moral norms into a vital position. In this case, administrative, legal, political, economic, spiritual, ideological directions of education are inextricably linked with the interests of ecological and moral education, and in certain socio-political situations, they are absorbed into the individual's lifestyle and lead to the rise of moral norms to the level of belief. It determines the concrete social, economic, political living conditions of a person, directions of education, and their mechanisms of action. Even if ecological moral norms become a factor of activity, as we said above, it is related to the issue of human freedom, but it cannot be completely independent of the general interests of society. Man is obliged to fulfill universal environmental requirements, subject to the logic of morality.

**Literature Review.** The axiological-regulatory function of ecological values is the norms and principles of encouragement or prohibition, which are the coordination of personal and social interests. In turn, these constitute the content of a person's ecological beliefs and determine the value directions of nature protection activities. The transformation of these requirements into the content of concrete practical activities depends on the person's understanding of his environmental responsibility and management and control of his activities based on public opinion. If people do not create "ecological ethics" of environmental protection, any measures to manage their activities based on environmental requirements will be very difficult to have a positive effect.

The most important condition for managing ecological activities with the help of spiritual regulators is the deep sense of moral responsibility of each individual for the future of nature and society. In this context, environmental ethical responsibility fulfills two interrelated functions. That is: firstly, it coordinates the subjective capabilities of a person with objective necessity. Secondly, taking into account the social interests of the individual, it manifests his will in a "personified" form. After all, "the dialectics of freedom and determinism are classical philosophical problems" [1]. Accordingly, environmental moral responsibility should be considered as a social phenomenon that simultaneously restricts the free will of a person and encourages nature protection.

**Analysis.** The "ecological way of life" convenient for human life does not arise by itself, spontaneously based on the objective laws of nature, but it is the materialization of spiritual values and is the result of socio-practical activity. The mutual dialectical unity of these depends on the nature of the "ecological way of life" which is a necessary condition for the management of human nature protection activities. In addition, natural resources have an ecological and social "consumer value", and in concrete situations, the "consumer value" of some components of the biosphere may have a relatively priority value. Regardless of the forms of ownership of natural resources, social spheres of use are limited. That is, levels of "monopolization" are created in accordance with the characteristics of the use of natural resources. In such conditions, the use of natural resources and its protection is

organized and managed with the help of socio-axiological activities, not only the task of the administrative-legal and political organizations of the state. Any form of social consciousness and branch of science - performs the function of managing socio-political relations. The socio-spiritual attitude of the subject inevitably takes place in a certain social and natural environment. Therefore, this issue, to one degree or another, goes back to the axiological management of ecological relations. According to its content and function, "ecological management" as a component of social management is aimed at maintaining the compatibility of the relations of the "nature-society-man" complex, the balance of the biosphere, and its character is determined by the needs of society.

From the point of view of ecoethics, environmental management consists of rationally organizing human activities to change and protect nature with the help of moral norms, codes, principles. Its content and character are determined by the basic economic and ecological relations of the society, that is, the basic or superstructure elements influence the ecologicalization of moral and spiritual values through their own channels. Based on these goals, conditionally, it is important to include the concepts of "ecological base" and "ecological superstructure" in science.

Axiological views influence environmental activism and responsibility in three independent but interrelated directions. That is: the first is to create the ideology of ecoethics, which consists of "ethicalization" of ecological activities; the second - environmentalization of socio-ethical relations; the third is to raise environmentalist moral values to the level of public policy. The mutual unity of these directions affects the structure of social-ecological activity and responsibility of a person and creates a set of universal moral norms that determine his "ecological qualities"[7].

**Discussion.** Based on the concrete tasks of ecological activity forms, the subject's ability to choose certain ethical norms depends on the level of development of the society. Because, at certain stages of society's development, the evil done to nature is morally justified. Even condemning elderly parents or sick people to forced death was considered a moral norm. It should be noted that ecological moral norms, as a subjective means of managing the balance of the biosphere, can be used consciously or spontaneously by man. In this case, the conscious or spontaneous nature of ecological activity corresponds to the level of development of society. However, environmental awareness and spontaneity should not be confused with the issues of objectivity and subjectivity in nature conservation.

Any society, in a certain sense, has abandoned anti-ecological actions that harm the lives of future generations and has created a set of socio-economic, administrative-legal, spiritual-ethical norms that prohibit sacrificing the interests of future generations to the needs of people living now. In turn, these norms are relatively independent phenomena, arising in the course of the objective development of nature, based on the material and spiritual needs of man, maintaining the internal ecological balance of the biosphere, and anthropotechnogenic influence on nature.

Environmental ethics' conscious and purposeful management of these relationships reveals its subjectivity. But, according to its genesis, the objectivity of environmental ethics also comes from the objectivity of human nature protection needs. In the process of ecological practice, the relations of objectivity and subjectivity of

ethics "materialize" and acquire their concrete meaning[5]. That is, the objectivity and subjectivity of ethics in environmental activism do not express any meaning without each other.

The subject's creative role in changing nature and its essence in the process of ecological ethical activity consists of:

1. The incompatibility of ecological and moral needs with human economic living conditions is reflected in the damage to the balance of the biosphere. In this case, the perceived necessity of nature protection is the driving motive of the subject's ecological practical and theoretical activity.

2. The relative independence and creative activity of ecological ethics is characterized by the appropriate organization of the natural balance of the biosphere, that is, it coordinates and concretizes the directions of nature protection activities.

3. In ecological relations, it is not a passive characteristic of the needs of moral-nature protection, on the contrary, it manifests its objective content by organizing the emotional-spiritual, spiritual-ideological basis of the processes of organizing and managing ecological activities.

4. Theoretical and practical directions of ethics, which is the regulator of ecological activity and responsibility relations, in the process of generalization, concretization, integration and differentiation of historical experiences, is an objective historical necessity.

In the ecological literature, the extinction of some species in nature is morally justified by the objective necessity of the historical development of the biosphere, the legitimate results of civilization, and they deny the role of the anthropotechnogenic factor in accelerating this process. In fact, in his socio-economic activity, man is obliged to change nature based on his needs, but these changes should not damage the natural balance of the biosphere.

Natural resources, as the material basis of human values, should be preserved for future generations. Because the ecological activity and responsibility of the next generations depends on the extent to which we organize, assimilate and "materialize" these social phenomena. After all, we leave to the future generations: "not only this or that construction, but also the ethics of production relations formed today, the culture of connection with nature, the responsibility for the future, the duty" [2].

Social responsibility and duty to future generations is not as strongly placed on the agenda as in other fields, such as in the field of ecology. If so, this issue will certainly come down to environmental needs and interests. Analysis of the content of concepts of social responsibility and duty in the framework of ecological activities, determines its perspective directions. Special scientific literature mentions problems of environmental responsibility in three groups, namely:

- 1) to determine the existence of ecological responsibility and its categorical apparatus within the framework of metaethics problems;

- 2) analyzing the features of the biosphere balance in the "nature-society-man" complex within the framework of normative ethical issues, defining human responsibilities and obligations in it;

- 3) is to find a solution to theoretical and practical life-related problems of environmental responsibility to the next generation [3].



The function of morality in the formation of ecological responsibility is manifested in its influence on the development of social relations and in the process of their ecologicalization. Ecological values - nature protection needs arise at intersections, and become a criterion for normative evaluation of quantitative and qualitative indicators of biosphere balance. In the process of co-evolution of the nature-society-human complex at the micro and macro levels, it is methodologically important to determine the features of relatively independent environmentalization of ecological moral values. Because each element of moral value has its own direction of influence on increasing environmental activity and responsibility. In this case, the concrete indicators of the "ecological way of life" determine the priority importance of certain value elements in the development of activity and responsibility in the field of nature protection. Especially in the situation where the economic and basic possibilities of maintaining biosphere balance are limited, increasing the role of the subjective factor in the formation of ecological activity and responsibility is gaining importance.

**Conclusion.** Ecological responsibility is the awareness of human unity with nature, which creates collective possibilities of social management of biosphere balance. Because, summarizing the above, management of nature change and protection activities with the help of axiological-ethical values and principles: firstly, the relationship of nature-society-human complex is characterized by the direct influence on spirituality and arises from concrete ecological situations. Secondly, it is aimed at understanding the moral and ethical consequences and perspectives of man-made activity of harming the balance of the biosphere, and realizing his responsibility and duty in front of future generations. Thirdly, people's anti-ecological actions towards nature have their own motives and reasons, and ethics is directed to eliminate these reasons. Fourth, the moral or immoral relations between man and man, man and nature, are manifested in each complex in its own way, but their social essence is in the protection of man through the protection of nature. Fifth, the heuristic function of ecological moral values is the rational organization of dialectical connections in the content of ecoethics: ecological conscience, ecological duty, ecological responsibility and other categories.

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## **THE DEVELOPMENT OF PHILOSOPHICAL IDEAS ABOUT THE SOUL IN WESTERN PHILOSOPHY**

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**Abstract:** This article analyzes the gradual development of philosophical views on the soul in Western philosophy. The article also describes the interpretation of the human soul in Eastern philosophical thought and the formation of philosophical anthropological views on man.

**Key words:** soul, soul, soul, spiritual power, human soul, spiritual world, psyche, philosophical anthropology.

**Annotatsiya:** Ushbu maqolada G'arb falsafasida ruh haqidagi falsafiy qarashlarning bosqichma-bosqich rivojlanishi tahlil qilinadi. Maqolada Sharq falsafiy tafakkurida inson qalbining talqini va inson haqidagi falsafiy antropologik qarashlarning shakllanishi ham bayon etilgan.

**Kalit so'zlar:** ruh, jon, ruh, ruhiy quvvat, inson ruhi, ruhiy dunyo, psixika, falsafiy antropologiya.

**Introduction.** In the development of Western philosophical thinking, the study of the secret of the inner world of man, its understanding has been one of the urgent issues. Unlike the East, the philosophy of the West relied on purely rational principles in the knowledge of man. The study of the human soul was brought to a new level in the West by the new era. In modern philosophy, the characteristics of the soul were studied through the analysis of the psyche, the relationship between consciousness and unconsciousness.

**Literature Review.** In ancient Greek philosophy, the place of Socrates is incomparable in the field of opinions about human existence. "Know thyself!" slogan - refers to the understanding of the whole being by understanding the human heart. He says that evils, evil inclinations and injustices in the human heart come from ignorance. Therefore, acquiring solid knowledge, as Socrates explains, moving toward goodness, will surely lead a person to happiness. Plato further develops Socrates' view of man. His views on the soul and spirit help to understand the soul in the study of the human soul. According to him, if a person is divided into an immortal soul and a mortal body, then the soul itself consists of two parts - an upper and a lower part. The higher part is based on intelligence, while the lower part is based on emotions. According to the thinker, the soul creates changing states in the body: suffering, courage and fear, anger

and hope. All this is mixed with feelings and affections that have not yet been realized. According to Plato, wild, animal instincts and visions lurk in the heart of every person, and under the influence of gluttony, they set aside all honor and reason and seek to satisfy their lustful desires. Even though at first he seems intelligent, calm and good, "... some terrible, unnatural, wild aspirations... are hidden in him, only the question arises whether it is so" [1; 391]. Plato also highly appreciates the role of the social environment in the manifestation of animal desires in the human heart.

According to Plato's student Aristotle, man does not get his abilities from nature, he is not good or bad by nature. Goodness is a quality achieved through action, like a habit. The difference between goodness and habit is that habit is not formed by purpose, and goodness is achieved through special training and awareness. Goodness of a person is seen in his rational behavior, upbringing and attitude towards his duty.

**Analysis.** Medieval Christian philosophy was one of the first to try to prove that man has god-like qualities and feelings and began to study the spiritual and spiritual world of man more deeply. In particular, in the views of the Christian theologian and philosopher Origen, born in 184 AD, it is said that a person consists of a soul, a soul and a body. According to him, the human soul does not depend on itself, because it is given by God, it always strives towards goodness and truth. The heart is a person's "I" and indicates the beginning of individuality in a person. Origen explains that the same soul chooses between good and evil. By its very nature, it is always indebted to the soul, and the body to the soul. But since the soul embodies two poles - good and bad - sometimes they change places and different desires and passions arise in a person[2;59]. Therefore, evil does not come from God or nature, it does not appear in the body, but it is created in the heart of a person. Augustine, another famous Christian philosopher who thoroughly studied the inner world of man, believes that man knows good, but his will does not obey him, and as a result, he does not do what he should not do. Augustine sees this imbalance as a disease of the soul, a consequence of man's lack of self-control. According to him, the human heart is very complicated and its secrets are not known even to himself. Only God can find a way to such a heart. According to the thinker, time (the historical path traveled by man) is the achievement of the human soul, and even if there is no universe and its movement, the soul remains, and as long as there is a soul, there will be time. According to him, the condition of the existence of time is the regulation of our hearts. This is done through hope for the future, attention to the present, and memory related to the past. Man is not only a product of nature, but a historical being.

**Discussion.** The spiritual world of man, the problems of the formation process of his spiritual world, are studied by Thomas Aquinas, the great representative of scholasticism. According to him, the soul acts as the main principle in the formation of all aspects of human life. "The human soul is a pure, spiritual form that exists without a body, without matter, a substance independent of matter. This explains his immortality and non-disappearance. Because the soul is indestructible because it is a substance, and it is indestructible because it is a pure form" [2;64]. The philosopher sees virtue in four forms - wisdom, courage, temperance and justice - and adds three more Christian virtues: faith, hope and love.

"The problem of human nature being good or bad becomes the central issue of philosophical-historical considerations of the new era: This issue is enriched with new views in the philosophy of Pascal, Helvetis, Diderot and Rousseau. Depending on the solution of this problem, various doctrines about man appeared, and in attempts to justify the essence of human nature, it was mainly demanded that a person should comply with certain moral norms existing in society»[3;12]. As for Descartes, recognizing the identity of the soul and mind, he says that through the will of man, he can achieve absolute control over desires.

Classical philosophy looked carelessly at the problem of man, had a general opinion about man, while non-classical philosophy emphasized the need to see all aspects of human life, to study his feelings, desires of the heart. First of all, we can see the issue of human existence in the existential philosophy of S.Kerkeorn, the directions of moral activity and the manifestation of the desires of the heart through Schopenhauer's philosophy of will. Schopenhauer cites the idea that human nature is characterized by such qualities as selfishness, anger, hatred, and compassion. Selfishness, anger and hatred lead a person to a spiritual crisis, while compassion is the basis of spiritual maturity. Friedrich Nietzsche, a representative of the philosophy of life, believes that in the heart of a person, the desires of creation and humanity should be united as a whole, and for the perfection of a person, he should be able to combine the qualities of humanity. In his opinion, in order for the prosperity of the soul to rise, a person must learn to control his ego, and the conscience must be the "supreme judge, the voice of God" that controls human behavior and behavior. The philosopher states that man was given "the will to rule" from the beginning.

In the 20s of the 20th century, as a result of the revision of the theoretical knowledge about man, the current of philosophical anthropology was formed and developed a special philosophy of man, changing the approaches of current philosophical currents. Philosophical anthropology suggested that human nature has gone beyond the state of naturalness. As a result, physical anthropology and zoopsychology, American cultural anthropology, and English social anthropology, with new currents, began to form.

A. Gelen is considered one of the philosophers who developed philosophical anthropology. His views are formed under the influence of Nietzsche's views on man. The thinker studies human animal instincts and their influence on active life activities. His theory builds on the differences that arise from the comparison of human and animal biological structure, his approach to the priority of biological characteristics. In his views, A. Gelen emphasizes that the spiritual soul (soul) is unique to man. But man is interpreted as an incomplete, incomplete biological being and differs from the animal world in that he is not tied to a specific environment, has the ability to adapt, and can decide his own destiny. In order to save himself, man is forced to create new conditions, environment, factors necessary for his life. In particular, he changes himself and lives in an artificial environment created by himself. Thus, through his thesis, A. Gehlen justified the fact that a biologically unadapted "half-and-half" human is an active being. Thus, according to A. Gehlen's teaching of anthropology, "nature made man "human", did not give him animal instincts" [4; 305]. The philosopher argues that a person's unique body structure is biologically incomplete and causes him to be cultured. The



thinker reveals the inner world of man, the question of his soul through the concept of instinct-like impulses. According to him, "human beings have socially forming impulses similar to different instincts, which are not connected with each other. The direction of social behavior is determined by the predatory, invasive instinct, which is given as an innate impulse. The energy of aggression passes into various forms of behavior»[4;305]. Therefore, the cultural, spiritual and moral possibilities and inclinations of a person are not recognized in A. Gehlen's views. The human soul does not correctly assess the importance of will, interprets according to instinct and exaggerates bioinstinctive features.

M. Landman, a representative of cultural anthropology, a branch of philosophical anthropology, corrected the contradiction in A. Gehlen's views and put forward his views, recognizing the spiritual and biological existence of a person. According to the philosophy of M. Landman, spirituality in the human essence is only a characteristic of a person, and the spirit takes precedence over the body. In his opinion, the psyche is not a complement to the body, but the main cause. Thus, M. Landman is different from A. Gehlen, man was created from the beginning as a spiritual being, his biological characteristic is not the result of randomness, but the natural development of life. He concludes that he received his law from the psychic center. In this way, being connected to biological philosophical anthropology and having a discussion with the first representatives of this current, biological anthropology does not recognize a person from his somatic psyche and his whole existence as a single system, that is, the unity of body and soul, and the relationship with the objective soul at a higher level.

Although the thinker moved away from the biological approach in his views and paid attention to the spiritual side of man, he did not dwell on the human soul. But he interprets the soul through his views on the objective and subjective relationship of the soul. According to him, "a person is a product of the objective spirit and a tool. The objective soul exists before man, and at the same time depends on him. Just as the natural world is formed for a single person and plays a primary role for conventional thinking, so the objective soul acquires the primary status for the subjective soul»[4; 309].

Professor G. Ruzmatova in her research on mental analysis notes the Freudian approach that the human psyche is made up of "U" (unconsciousness), "I" (consciousness), "higher-I", "ideal I" (conscience). "However, such views on the human psyche are reflected in a number of philosophical works. For example, in Pythagoras, the human heart is divided into intelligence, observation (thought) and passion. Pythagoras' disciple Ares Krotonsky also says that the human heart consists of three parts: the mind, the beginning of passion and the "desiring" basis. And Plato says that the human heart consists of thinking, rulership and the beginning of "immorality". Dividing the human soul into three parts is also found in the works of later philosophers. In particular, Nietzsche indicates three internal factors: "will", "soul", and "I". Plato, Kierkegaard, Schubert, in Sufism, as well as the Uzbek philosopher-scientist Omonulla Faizullaev[5;62] divide a person into body, soul and soul»[3;29]. Therefore, the trinitarian theories of human essence are also important in the history of philosophy in the understanding of the soul.

The human soul appears in Fromm's teaching as a spiritual essence. Its content is revealed through the existential need of man beyond time. It recognizes the role of the social environment in human development. "However, he emphasizes the need to take into account that the system of innate needs of human nature plays a decisive role in the formation of any form of social activity" [3; 162]. Man's state of evil is a tragic attempt to break free from the conditions that oppress him, hold him in pressure, and force him to live within certain patterns. In general, a person is prone to good and evil, and the manifestation of one of them at the right time determines the existence of a person.

**Conclusion.** it became clear that in philosophical teachings, the concepts of spirit, soul and soul are related to the human soul, revealing its essence, and in some cases they are cited as literal. In Eastern philosophy, the concepts of soul and soul are used as synonyms for the category of soul, while in Western philosophy, they are interpreted as psyche, unconsciousness.

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## **THE ROLE OF THE SOCIAL ENVIRONMENT IN FORMING THE EDUCATIONAL VALUES OF YOUTH IN FAMILY AND EDUCATIONAL INSTITUTIONS**

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**Annotatsiya.** Mazkur maqola yoshlar ijtimoiy moslashuvining ijtimoiy-madaniy xususiyatlarini o'z ichiga qamrab olgan bo'lib, avvalo ijtimoiylashuvning ilk bolalaik chog'idagi xususiyatlari e'tiborga olinib, oila institutining o'rni va roli tadrijiylik asosida xorijiy olimlarning yondashuvlari, shuningdek olimlarimiz bildirgan fikrlar asosida yoritilgan. Oiladagi munosabat muhitining ierarxik shakllari va uning ta'lim tizimi bilan bog'liqlik xususiyatlari ko'rsatib o'tilgan. Yoshlar muhitini qiyosiy ekologik yondashuv shaklida ta'lim va ijtimoiy muhit bilan tadqiq etish mavzuning keng qirrali ekanligi asoslab beradi. Maqolada psixologiya, pedagogika, tilshunoslik sohalari bir butunlikda sotsiologik tahlil etilishi mavzuning muhim ijtimoiy masala ekanligin ko'rsatib beradi. Albatta, yoshlarda ta'lim ko'nikmalarini shakllantirish birgina fan yoki sohaning vazifasi bo'lib qolmasdan, balki butun sohalar kompleksini qamrab oladi. Oila va ta'limdagi uyg'unlik, tajriba, yutuqlar va jamiyatga daxldor muhim masala ekanligi shubhasiz, shu nuqtai- nazardan yoshlarni ta'limga jalb etish masalalari hukumat qarorlari asosida amalga oshirilishi ham maqolada o'z aksini topgan .

**Kalit so'zlar:** ijtimoiy muhit, munosabat shakllari, ijtimoiy taraqqiyot, ekologik yondashuv, so'z boyligi, ijtimoiy layoqat, pedagogik omil, boshlang'ich ta'lim, oilaviy tarbiya.

**Аннотация.** В данной статье освещаются социокультурные особенности социальной адаптации молодежи, в первую очередь учитываются особенности социализации в раннем детстве, место и роль института семьи поэтапно базируются на подходах зарубежных ученых, как а также на основании мнений, высказанных нашими учеными. Показаны иерархические формы семейной среды и ее взаимосвязь с системой воспитания. Изучение среды молодежи в форме сравнительного экологического подхода с образованием и социальной средой обосновывается тем, что тематика обширна. Проведенный в статье социологический анализ областей психологии, педагогики и языкознания показывает, что тема является важной социальной проблемой. Безусловно, формирование педагогических умений у молодежи является задачей не только одного предмета или области, а охватывает целый комплекс областей. Гармония между семьей и образованием, опытом, достижениями и обществом, несомненно, является важным вопросом, с этой точки зрения вопрос вовлечения молодежи в образование реализуется на основе решений правительства.

**Ключевые слова:** социальная среда, формы отношения, социальное развитие, экологический подход, словарный запас, социальная способность, педагогический фактор, начальное образование, семейное воспитание.

**Abstract.** This article covers the socio-cultural characteristics of social adaptation of young people, first of all, the characteristics of socialization in early childhood are taken into account, the place and role of the family institution is gradually based on the approaches of foreign scientists, as well as on the basis of the opinions expressed by our scientists illuminated. Hierarchical forms of the family environment and its relationship with the educational system are shown. The study of the environment of youth in the form of a comparative ecological approach with education and social environment is justified by the fact that the topic is wide-ranging. The sociological analysis of the fields of psychology, pedagogy, and linguistics in the article shows that the topic is an important social issue. Of course, the formation of educational skills in young people is not only the task of a single subject or field, but covers a whole complex of fields. The harmony between family and education, experience, achievements and society is undoubtedly an important issue, from this point of view; the issue of involving young people in education is implemented based on the decisions of the government.

**Keywords:** social environment, forms of attitude, social development, ecological approach, vocabulary, social ability, pedagogical factor, primary education, family education.

**Introduction.** Family and family relations play an important role in the birth of a child as a social being. Before his birth, parents create imaginary sketches of their dream children, in which the relationship between parents and children is first of all important, and our state takes responsibility for the worthy future of the country with modern knowledge and skills. Educating competent, goal-oriented and energetic young people who can take responsibility is the most important condition for stable and rapid development of the country [1-,B-1].

From birth, the child tries to establish a mutual and proactive progressive relationship with his relatives. According to the British psychologist John Bowlby, the child chooses physiological and emotional closeness to "**caregivers**" [2-, B-85-86]. As the child grows up, his circle of social relations expands with other children besides his parents, i.e. among close friends and relatives of the family and in the environment of child care specialists, the school introduces new forms of relationships (with their peers, older school children and teachers) and help to adapt to social norms (general rules and regulations of the school, universally recognized institutional moral and cultural rules related to the school outside the family).

The analysis of the above issues makes it necessary not only to consider socio-psychology as an object of study of sciences, but also to find an important interdisciplinary assimilation solution for all socio-spiritual, economic and political spheres based on the demands of the times. At this point, it is important to find an answer to the question of which social parameters are measured or determined by the child's participation in the socialization process in the family circle or the school's contribution to the child's social life.



**Literature Review.** Since the article refers to the youth group as an object, the sources used are the British psychoanalyst John Bowlby and Miguel Free's "Care for children" for children's care, instilling in them a sense of respect for educational values the work "care and the growth of intuition" and the work "Environment, group and psychogenesis" by the French scientist G. Valo were also used. In this work, the scientist explained the role of the social environment in the socialization of young people from a socio-psychological point of view. The French sociologist E. Duirkheim scientifically substantiated the role and influence of education in the life of society in his work "Education and Sociology". A. Navoi, one of the Eastern scientists, gave a scientific and literary interpretation of the place of language in social life through the work "Muhokamatul-Lughatayn" (Discussion of Two Languages). In his work "Social class, family environment and thinking", the French scientist Jack Lotry explains the stratification features in the formation of educational goals in young people. The creation of an environment for reading among young people and raising it to the level of state policy by our government is also reflected in the regulatory documents issued by our government. From these normative documents, the decision of the Cabinet of Ministers "On the approval of the national program for the development and support of reading culture in 2020-2025" was announced, as well as the Decree No. 781 of December 11, 2020, 14 was mentioned.

**Research methodology.** The process of formation of educational values in young people is a continuous process, from a methodological point of view, systematically, firstly by parents and relatives in the family circle, then on the basis of the cooperation of educational institutions and neighborhood institutions, based on the principles of the main reformer of the state is being implemented. The issues raised in the article are systematically analyzed based on foreign sources.

If there is a malfunction in the system, it will certainly have a negative impact on the process. For example, there is no doubt that an unhealthy environment in the family has a negative impact not only on the education of a growing child, but also on upbringing, on the contrary, if such a situation occurs in education, no matter how hard the parents try, the child's educational interest will remain weak. In this respect, education requires systematic practical and theoretical approaches.

## 1. PROCESS OF SOCIALIZATION

**Main part.** Socialization is the process of getting used to the child in relation to the socio-cultural environment in which he grows up and has a universal character and reflects cultural diversity: every society, every social group develops its educational principles, which are reflected in the child's cultural values.

In 1959, the scientist G. Vallon, who worked in the field of social psychology, recognizes the environment as a set of combined physiological, emotional, and ideological conditions and expresses the opinion that the relationship between the environment and the individual occurs as a result of mutual transformational changes [3-, B 65-67]. Environmental conditions are determined not only by the family's economic situation, but also by the extent of their influence on development: mother's education level, parents' employment and personal time fund, accommodation, living conditions, regional location and level of quality (social services) and others are taken into account. For example, contact with a book affects the growth of vocabulary, while

the provision of toys develops individual and collective abilities. The above two conditions directly affect the child's mental and physiological development. Jack Lathery, a scientist working in the field of differential psychology, says that some types of practice-based education ensure a child's cognitive development. This situation is carried out from the perspective of the family's regular attention to the child, and the economic factor and the changing living environment are not very important [4-, B 153-156].

Since recently, some scientists have been conducting research within the framework of the relationship between parents' education and the child's social skills.

1. It is based on the "covenant" of parents, in which special attention is paid to the independence of the child, and parental responsibility is not so important.

2. Parents are "lawmakers", in which they create and implement, the tasks that must be performed are different from each other, a hierarchy of unconditional obedience to adults, forcing obedience, trying to limit external influence from the family to do and others. In this case, the parent, together with determining the child's daily tasks, fulfills the role of a permanent decision-maker, leaving no place for the child.

3. The form of "motherhood", in which, as above, together with the support of submission, encourages communication and also limits external influences.

Different family units correspond to the above forms, that is, they are manifested in the relations of a group belonging to a certain social position: "bastion" families are those that strongly defend their rights, with a high level of restrictions it is more common in families of mixed environment, "united" families, this type of family supports a form of free relations with the external environment in relation to its members, in which the external environment takes priority.

In relation to education, the social environment is not only limited to the family circle, but also directly or indirectly includes other environments, in which the family limits the child's connection with the environment to a certain extent or, on the contrary, supports it, such as friends or the tendency to misbehave. Examples include groups within a neighborhood or a specific area, as well as school communities. These groups reflect in their activities the activities based on specific rituals or the forms of subcultures that follow social norms. This situation affects the process of integration of young people into social life in determining their future goals, from this point of view; the group membership of young people is often controlled by the family. In the same way, the concept of family has a changing character, and a child reaches adulthood in a full or incomplete, multi-child family, in a reorganized (second marriage). The model of family structure has a variable character in relation to time and space; in particular, traditional societies recognize the preservation of family unity and mutual support of family members as an inseparable value, while autonomy and individualism in modern societies are under concern [5-, B-58-60]. These situations affect the values of the environment in which young people determine the future strategies of values.

Sociologist E. Durkheim divided socialization into stages, education has an important place in the socialization of a person, and he believes that the knowledge and skills gained in education will be passed on to a person throughout his life, as well as values

aimed at the integral goal of society. He emphasizes in his work "Education and Sociology" [6-, B 9-11].

## **2. ECOSYSTEM APPROACH IN FORMING THE SOCIAL ENVIRONMENT OF EDUCATION**

Uri Bronfenbrenner, an American psychologist and the founder of the ecological system theory in psychology, says that a child grows up in a complex eco-system environment, first of all, within the influence of family, school cultural values, law and universal and national traditions [7-, B -18-20]. In this case, the forms of elementary relations are first formed in the family, and then they are implemented directly in educational institutions. Educational activity serves as a program for the child to get acquainted with and adapt to the external environment.

Bronfenbrenner researches the social environment of young people and divides it into four main different environments;

1) the micro system consists of two elements (mother and child) that are close to each other.

2) mesa-system, which shows two or more aspects (parents, school or inter-school and cultural recreation institutions).

3) the system of the natural environment, which is a set of systems that form proportional connections and intersections of many systems, without which young people cannot reach a certain level of development (acquiring a profession as a result of the working conditions of their parents or the acquired knowledge).

4) macro-system, in this system worldviews, values and practices are realized in relation to other systems, which are characterized by the signs of culture.

The impact of the social environment on young people is not only positive, but in addition to this, I found it necessary to pay special attention to the virtual environment, which today is a world of unique behavior models that do not conform to the rules of society in the formation of the worldview of young people, emergence, as well as the fact that it is becoming a weapon of ideological manipulation in their minds, instilling false ideas that affect their future, the current situation demands scientific study as an urgent issue.

This situation does not only occur in the environment of young people, but the fact that parents make certain demands of young people, the weakening or activation of certain values as a result of certain attitude stimuli of young people are among the issues observed in all societies.

## **3. SOCIALIZATION OF COMMUNICATION LANGUAGE**

Accepting the requirements of the social environment, communication language is an important means of communication in social communication. LANGUAGE is an important means of communication and exchange of ideas between people, in society, and is part of the important instruments of socialization. Alisher Navoi in "Muhokhamat-ul lughatayn" (Discussion of Two Languages) explains the social importance of language in a deep manner and emphasizes that it gives a human form to the person [8-, B-186].

Insonni so`z ayladi judo hayvondin, (The word distinguished man from beast)

Balkim guxari sharifroq yo`q ondin. (Perhaps there is no better thing than it)

So`z gavharedurki, rutbasining (The word is the main feature of people)

Sharhidadur ahli nutq ojiz, (To articulate its features with words are tough)

Andinki erur xasis muhlik, (it is the meanest of all)

Ko`rg`uzguchadur Masih mo``jiz. (Shows a miracle in the mirror)

The Russian scientist Lev Vygotsky in his work "Language and Thinking" interprets the comprehensive pedagogical adaptation of language through the theory of dialectical psychology on the example of children's lives [9-, B-56-57]. Inspired by this, Boston University professor J.B. Glason and Harvard University doctor J. Bruner show three aspects of the importance of language in socialization [10-, B-53]:

1. Language plays an important role in social adaptation; young children acquire an understanding of the world by referring to older children, which directly directs their activities, and on the contrary, prohibits historical realities is realized through storytelling.

2. Bruner states that historical events interest children and thus they gain an understanding of social norms, moral values, violence and culture. As a result of the use of language, children become easier to socialize, they accept social norms such as what, how, when and to whom they can talk or not [11-, B-79-80].

3. Cross-activity of socialization is carried out in a verbal manner determined by the status, tasks and within the framework of the social system. For example, it is emphasized that parents treat boys differently than girls, especially that boys should help girls. This situation is the starting point of social stratification processes in the family, and to a certain extent it goes back to issues of gender inequality [12-, B-48-51].

**Conclusion.** Living in partnership, moving, striving for a goal is an integral part of family and educational programs. As a result of entering into contact within a certain group, self-respect, ensuring equal treatment with others, obeying social norms and feeling that he belongs to the group; he performs his social activities in space and time. Explaining one's own feelings and portraying others in the environment of children's early education

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## **TEXT-REALITY INTEGRATION AND SOCIOLOGICAL ANALYSIS OF LITERARY TEXT**

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**Abstract.** This article deals with the analysis of literature by the way of sociological method and how the reality and text integrated. Sociological method integrates reality with the societal life of people.

**Key words.** Integration, text, reality, sociological approach, sociological method.

**Annotatsiya.** Ushbu maqolada adabiyotni sotsiologik usulda tahlil qilish, voqelik va matn qanday birlashganligi haqida so'z boradi. Sotsiologik usul voqelikni odamlarning ijtimoiy hayoti bilan birlashtiradi.

**Kalit so'zlar.** Integratsiya, matn, voqelik, sotsiologik yondashuv, sotsiologik usul.

**Аннотация.** В данной статье речь идет об анализе литературы социологическим методом и о том, как интегрируются реальность и текст. Социологический метод интегрирует реальность с общественной жизнью людей.

**Ключевые слова.** Интеграция, текст, реальность, социологический подход, социологический метод.

**Introduction.** Obviously, criticism is only interested in the "text-reality" relationship. Thus, in the field of view of N.A. Dobrolyubov only hits one part of the communication chain in literature. And this does not at all testify to the critic's

"blindness". On the contrary, we are talking about a programmatic, fundamental point, about an analytical "vision".

**Literature review.** As an example, let us refer to the article by N.A. Dobrolyubov's "A ray of light in the dark kingdom", in which, as you know, a brilliant interpretation of the drama of N.A. Ostrovsky's "Thunderstorm". The significance of this article for the history of Russian literature is undeniable. A return to it today is justified already because the concepts of vulgar sociology and theories that arose in the circle of M.M. Bakhtin. O.N. Dobrolyubov begins the article with arguments about the "service" role of literature, "... whose meaning lies in propaganda, and dignity is determined by what and how it promotes." At the same time, he points out that the greatest geniuses towered over this "service" role, depicting "fully and multilaterally" the essential aspects of life. Such was the great Shakespeare. Such is the playwright Ostrovsky.

**Analysis.** To achieve this, N.A. Ostrovsky abandons traditional dramatic genres. "Thunderstorm", according to N.A. Dobrolyubova, does not fit into the traditional schemes of "comedy of intrigue" or "comedy of characters." Ostrovsky creates a new genre in his work, which in the article is designated as "plays of life". Note that this genre name is in itself very characteristic of sociological thinking. If the "intrigue" or "character" of the category is largely intra-literary, then the concept of "play of life" takes the analysis to a different level. The point is not even that, according to N.A. Dobrolyubov, Ostrovsky refers to the "everyday, economic side of the issue", but rather to the fact that he is attracted by "... the general, not dependent on any of the actors, the situation of life." The "position" of the actors, adds the author of the article, dominates them, that is, over their characters. This is an important principle of the sociological method: not so much the individual as the socio-typical is interesting in the literature. Thanks to the sociological method, the critic accentuates and notes certain moments in the play "The Thunderstorm", but does not record others, which are also important in his own way. It should be remembered that N.A. Dobrolyubov took part in the literary struggle that unfolded around the work of N.A. Ostrovsky. In the disputes around the play "The Thunderstorm", authors clashed with different ideological and literary trends. It is quite clear that some of N.A. Dobrolyubov are given in a polemical accent, which, however, does not affect the main theses.

**Discussion.** The critic comes close to the idea of the correspondence of the character of the heroine to the genre nature of "The Storm". Indeed, in the "play of life", as in the soul of the heroine, there is nothing originally given, "formulated", going back to solid logical foundations. Katerina obeys her nature in everything, is "led" by her. The basis of her character is passion, which gives this heroine depth and at the same time illogicality. However, much in Russian life is beyond logic. If on. Dobrolyubov confidently correlates the development of Russian life with the character of Katerina, then he does not compare or bring together two literary moments - characterological and genre. Most likely, it seems to him something self-evident and obvious. For the sociological method, literary characteristics proper seem to be banal and secondary signs. This distortion is due to the special optics of the sociological method, its place in the interpretation of literature as a system. The critic puts forward the concepts of "background" and "soil" as the central ones. In the "play of life" "... the

struggle required by the theory of drama ... takes place ... not in the monologues of the characters, but in the facts that dominate them." These "facts" constitute the "soil" of Russian life, as Ostrovsky portrays it. The remark of N.A. Dobrolyubova about characters who are not directly involved in the main conflict. They constitute the very "background", "crowd" that determine the fate of the main character. The critic expresses original considerations about the "mass" as a factor in art and life, which would later become one of the most important motives for the sociological analysis of literature.

O.N. Dobrolyubov is most interested in how ideas about good and evil, the economic and everyday habits of the "crowd" are formed. He notes that the representatives of the "dark kingdom" in the play "breathe heavily", as they feel that there is a force above them - "... the law of time, the law of nature and history ...". The sociological method in literary criticism seeks to reveal the laws behind a literary work, "circumstances" outside of it. The critic considers the characters of the work themselves as elements of the "setting" (*italics – N.A.Dobrolyubov*), as speaking and moving "circumstances" that make the heroine's "fatal end" necessary. In his opinion, it is the "environment", subordinated to the force of the Dikikhs and Kabanovs, "... usually produces Tikhonov and Borisov ...". Analyzing Katerina's drama, the critic deeply comprehends her harmonious, freedom-loving character. However, he considers the position occupied by the heroine in the way that was established under the influence of the Dikikh and Kabanovs to be the real cause of the tragedy. This emphasis on the social position of the character, the desire, first of all, in this way to understand the essence of the conflict are important elements of the sociological method.

The typification of N.A. Dobrolyubov described it excellently. In this case, he neglected the description of the symbolization characteristic of a literary text. For the symbolic plan of the play, it is very important to mention the thunderstorm and the "thunderous taps" in the conversation between Kuligin and Dikim (file 4, yavl. 2). In the opinion of the latter, the matter is not in "electricity", since a thunderstorm is sent to people in "punishment." Kuligin, on the contrary, believes that the "thunderstorm" is not a threat at all, but "grace" (file 4, yavl. 4). Addressing the assembled crowd, he exclaims: "You are all thunderstorm!" Here this word symbolizes fear, which in various guises fills the hearts of Kalinovites, uniting with the deepest ignorance. We add that N.A. Dobrolyubov has an excellent sense of the social symbolism of the drama. However, he does not investigate it in the text of the work itself. The critic brings it out, projecting it onto the "social atmosphere," Russian life. The "river" and "key" also acquire a symbolic meaning in the play. Katerina receives from Varvara the key to the gate in the garden. He burns her hands, at first she wants to throw him far away, "... to throw into the river ..." (d. 2, yavl. 10). However, she herself will rush into the river, into the pool.

The poetics of omen is also significant on a sound level. So, in the text of the play, the lexemes "enemy - ravine", "will be taken away - whirlpool", etc. are coming together. Katerina is very sensitive to that symbolism, which is the very core of the traditional way of life. Its essence consists in "signs", which, according to Kabanova, are for everything (d. 4, yavl. 5). She immediately understands who we are talking

about when passers-by talk about the fact that this storm will certainly kill someone. At this moment, the old lady reappears, shouting out words about the temptation of beauty: "Better in the pool with beauty!" (d. 4, yavl. 6). In the play, the conversation about omens is immediately accompanied by the appearance of a living omen, a "realized metaphor."

At the time of the meeting, Katerina says the words about the sin that "will fall like a stone on the soul" (d. 3, p. 2, manifest. 3). This "stone" evokes the expectation of a river and a pool. Katerina dies, goes to the bottom. On one level, the drama is being played out, on the other it is constantly being prepared, like a "thunderstorm", gathering. These constant mutual transitions and transformations of words, replicas, stable expressions constitute the end-to-end symbolic basis of the text. Intratext transformations, "generating" meaning were not for N.A. Dobrolyubov's subject of critical consideration. Not designed to comprehend the "inner form" of a work or word, the sociological method embodies another way of reading art.

Based on the ideas of the Russian commoners-democrats and the concepts of K. Marx and F. Engels, later G.V. Plekhanov, P. Lafargue and V.I. Lenin anew and more rigidly formulated the main provisions of the sociological approach. So, for example, in the article "Dobrolyubov and Ostrovsky" (1911) G.V. Plekhanov criticized the enlightenment elements in the critic's worldview, which, in his opinion, go back to the philosophy of L. Feuerbach. The appeal of N.A. Dobrolyubov to abstract, "natural" reason, Plekhanov explained by his lack of a "class point of view." To the ideas of G.V. Plekhanov, for example, the provisions of some of the works of D.N. Ovsyaniko-Kulikovsky, one of the most significant representatives of the psychological approach in literary criticism.

**Conclusion.** Summing up, we note that the emerging in the works of N.A. Dobrolyubov's sociological method was less cruel, more generalized and open than, say, the postulates in the later works of G.V. Plekhanov or, moreover, V.M. Fritsche. Sociological motives in the thinking of M.M. Bakhtin, on the contrary, defined his concept of "dialogue", which became one of the central in literary criticism of the twentieth century. It is not the sociological method itself that is dangerous, but its possible diktat, "one-man command." Literature is an open system. The system of its interpretations implies a plurality of approaches, their inner incompleteness and openness.

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**THE ROLE AND IMPORTANCE OF USING NEW PEDAGOGICAL TECHNOLOGIES DURING THE DRAWING OF THE “GUDON” HEAD IN PENCIL DRAWING LESSONS.**

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**Anatatsiya:** Ushbu maqolada “Anatomik gipsli gudon boshining chizmatasvirini ishlash” mashg’ulotida yangi pedagogik texnologiyalarni qo’llashning o’rni va amaliy ahamiyati haqida fikr yuritiladi.

**Kalit so’zlar:** Qalamtasvir, anatomiya, gudon, pedagogik texnologiya, san’at, rassom, perspektiva, Shakllar, yorug’, soya.

**Аннотация:** В данной статье рассматривается роль и практическое значение использования новых педагогических технологий в упражнении «Изготовление рисунка головы по анатомическому гипсовому слепку».

**Ключевые слова:** Карандашный рисунок, анатомия, искусство, педагогическая технология, искусство, художник, перспектива, формы, свет, тень.

**Abstract:** This article discusses the role and practical importance of using new pedagogical technologies in the exercise "Making a drawing of the head of an anatomical plaster cast".

**Key words:** Pencil drawing, anatomy, art, pedagogical technology, art, artist, perspective, forms, light, shadow.

**Introduction** Известно, что глубокое понимание и знание теории изобразительного искусства и карандашного рисунка подготавливает почву для практической работы студентов в области изобразительного искусства. “Whoever imagines science without practice is like the pilot of a boat setting out to swim without an oar, and he can never be completely sure where he is going” said Leonardo da Vinci. Especially in the field of painting, practice must always be carried out in connection with a strong theory, and without them nothing can be achieved.

Therefore, the method of organizing the learning process in visual art classes based on modern technologies is one of the most urgent issues in the field of education today. For this, it is necessary to use modern technology and methods.

**Methodology.** Method actually means knowing, learning, research way, creative method, pedagogical method. In pedagogy, teaching methods are the unique methods used by teachers in teaching their students in the process of artistic education and training, in order to acquire knowledge, skills and professional qualifications, to develop their creative abilities, and to find the content of their worldview. understood.

The methodology studies the content and characteristics of teachers' methods of working with students in the educational process and teaches to use various methods of teaching visual arts:

"Methodology of fine art teaching" implies the achievement of the teacher's level of thorough knowledge of the methods of teaching art to students and the increase in the efficiency of mastering.

"Methodology of Fine Art Teaching" summarizes the theory of positive works tested in the field of pedagogy as a scientific discipline and presents teaching methods that have effective results in educational and pedagogical practice. The methodology is based on the research results of pedagogy, psychology, art science, and defines the rules of teaching visual arts. At the same time, it defines new modern methods of educating the next generation.

**Literature review** The use of modern methods of interactive, pedagogical, innovative and information technologies, differentiated teaching, module teaching, didactic game teaching, problem-based teaching in the educational process is increasing day by day. One of the reasons for this is that, until now, in traditional education, students were taught to acquire only ready-made knowledge, but modern technologies allow them to search for the acquired knowledge by themselves, study and analyze it independently, and even draw conclusions. teaches them to cause themselves. In this process, the teacher creates conditions for the student's development, formation, learning and education, and at the same time performs the task of management and direction.

Interactive methods are collective thinking, that is, methods of pedagogical influence, which are a component of the educational content. The uniqueness of these methods is that they are implemented only through the joint activity of pedagogues and students.

Innovative technology (ingl. Innovation) is innovation, innovation. Innovative technology is the introduction of innovations and changes to the activities of teachers and students in the pedagogical process. The distinctive features of such a cooperation process are as follows:

- forcing the student not to be indifferent during the lesson, to think independently, to search creatively;
- to ensure that pupils-students are constantly interested in knowledge during the educational process;
- development of the student's interest in knowledge and independent creative approach to each issue;
- organization of cooperative activities of the pedagogue and the pupil-student.

Pedagogical technology is defined as the use of television, computer, distance learning or various techniques that are related to information technology and are harmful to the teaching process.

The main basis of pedagogical technology depends on the technology chosen by the teacher and the student-student to achieve the result expected from the set goal, that is, in the process of teaching, from the intended goal to an effective result. each technology used in the achievement of the teacher and student cooperation, positive

results, independent thinking, creative work, search, analysis and drawing conclusions, is the basis of this teaching process.

**Research Methodology** Pedagogical technology in the educational process is an individual process, it is a pedagogical process directed to one goal, planned in advance and aimed at effective results based on the needs of the student.

The visual arts teacher should plan the future lesson process in order to visualize each lesson in advance. It is very important to design the course of the future lesson, because the technological map of the lesson is created based on the characteristics of the subject, the subject taught for each lesson, the possibilities and needs of the students. In order to create such a technological map, the teacher should be aware of art pedagogy, art psychology, special methodology, pedagogical and information technologies, as well as methods and methods. Making each lesson colorful and interesting depends on the designed technological map of the lesson, which is carefully thought out from the beginning.

**Analysis and results** Below is an example of a pre-designed technological map of a practical training on the subject of Making a pencil drawing of the head of "Gudon" with anatomical plaster" from the subject of visual arts:

The purpose of the lesson: to strengthen knowledge and skills in working with a pencil drawing of a plaster human head.

Engaging in practical training aimed at deepening and strengthening new knowledge about the "Gudon" head with an anatomical head and its depiction in pencil drawing will further enrich our knowledge and skills in pencil drawing bio. For this, we need to prepare a practical training plan.

1. Theoretical, methodological and practical importance of nature-based imaging.
2. Placing the pencil drawing of the head made of gypsum on the picture plane.
3. Follow the rules of construction, perspective, light and shadow in the drawing.
4. Following the methodical sequence of depicting nature in pencil. Next stages of depiction.

5. Work on pencil drawing technique.
6. To achieve integrity in pencil drawing.

Pedagogical tasks

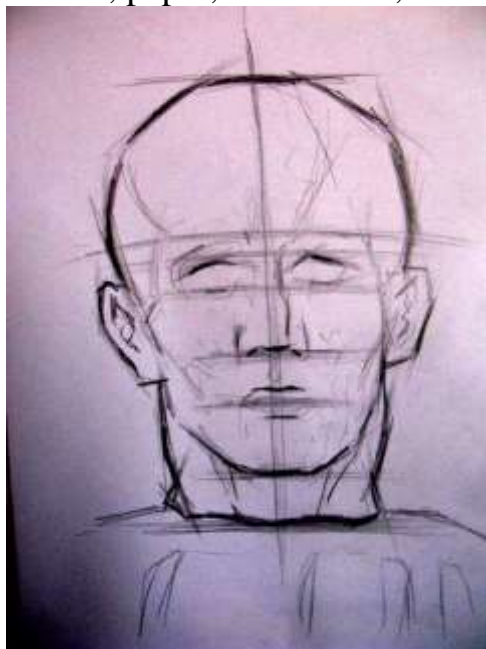
1. create a basis for independent study of the subject;
2. to help in deep assimilation and consolidation of knowledge on the subject;
3. To teach how to correctly describe images in nature on the photo plane;
4. Structurally correct description of things in nature;
5. Organizing work in groups and individually;
6. Development of drawing skills;
7. Providing theoretical and practical information on the formation of the skills of step-by-step implementation of the "Gudon" plaster head in pencil drawing:

**Analysis and Results.** Results of educational activities.

1. To get acquainted with the practical training plans in advance and prepares;
2. The topic of the practical training brings to mind the theoretical information, strengthens concepts and skills;
3. Ideas about the correct placement of the plaster human head in the plane of the picture are formed;

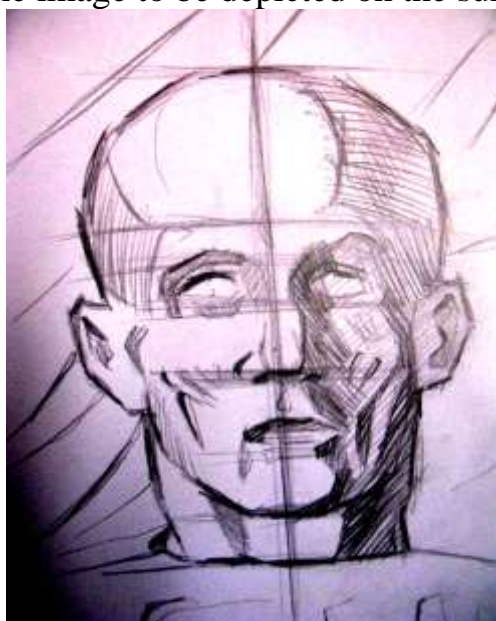


4. To learn to correctly describe the image of a human head made of plaster in nature;
5. Tries to perform a practical task individually.;
6. Forms the skills of step-by-step implementation of depicting the "Gudon" plaster head in a pencil drawing;
7. Forms the skills of working in pencil drawing technique;
8. He will have theoretical and practical conclusions of step-by-step depiction of the plaster head of "Gudon" in pencil;
9. *Teaching methods and techniques* - Tasks, practical work method.
10. *Teaching tools* - samples of plaster human head pencil drawings, easels, electric lighting devices, pencils, markers, paper, blackboard, chalk.



**Stage 1**

**The first** stage - composition placement begins with the placement of the composition of the image to be depicted on the surface of the paper.



**Stage 2**

**The second** stage is to reveal the linear-constructive basis of the form and open perspective views.



**Stage 3**

**The third** stage is the plastic description of light and shadow.

Having determined the linear-constructive basis of the head shape, we proceed to reveal its size using light-shadow ratios. In this place, it is very important to maintain the correlation of lines and colors.



**Stage 4**

**The fourth** stage is to finalize the results of work on the picture.

At the last stage of working on the drawing, first of all, it is necessary to check the general condition of the picture (it is necessary to subordinate the details to the general form, to color the picture, to determine the ratio of dark and light, to compare the contrast, light, reflection and half-shadow ), some parts of the described Gudo anatomical head should not stand out from the general view.

In the process of teaching, students are treated as individuals, various pedagogical technologies and modern methods are used to make them independent,

free to think, to research, to approach a problem creatively, to feel responsibility, to conduct scientific research, analysis, to do, to make effective use of scientific literature, and most importantly, to increase their interest in reading, science, pedagogy, and their chosen profession.

Achieving such a result requires the use of innovative and information technologies in the practice and educational process. Modern methods or technological trainings that help to increase the effectiveness of teaching help students to form logical, intellectual, creative, critical, independent thinking, develop their creative abilities, become competitive, mature specialists, and help specialists helps to develop professional qualities.

Therefore, the acquisition of visual art education and knowledge is acquired through long-term practice of art, as well as through effective creative work.

**Conclusion.** In the course of the qualification work, the following tasks were performed and the following conclusions were reached:

1. The theoretical and practical basics of working with plaster models in pencil drawing were studied.
2. The best practices and methods of teaching fine art lessons, nature-based illustration lessons were studied and researched;
3. A technological map of the practical training on working with a pencil drawing of the “Gudon” head with anatomical plaster was developed;
4. The step-by-step method of making a pencil drawing of the head of “Gudon” with anatomical plaster was developed based on the rich pedagogical experiences gathered so far;
5. It was recognized that the sequential method of working with plaster models in pencil drawing is an effective means of representation that can be used in fine arts classes.

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