

# ACTUAL PROBLEMS OF MODERN SCIENCE, EDUCATION AND TRAINING









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#### MODERN PROBLEMS OF PEDAGOGY AND PSYCHOLOGY

#### **UDC 378.147**

## PEDAGOGICAL MODEL FOR FORMATION OF INDIVIDUAL LEARNING PATH OF FUTURE ENGINEERS

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Annotatsiya: Maqolada o'qitishning kredit tizimi sharoitlarida bo'lajak mutaxassislarning individual ta'lim marshrutini amalga oshirish modeli keltirilgan, uning nazariy asoslari va amalga oshirishning muhim bosqichlari bayon qilingan.

Kalit so'zlar: individual ta'lim marshruti, o'qitishning kredit tizimi, mbo'lajak mutaxassis individual ta'lim marshrutini shakllantirish modeli, tayutorlik yordami.

**Аннотация:** В статье рассмотрена модель реализации индивидуальной траектории обучения будущих специалистов в условиях кредитной системы обучения, описаны ее теоретические основы и важные этапы реализации.

**Ключевые слова:** индивидуальная траектория обучения, кредитная система обучения, модель формирования индивидуальной траектории обучения будущего специалиста, тьюторское сопровождение.

**Abstract:** The article covers a model for the implementation of the individual learning path of future specialists in the conditions of the credit system of education, its theoretical foundations and important stages of implementation have been described.

**Keywords**: individual learning path, credit system of training, model of formation of individual learning path of the future specialist, tutoring support.

**Introduction:** Joining the Bologna process with a view of integrating the educational system of our country into the educational space of the world community implies a number of important changes in the higher education system. Mainly, these are: stage-by-stage training of future specialists, introduction of academic mobility of all subjects of the educational process; strengthening control over the quality of higher education; transfer to the credit system of education. In this case, the credit system of teaching is related to the maximum individualization of education, aimed at ensuring the academic freedom of all educational subjects, the elective structure of educational programs. Achieving the goals of the Bologna Declaration determines the vector of training future professionals in the direction of self-awareness, self-evaluation, self-development, self-confidence, self-actualization, therefore, the issues of determining the own personal "learning direction" of the student are of particular importance. The successful solution of the set tasks can be achieved on the basis of the purposeful and systematic design of the individual learning path of the student [1].



**Literature review.** Independent work of students is one of the most important elements of national professional education in the modern education system. Independent work of the student in the structure of the individual learning path is one of the important components on the way to achieving the educational goal [4, 5].

The task of implementation (design) of individual learning path is widely covered in modern literature; such scientists as E. A. Aleksandrova, G. A. Bordovsky, E. F. Zeer [6, 7] were engaged in its development.

Khutorskoy A.V. applies the concept of "individual learning path" in relation to "a conscious and agreed with the teacher choice of the main components of his education: the meaning, goals, objectives, pace, forms and methods of teaching, the personal content of education, the system for monitoring and evaluating results" [8].

Despite a significant amount of research, the problem of designing individual learning paths of students has not yet received corresponding adequate coverage in science, the regulatory framework for ensuring the process of individualization of learning has not been developed, and most importantly, technologies and algorithms for designing individual learning pats of students, as well as pedagogical model of organization of individual learning paths of students of technical universities have not been developed[2, 3].

In frame of the problem of developing individual learning paths and its implementation, the following three main directions have been identified: research of possible types of individual learning paths based on the motivational field and educational needs (A.G. Gogoberidze, N.A. Labunskaya, Yu.F. Timofeeva); studying the conditions of organizing the preparation of students for teaching according to individual learning paths in the set of pedagogical modeling issues (S.I. Arkhangelsky, A.V. Mudrik, A.S. Podymova, V.A. Slastenin, I.V. Chekaleva); consideration of individual learning paths as constituent elements of a multilevel system of higher pedagogical education (G.A. Bordovsky, N.V. Bochkina, N.F. Radionova, A.P. Tryapitsina, V.S. Yampolsky).

Our research carried out in the Bukhara Engineering-Technological Institute was devoted to the problems of forming an individual learning paths for a future specialist, and this path was presented in the form of a model. One of the main advantages of modeling a specific process or phenomenon is the integrity of information presentation, which allows demonstrating the acceptability of the main components and elements in the model at the design stage, as well as to demonstrate the process, which allows implementing it more effectively in practice.

**Methodology of the research.** In pedagogical literature, there are various views on the model:

- model as a way of organizing life activities of the educational society;
- model as an example (more precisely, an image) of pedagogical activity and teaching experience to be revised;
- model as an alternative type of education and the architecture (i.e., the originality) of its constructions and new forms;
  - model as a systematized form of innovative experience;
- model as a conceptual basis for launching the project mode of development of educational institution;



- model - as an organizational system that translates and develops cultural norms.

In this research, the model represents a specific image or option of the process of forming an individual learning path for a future specialist in the context of the credit system of teaching at a higher education institution.

For a scientifically based process of forming an individual learning path of a future specialist, a comprehensive description of this process as a source of information for its organization and implementation is required. Such a description should have predictive power and serve as a means of feedback.

Analysis and results. Researchers in field of pedagogical processes use different schemes of object representation depending on the purpose and subject of process demonstration. In particular, processes are usually analyzed through structural components of the scheme, such as the subject of activity (initial material), principles, conditions of activity, goals and results. Following the goals of modeling the process, we need to put a scheme in it, in which the main components and elements used by the teacher (consultant) and the student himself in the design of individual learning path (ILP) are separated. We agree with the opinion of the authors [4] that the set of graduate competencies is determined by considering the requirements for students during their studies and previous graduations.

Based on the essence of the "individual learning path" concept, as well as the goals and objectives of the research, we have developed a model for the formation of an individual learning path of a future specialist in the conditions of the credit system of education (CSE) with the goal, main principles, approaches, features of training specialists in CSE, which ensure the implementation of the model organizational-pedagogical conditions, expected results within ILP, content and components of ILP, technology for extracting teaching tools and methods within ILP, tutoring support of ILP, diagnosis of effectiveness of teaching within ILP (Fig. 1).

In our opinion, the formation of the ILP as a system-forming component of the model is the objective that defines a certain vector. In our opinion, the following goals should be distinguished: teaching in accordance with State educational standards, teaching in frame of a specific educational program and teaching directed at a student receiving special education. In the model, we also included the features of training of specialists in CSE conditions, since the credit system of training makes certain adjustments to the process of training future specialists. Based on the analysis of CSE literature and practice, we have distinguished the following features: restructuring of the activity style of teachers, who are directly forced to adapt, moving from traditional "authoritarian" forms and methods of teaching to subject-oriented teaching forms that involve the active learning activity of the student; true individualization of education, which allows students to choose the subjects (and credits, respectively) that the student can study according to his needs and level of education, as well as teachers according to his ideas, requirements and attitudes about science; creation of a special information-educational environment aimed at independent mastering of educational programs; shifting the focus in the training of specialists from knowledge orientation to competence orientation, where the main emphasis is not only on knowledge, but

more on competencies; ensures the participation of employers in the formation and implementation of educational programs.

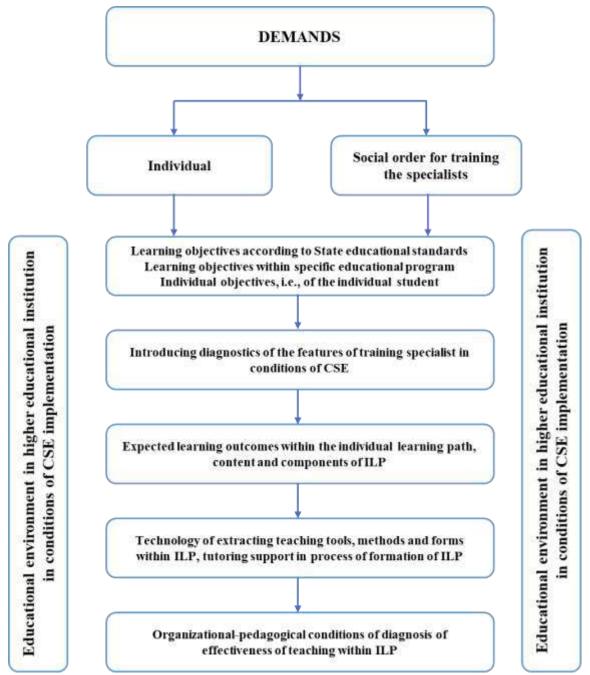


Fig 1. The model of formation of the individual learning path of the student in the conditions of CSE implementation in a higher educational institution.

The development of the model of the individual learning path (ILP) of future specialists in conditions of CSE requires the selection of certain methodological approaches. As these approaches, we identify the following: semi-subjective, activity-based, person-centered, and competency-based.

In the structure of the model, we also included not only the needs specified by the order of training specialists of a particular specialty, but also individual needs, that is, the needs of each student based on the requirements and personal interests of students.



This feature allows the student to complete final qualification work, course projects based on real applications and assignments from enterprises and organizations; to participate in carrying out scientific research works and putting research results into practice; participation in forming the catalog of elective subjects; to participate in the development of the specialist model (that is, specialist competencies); to invite leading experts to attend special courses and seminars; carrying out an examination of the educational program; conduct the defense of diploma projects directly at the enterprise; provides for inclusion of employers in the Board of Trustees of higher educational institution.

The model includes the main components (targeted, meaningful, organizational-pedagogical, technological and evaluation-resultative) of individual learning path of the future specialist.

In our opinion, the most important element of the ILP formation process is the advisory institute that provides ILP tutoring support. The main task of advisory is to help in the selection and implementation of the individual learning path and individual learning route of the student, as well as to ensure the mobility and flexibility of educational programs in the context of the implementation of the credit technology of education. Advisory provides students with the information necessary to choose programs, modules and their combinations that match their academic interests and abilities, guarantees the acquisition of the amount of credit necessary to complete the educational process according to the level of preparation, and helps the student adapt to academic life. Functions of adviser are usually performed by an experienced teacher of the graduate department appointed by the dean of the faculty and approved by the order of the rector of the higher institution. The following types of advisory activities are distinguished: preliminary advising; advising; repeated advising.

The process of forming an individual learning route based on the results of the advisory theory includes:

- advisory assistance for understanding and formulating the educational needs of the student;
- advisory assistance in creating a map of resources for the implementation of the educational requirements of the student;
- advisory assistance in designing the ILR of self-development, drawing up a "map" of self-development path;
  - building a system of educational events;
- organizing the opportunity to participate in educational events outside of higher education institution;
- advisory assistance in assessing the student's progress, i.e., maps of the current development zone and the future development zone.

The process of forming the ILR should follow certain stages, because the phasing determines the logical sequence of the necessary elements of the ILR. By following the stages of building the ILR, the integrity of the structure and the implementation of the management process are achieved within the implementation of the credit technology of education.

The stages of formation of an individual learning route are as follows:



- Stage 1. Analysis of initial conditions: social order  $\rightarrow$  competencies (professional, basic).
- Stage 2. Determining the objective of training within the individual learning route.
  - Stage 3. Determination of teaching content.
- Stage 4. Implementation of teaching content (choice of forms, methods, technologies).
  - Stage 5. Evaluation of teaching results (formation of competencies, etc.).

Creating an individual learning route for each student is a complex many-sided process, which includes:

- a) independent determination of the set of subjects;
- b) drawing up a training schedule based on the formed groups;
- c) determining the ways of implementing the educational program;
- d) creating a system for monitoring and evaluating educational achievements of the students at the level of the deanery, department, and higher education institutions in general;
- e) transition to identifying the most competitive and most demanded personal qualities of a graduate in the labor market;
- f) transition from the focus on the formation of skills to the focus on the development of competencies.

**Conclusions and suggestions.** The developed model has been approbated in teaching of "Information security" subject at the Bukhara Engineering-Technological Institute, has been implemented as an experiment and the following conclusions have been reached:

- 1) Individual learning route is an educational program designed for a concrete student and aimed at developing his individual abilities. It is a means of revealing and developing their abilities and helps to cope with the future profession.
- 2) In accordance to the reliable analysis of the obtained results, the implementation of the model of formation of the individual learning route in the conditions of credit technology of education helps to increase the quality of training of specialists, increases the level of self-evaluation of students, and encourages their self-awareness and self-development.
- 3) In the course of modern education, the creative activity of students that consists of the vector of the implementation of the individual learning path, is considered not only an integral part of the educational process, but also focuses on self-development and self-improvement in professional and personal growth of the student. In this case, the individual learning route allows the student to realize his personal needs, acquire the necessary competencies for his profession that ensure competitiveness in the labor market.

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#### **UDK 378**

## THE STATE OF INDEPENDENT WORK IN EDUCATIONAL INSTITUTIONS

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**Annotation:** This article provides information on the distribution of hours allocated to science in the credit system of education and the implementation of independent work.

**Key words:** education, competence, independent work, credit, credit system, specialist.

**Annotatsiya**: Ushbu maqolada oʻqitishning kredit tizimida fan uchun ajratilgan soatlar taqsimoti hamda mustaqil ta'limning bajarilishi toʻgʻrisida ma'lumotlar keltirilgan.

Kalit so'zlar: ta'lim, kompetentlik, mustaqil ish, yuklama, kredit, kredit tizimi, mutaxassis



**Аннотация:** В данной статье представлена информация о распределении часов, отведенных на науку в кредитной системе обучения и реализации самостоятельного обучения.

**Ключевые слова:** образование, компетентность, самостоятельная работа, нагрузка, кредит, кредитная система, специалист.

**Introduction.** The rise and development of the country is important to the extent to which the educational system is established. In order to liberate the society's economy, raise social and political relations to a new level, it is first necessary to improve the education system. That is why the education system in our country is treated as a priority direction of development.

Funds allocated to education from the budget of Uzbekistan are increasing every year. If in 2021, 2.9 trillion soums were allocated from the state budget to the Ministry of Higher and Secondary Special Education, and 22.1 trillion soums to the Ministry of Public Education, then in 2022, 4.1 trillion soums were allocated to the Ministry of Higher and Secondary Special Education, and 25,000 to the Ministry of Public Education. 8 trillion soums have been allocated<sup>1</sup>.

The allocated funds are used directly for the development of the educational system, including the construction of new higher education institutions, the construction or reconstruction of existing educational buildings and student dormitories, the purchase of new modern laboratory equipment, new literature, in general, the above funds are directed to all aspects of the development of the education sector. It can be seen from the allocated funds that our government can create all the possibilities for the development of education.

Under the conditions of the current market economy, fundamental changes occurring in the world community and technical-technological development rightly demand qualitatively new results from the educational system.

**Literature revue**. Professors and teachers limit themselves to the education provided in the auditorium in providing knowledge to students and directing them to science. Because in most cases, students do not complete the study hours or independent work hours that should be completed outside the classroom.

N. Sayidahmedov, P. T. Magzumov, A. R. Khodzhaboev, R. Mavlonova, U. N. Nishonaliev, E. T. Choriev, N. A. Muslimov, O. A. Koysinov and others from the pedagogic scientists of our country in their research who thought about the organizational and methodical foundations of independent work of students.

However, the analysis of the literature devoted to this problem showed that there is still no consensus on the meaning of the concept of "independent work" and there is still no consensus on its meaning.

As R.J.Ishmuhamedov, A.A.Abduqodirov, A.Pardaev noted, today's task of education is to teach students to work independently in the conditions of an information-educational environment that is increasing day by day, to use the flow of information wisely. For this, it is necessary to provide them with the opportunity and conditions for continuous independent work [2].

<sup>&</sup>lt;sup>1</sup> https://daryo.uz/k/2022/12/30/ozbekistonda-talim-sohasining-bugungi-holati-tahlil-qilindi



There are different approaches to defining the concept of independent work. In particular, the method of independent work teaching (A.G. Kovalev, A.I. Bushley, I.V. Kuzmin, I.Ya. Lerner), acceptance of teaching (A.V. Usova), form of organization of student activities (B.P.Esipov, V.A.Shchenev), defined as an educational tool and a form of educational and scientific knowledge (P.I. Pidkasistiy, E.L. Belkin).

Analysis and results. A more complete description is given by P.I. Pidkasisty. He notes the definition as follows: "Independent work in higher education is a unique pedagogical tool for organizing and managing independent activities in the educational process" [3]. He considers the concept of "independent work" as a didactic phenomenon, acts in his secondary capacity.

As today's demand is focused on the training of highly qualified and competent personnel, it is not the educational institutions, but the customer who decides what to teach. It is necessary to constantly analyze the social orders and opinions of consumers, the need in the labor market, the compatibility of the graduate's competence with production requirements, as well as the internal factors of the development of the educational institution. In other words, the customer requires the preparation of a competent specialist, and this process, in turn, imposes new tasks on professors and teachers of educational institutions [1].

Independent work is work carried out according to the instructions set by the teacher or acquiring new knowledge and acquiring the necessary skills. Independent work has its own form and essence.

Let's analyze the training of students studying in the higher education system today ("Computer systems and networks") as a science example.

For example, if a total of 150 hours are allocated for the subject "Computer systems and networks", then 60 hours are allocated for classroom training and 90 hours for independent education. 5 credits are allocated for this subject and evaluated through the credit system.

A 4-year undergraduate student must complete a total of 240 credits or 7,200 hours of study in all undergraduate programs. Based on the total hours, 1 credit is equal to 30 hours of study load. 40% of the total educational load is classroom hours, and 60% is independent learning. It follows that 60% of the total 7200 hours, i.e. 4230 hours, are allocated for independent study.

Studies show that in some HEIs, teachers or students are limited to the workload hours allocated for classroom training, that is, the workload allocated for independent study hours is not fulfilled.

What does this mean? What does this lead to?

In order to meet the requirements, set by the customers for an up-to-date, competitive and competent specialist, the knowledge given in the classroom training of educational institutions is definitely not enough, but it is necessary to achieve the ability to analyze various issues encountered in non-standard situations and to form decision-making abilities through solid mastering of independent work outside the classroom.

Application of new methods, "Smart" technologies to the educational system is a new tool of modern education [4]. There are many students, and even more tasks, so teachers have little time and opportunity to monitor their knowledge. Therefore, it will not be without benefit to introduce new modern teaching methods, increase laboratory equipment and introduce new generations of literature into the system.

#### Conclusion and suggestions.

- Independent work planning not only includes its purpose, content, forms, methods and execution period, but also takes into account the normative credit unit of its execution;
- The content of independent work should provide for the use of different forms and methods based on its organizational and methodological support, and should ensure that educational assignments have a varied character;
- In the process of independent work, it is necessary to expand the possibilities of using foreign experience in the development of students' creative abilities;

It is necessary to acquire new knowledge, to follow constant scientific analyses. Only then, competent professionals can make the necessary decisions to solve the problems they may encounter in different situations.

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#### **UDC: 378.1**

## PEDAGOGICAL CONDITION FOR THE FORMATION OF ECOLOGICAL THINKING OF STUDENTS OF A TEACHING THECHNICAL INSTITUTIONS

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**Abstract:** This article presents the methods of ecological education in learning foreign languages in the teaching of modern science, there is adjustment of the educational process with the necessary consistent focus on clear goals in technical institutions. And the article outlines the principles of the content of ecological culture in solving problems, the combination of regional and global approaches to the study of



current problems, as well as the orientation of learning to develop the valuemotivational sphere of the individual, and the harmonization of relations with the environment.

**Keywords**: integrative nature, associative methods, figurative-semantic, environmental issues

**Introduction**. The main indicator of the effectiveness of the development of human culture is the level of personal abilities for self-development, for transforming oneself as an active, learning, teaching and feeling person. At the same time, it is important to what extent ethical, aesthetic and other values and concepts, especially such as Conscience, Truth, Beauty, the Secret of the meaning of life and others, are filled with living experiences, how much it is possible to penetrate into the inner world of surrounding phenomena, people, things, how developed and strong are not only and not so much mental as sensual and emotional ties with the world. The process of becoming a person takes place in activity. The essence of personality development in activity lies in a qualitative change in activity in which a person acts as a subject. These changes occur due to the complication of all structural components of activity - goals, motives, content, their relationships, as well as due to a change in the position of the individual in the activity.

Psychologists distinguish between two levels of knowledge. The first is related to the implementation of specific actions. Possession of such knowledge is not yet an indicator of the abilities of a specialist. To determine competence and especially professional skills, the second level is more important, the so-called meta-knowledge information about the mechanisms of activity, understanding its structure, the ability to learn to comprehend the rules of any activity.

**Methods.** The development of both levels of knowledge and skills in the process of preparation is a prerequisite for the intensification of the activity of the student himself and his ability to teach this to students in the process of teaching.

The most important characteristic of a teacher's work is creativity. A person who is able to apply the principle of creative activity in his special sphere of work is, according to the definition of V.V. Davydov, "... a comprehensively developed personality. Therefore, it is necessary to make the development of the subject himself as a personality, the main strength of which lies in the ability to realize the need and changes in circumstances, the need for self-change, the ability to find in oneself the means for the practical implementation of this goal, as the goal of the progress of teacher training ... "

The development of both levels of knowledge and skills in the process of preparation is a prerequisite for the intensification of the activity of the student himself and his ability to teach this to students in the process of teaching.

The most important characteristic of a teacher's work is creativity. A person who is able to apply the principle of creative activity in his special sphere of work is, according to the definition of V.V. Davydov, "... a comprehensively developed personality. Therefore, it is necessary to make the development of the subject himself as a personality, the main strength of which lies in the ability to realize the need and changes in circumstances, the need for self-change, the ability to find in oneself the means for



the practical implementation of this goal, as the goal of the progress of teacher training ... "

**Discussion.** Thus, the question is not whether to "educate" or "not educate", but how to educate, because the image is formed in the mind of the subject by the subject himself, depending on the qualitative characteristics of the subject. The teacher only contributes to the formation of a way of life, but does not insert his way of life into the mind of a child, like a disk in a computer drive.

In the course of the study, the pedagogical conditions necessary for the most effective process of the formation of the ecological culture of the personality of the future teacher were determined.

## Pedagogical conditions of formation ecological culture of the student

Implementation of the principles of the formation of ecological culture

The integrative nature of theoretical knowledge, which act not as an object of assimilation, but as a driving force, as a means of understanding what constitutes the essence of environmental issues

Problematic, partially exploratory and research teaching methods using associative methods and ecological and pedagogical game training (including in nature), which are dominant in the educational process and allow us to detect deep stereotypes of attitudes towards nature, towards other people, towards ourselves.

In the process of formation of the ecological culture of the individual, specific pedagogical and psychological principles are used:

- the unity of knowledge, experience, action. This principle reflects the deep interconnection of intellect, feelings, activities in the process of formation and development of a responsible attitude of the individual to the environment. The formation of ecological culture in the conditions of a purposeful pedagogical process presupposes the organic unity of the assimilation of scientific knowledge about the interaction of man, society, the natural environment with the sensory perception of its results. It is important for the teacher to direct the emotional reactions of students associated with assessments of the state of the natural environment or human actions to the development of moral feelings, dignity and respect (including oneself) for correct behavior; conscience, honor, duty to other people for behavior in the environment; shame for a thoughtless act.
- the following principle is the principle of freedom of emotional and sensual choice. Based on the fact that emotions (according to A. N. Leontiev) "mark" personally significant objects and direct the disclosure of a person's natural sensory potential, a teacher is able to help start the process of discovering the natural sound and foundations



of being inside each pupil, along with the "taste" of life should rise "out of oblivion" "the taste of true Nature" and "the taste and value of Life", when a person considers himself as the eldest in the family of Nature with all the responsibility that follows from this.

- the relationship of global, regional and local (local history) levels of environmental problems. The implementation of this principle contributes to the development of a broad comprehensive view of the problems of human interaction with the environment and labor activity. This requires the inclusion in the content of education of such facts, concepts, patterns that would allow us to compare environmental problems of different scales. The arguments turn out to be formal if they cannot concretize global environmental problems, as well as generalize specific local phenomena to the level of national and global environmental problems.

It is important to conclude that the occurrence of many environmental problems depends on the behavior and actions of each person in the place where he lives and works. Knowledge of these problems acts as a kind of motivation to comply with environmentally appropriate restrictions in personal behavior. All this corresponds to the development of the need for environmentally literate behavior in everyday life.

- 1. Goal-setting as the relationship of a super-goal with a specific goal. In the field of moral quest, one must always put the goal above this specific goal life will blow everything away. The goal should not coincide with the goal, should not be equal to itself, but in order to achieve the real and possible, it is necessary to strive for the ideal and impossible. Only having a spiritual super-task can one achieve the intended goal. Thus, only by setting the goal of the spiritual development of a person, it is possible to achieve a humanistic attitude to the Nature of each individual.
- 2. Principles of pluralism and diversity. Diversity, as an endless source of comparisons of phenomena, objects at different stages of their historical development, allows humanity to draw the most valuable knowledge for many millennia, while pointing to the natural, historically determined world of their natural sequence. At the same time, diversity is a guarantee of sustainability, equivalent, according to in ecology, in the development of civilizations and the formation of mankind, especially at the present stage of its development, to potential wealth. "As you know, in accordance with the concept of adaptation, the more diverse the world of natural phenomena or objects, the higher its ability to survive in conditions of major and even global changes in the environment." With regard to such a phenomenon as civilization, this concept should reflect the peculiarities of the spiritual world of people.

Conclusion. Considering that the socialization of the individual occurs as a process of assimilation and reproduction by the individual of social experience, as a result of which he acquires the typological qualities necessary for life, knowledge, skills, speech and the ability to communicate humanly, that in the course of communication a multifaceted process of cognition by the individual of the created by people civilization, the acquisition of experience in social life, that in relation to personal consciousness, the traditional turns out to be the material from which the personal sculpts what corresponds to its attitudes. It should be noted that personal consciousness changes by passing through a system of crises - small boundary



situations. The task of the traditional cycle is to prepare for the identification of such in the process of individual socialization.

Thus, even if there is a sufficient amount of necessary information of an ecological nature, in order to express an ecological culture, it is necessary to go through the emotional-sensual sphere of a person.

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### HISTORY OF MEDICINE AND ITS SIGNIFICANCE IN MEDICAL EDUCATION

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**Annotatsiya.** Ushbu maqola tibbiyot tarixidagi zamonaviy tendentsiyalarni aks ettiradi va jahon olimlari tomonidan ushbu sohada olib borilgan tadqiqotlar haqida ma'lumot beradi.

**Kalit so'zlar:** tibbiy ta'lim, kompetensiya, tendentsiya, metodologiya, tibbiy deontologiya, tibbiy amaliyot, ijtimoiy tamoyil, gumanitar fanlar, empirik tadqiqot, didaktik imkoniyat.



**Аннотация.** В данной статье отражены современные тенденции в истории медицины и представлена информация об исследованиях, проводимых мировыми учеными в этой области.

**Ключевые слова:** медицинское образование, компетентность, направление, методология, медицинская деонтология, медицинская практика, социальный принцип, гуманитарные науки, эмпирические исследования, дидактические возможности.

**Annotation.** This article reflects on modern trends in the history of medicine and provides information on the research conducted by world scientists in this field.

**Keywords:** medical education, competence, trend, methodology, medical deontology, medical practice, social principle, humanities, empirical research, didactic opportunity.

**Introduction.** Currently, in connection with the change of socio-economic conditions of life in the society and the fundamental reform of the healthcare system of our country, various measures aimed at solving the current problems facing modern medical education are being developed and put into practice.

The change in the values of the society, the dominance of the laws of the market economy lead to the transformation of medical education into a field where special relations appear in the state-teacher-student system. The specificity of these relationships largely depends on the process of professional training of medical workers and various factors that influence students' choice of future professional specialization.

The process of career orientation of medical university students is of particular importance due to the establishment of the higher medical education system based on the credit system, the main principle of which is the active role of students in the formation of their educational strategies in obtaining higher education. In this process, the university creates an opportunity to influence the factors and motives of students' future choice of specialty by developing and implementing effective algorithms of educational activities.

The history of medicine has been taught as a program to future doctors in medical educational institutions for centuries. The reason is that every doctor should know the history of the field in which he works and be successful in this field. Most importantly, this process is an integral part of medical deontology.

The history of medicine is a science that teaches the discoveries, teachings of scientists, treatment methods, which have been formed and developed in the field of medicine for centuries, and helps to draw conclusions about them and to give opinions about them in the future, and to make assumptions.

The history of medicine has been taught as a program to future doctors in medical educational institutions for centuries. The reason is that every doctor should know the history of the field in which he works and be successful in this field. Most importantly, this process is an integral part of medical deontology.

Analysis and Results. Historically, History of Medicine was first introduced as a subject for higher education institutions in Europe and the United States, and this process led to positive results. Later, it was decided that this subject should be taught even at the master's level.



The teaching of this subject plays a key role in the formation of exclusive competences in future doctors, as the study of its main areas is of great importance.

Physicians and historians have long debated the role of medical history in medical education. Since classical times, physicians and medical students have looked to the history of medicine as a source of pragmatic knowledge and professional inspiration. For example, René Laennec defended his doctoral thesis on the history of medicine in 1804, inspired by Hippocrates' teachings on medical practice.

In the 18th century, new ideas about the value of medical history began to emerge. The German School of Medicine saw the study of medical history as a way to understand the development of medical knowledge, that is, how medical practitioners treated people in the past and why doctors achieved negative results.

The German scientist Kurt Sprengel describes the main aspects of the history of medicine in his five-volume "Essay on the Pragmatic History of Medicine (1792-1803)". According to him, the history of medicine has the following positive characteristics:

- 1. The history of medicine is the main part of the development of the doctor's consciousness;
- 2. The history of medicine is a force that contributes to a better understanding of medical knowledge;
- 3. History of medicine is a tool that educates the civil duty and responsibility of the doctor;
- 4. History of medicine is a way to teach future doctors to intellectual humility and tolerance.

Throughout the 19th century, historians tried to learn valuable lessons by turning to the past. In the decades that followed, German scientists repeated and refined these arguments, offering history as an antidote to arrogance, helping physicians understand the etiology of disease through the study of medical history and historical pathology. In this regard, they emphasized that the history of medicine is a valuable epistemological tool.

Similar arguments have emerged in France, England, and the United States. For example, Thomas Jefferson hired his personal physician, Robly Dunglison, to teach medicine and its history at the University of Virginia because he believed that "the student should learn something from the previous progress of science." Therefore, the science of history of medicine was considered the main branch of medicine at all times and it was important to study it.

Due to the positive attitude towards the history of medicine, in 1929, the "Institute of the History of Medicine" was established in the USA. E. Cordell, who was its first president, stated the following points at the opening ceremony of the institute: "The history of medicine teaches what and how to investigate. Expands the worldview and strengthens the mind. Above all, the history of medicine is a rich mine of neglected discoveries. Such ideas have led to an increase in the importance of this science, which is the main part of medicine.

In the 1960s, departments of history of medicine were established in 19 universities in the USA. In addition, the activities of the Countway Medical History



Library, the Osler Medical History Library, and the medical libraries at Yale were developed.

In 1970, Robert Hudson, head of the Department of History and Philosophy of Medicine at the University of Kansas, criticized the teachers who teach the history of medicine, thinking about the negative consequences of paying too much attention to the medical achievements of Egypt or Mesopotamia in science, and emphasizes that teachers should pay more attention to the medical history of the country and its achievements. As a result, a little later, the Department of History of American Medicine was established.

In the 21st century, the study of the history of medicine has not lost its importance, but has been recognized as a field that a future doctor should study. Professor S. Lederer of the University of Pennsylvania, USA, and others in their scientific research suggested that teaching "History of Medicine" to undergraduate students develops convergence (tendency to a firm opinion on a problem) in them.

Harvard University professor David Jones and others point to medical history as an important component of medical knowledge, thought, and practice. This discipline provides and enables analysis of important information about the causes of disease (e.g., the reductionist mechanisms needed to account for changes in disease over time), the nature of efficacy (e.g., why doctors think their treatments work and how their treatments have worked in the past and how they will work in the future). All of this brings the history of medicine to the fore, just as physicians must study anatomy or pathophysiology for effective diagnosis.

**Conclusion**, it can be said that the history of medicine is a science that plays an important role in the formation of tolerance, communicative, cognitive, and convergence competencies, which are the exclusive competences of future doctors, and which must be studied by students of medical institutions of higher education.

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## PROJECT LEARNING - AN INNOVATIVE APPROACH TO ORGANIZING THE EDUCATIONAL PROCESS OF SECONDARY VOCATIONAL EDUCATION

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**Annotasiya:** Maqolada ta'lim texnologiyasi sifatida loyihaviy oʻqitishning imkoniyatlari hamda professional ta'lim muassasalarida oʻquvchi —dizaynerlarni oʻqitishda ushbu texnologiiyani qoʻllash xususiyatlari koʻrib chiqilgan. Loyihaviy oʻqitishni tashkil etishning asosiy bosqichlari tavsiya etilgan.

Kalit soʻzlar: loyiha, loyiha metodi, loyihaviy yondoshuv, loyihaviy faoliyat, loyihaviy oʻqitish, loyihaviy oʻqitishni tashkil etish.

**Аннотация:** В статье рассмотрены возможности проектного обучения как образовательной технологии, особенности применения данной технологии в обучении студентов-дизайнеров в профессиональных образовательных учреждениях. Предложены основные этапы работ по организации проектного обучения.

**Ключевые слова:** проект, метод проектов, проектный подход, проектная деятельность, проектное обучение, организация проектного обучения.

**Abstract:** The article discusses the possibilities of project-based learning as an educational technology, the features of the use of this technology in the training of design students in professional educational institutions. The main stages of work on the organization of project training are proposed.

**Keywords:** project, project method, project approach, project activity, project training, organization of project training.

**Introduction.** At present, modern education should focus on practical application and take into account changes in the global and domestic markets. Today, any specialist must be able to work and succeed in a constantly changing market environment, have leadership qualities and the ability to make managerial decisions.

The modern world is an era of innovation, in which, without an appropriate education, it is unlikely that you will be able to build a career, find a job and achieve significant success in your future professional activities. And this is well understood by young people: today more than a billion students are educated in the universities and colleges all over the world. This number also includes students from Uzbekistan. In order to get a quality education, it is necessary to search for new technologies that are designed to promote the development of students' creative abilities, the formation of self-development and self-education skills. All these requirements are fully met by the project activity.

Project activity is a pedagogical technology that is focused not on the integration of factual knowledge, but on their application and the acquisition of new knowledge through self-education [1].



The project method gives scope for the creative initiative of students, implies their cooperation, and all this creates a positive motivation for the student to study. At the moment, the project method comes into life as a requirement of time and is one of the interactive methods of modern learning. It is an integral part of the educational process.

The project method is a set of sequential educational and cognitive techniques that allow students to acquire knowledge and skills in the process of planning and independently performing certain practical tasks with the obligatory presentation of results.

At present, we all understand that the student must become the central figure in the educational process, so that the cognitive activity of students in vocational education is in the center of attention of researchers. After all, in the process of implementing projects, students learn to think independently, work with information, improve their knowledge and skills in various fields.

The relevance of project-based learning is determined by its multi-purpose and multi-functional orientation, as well as the possibility of integrating it into a holistic educational process, during which, along with the mastery of systemic basic knowledge and key competencies by students, a multilateral development of the personality takes place.

It is necessary to teach future mid-level specialists to think independently, find problems in their future professional activities, solve them, and attract knowledge from various sources for this purpose. Students must independently predict the results and all possible consequences, be able to find connections between them. And only then the result can be achieved [2].

Therefore, in all State educational standards of vocational education of our republic, the need for project activities is determined. And this reflects the real needs of the market, since surveys of employers show that they now need personnel capable of carrying out not just professional activities, but also projects of various types.

**Literature revue.** Project activity, of course, is not something completely new for the educational environment of educational institutions, as well as for teachers.

The project method originated at the beginning of the 20th century in the United States. It is also called the problem method. Associated with the ideas of the American philosopher and teacher J. Dewey, as well as his student V.Kh. Kalpatrik, who proposed to build learning on an active basis, through the expedient activity of the student, taking into account his personal interests.

Modern studies of design processes were reflected in the works of such scientists as E.I. Zair-Bek, I.A. Kolesnikova, E.S. Polat. The development of the theme of project activities includes the following areas: project management, project structure (V.I. Voropaev, N.I. Ilyin, I.G. Lukmanova, V.N. Burkov, D.A. Novikov, V.D. Shapiro and M. L. Razu, V. I. Voropaev, V. I., etc.) [2,3].

Further research in this area is distinguished by a practical focus and is devoted to various aspects of project activities [4,5].

Foreign scholars define a project as a learning method in which a group of students work together to maximize their own knowledge and that of their colleagues.



Other authors suggest that students analyze and solve problems in a socially interactive environment [6,7].

The study of foreign and domestic experience in the application of project-based learning technology shows its advantage over traditional teaching methods. Project activity brings moral satisfaction to students and teachers, because it:

- is not routine, reproducing, but contains elements of creativity aimed at creating a new product (project);
- brings together participants for joint activities (design), in which there is an opportunity to communicate, discuss topical issues, prove their opinion, make decisions together, etc.;
- contributes to the acquisition of not only theoretical knonwledge, but also practical skills to apply this knowledge to solve problems;
  - develops the creative abilities of students.

The purpose of project-based learning is to create conditions under which students:

- 1) independently and willingly acquire the missing knowledge from various sources;
- 2) learn to use the acquired knowledge to solve cognitive and practical problems;
  - 3) acquire communication skills by working in different groups;
- 4) develop their research skills (identifying problems, collecting information, observing, conducting an experiment, analysis, building hypotheses, generalization);
  - 5) develop systems thinking [1].

**Research Methodology.** When creating and implementing a project in any organization, it is important to ensure the reliability of the information received. This is facilitated by the use of a whole range of methods. The theoretical foundations of the study and the task determined the organization and methods of the experimental study. The following methods were used during the research:

- 1. Method of system analysis (including morphological and functional-parametric description).
- 2. Statistical methods (normative, comparative, random assessment method, change tracking method, constructive-critical method, etc.).
  - 3. Survey methods: interviews, questionnaires, sociometric method.

The use of a systematic approach makes it possible to take into account the interaction of many elements of a different nature that determine the creation and implementation of the project, identify those that have the greatest impact on the object, and find ways to effectively influence them.

Statistical methods, such as normative, comparative, random evaluation method, change tracking method, constructive-critical method, are also necessary when creating and implementing a project.

A common evaluation method of project activities is the normative method. It involves the use of a prescriptive base such as "how this and that should be done", "what this subsystem or system should be like", "how certain documents should be drawn up", etc. At its core, the regulatory framework sets certain models, images, stamps (in a good sense of the word), in accordance with which the actual level of project activity is assessed [8].

In addition, there are so-called "independent" methods. Their use does not depend on managers, management consultants, analysts. These are the random



evaluation method and the constructive-critical method. The method of random assessment is characterized by "free", "sketchy", "impulsive" and similar statements of staff, visitors, employees of other organizations. Ordering such "random" information and comparing it with information obtained using other methods allows it to be used in the analysis and taking appropriate measures [8].

The constructive-critical method has two options. The first one is a generalized criticism that falls on administrators who are forced to take practical measures "to improve ...". The second is balanced-periodic criticism. It is distinguished by calmer assessments and proposals.

Analysis and results. Experimental studies of the implementation of the project method were carried out in the educational process of the Vabkent vocational school of the Bukhara region together with the department "Technology of light industry products" of the Bukhara Engineering and Technological Institute. The training was conducted in the discipline "Technology and design of light industry products" to determine the effectiveness of the application of project training as a condition for the development of social responsibility of future designers.

Based on our own experience in organizing work with students according to the project method, the work was carried out in the following sequence (stages):

- 1. Preparation of a list of project topics with their brief descriptions that are of interest to students and teachers. The choice of a project by students with the opportunity to propose their own project with the approval of the project manager;
- 2. Holding a meeting of students and representatives of the department-developer of projects (internal projects), at which students will learn the details of what they will do;
  - 3. Distribution of responsibilities within the project team;
- 4. Work on the selected project. Organization of systematic consultations and meetings with the project manager;
- 5. Public defense of the project, transfer of the product of the project activity to the department.

Based on the foregoing, we can conclude that the introduction of project-based learning is a complex personnel, organizational and methodological task that requires a comprehensive understanding of systemic decisions within school. There is no doubt that in vocational schools its solution requires a significant study of the issue of developing a material and technical base sufficient to combine theoretical training with practical skills.

In the process of working on the project, in order to develop the ability to critically assess our professional strengths and weaknesses, we, together with the students, conducted mini-views with a discussion of the work completed by some of the tasks. During such viewings, students were asked leading questions, they were asked to mark the best works, to advise each other - what can be improved in the works, what needs to be worked on further.

The features of project-based learning for designer students in the period we examined were:

- the presence of not one, but multiple project assignments per semester;
- a large number of preliminary exercises;



- conducting short reviews of works at the end of each stage;
- the presence of a task for independent work report on the topic;
- showing the best works of past years and the implementation of an individual creative project by each student.

These features are formed (set) by the teacher and are important conditions for the formation of professional competencies of future designer students.

The reflection of the teacher and students is an important analysis of the situation. We conducted such an analysis during the open final review of the design work completed during the semester. In a conversation with the students, it was found out that they are determined to continue their independent study of such works as a type of design, they want to apply their knowledge in life - they will carry out various projects; understand the significance of the acquired knowledge and see the prospect of further growth in this area.

#### Conclusions and offers.

- 1) The modern educational process in professional education can't be imagined without the search for new technologies that are designed to promote the development of students' creative abilities, the formation of self-development and self-education skills. All these requirements are fully met by the project activity.
- 2) Thus, we considered the possibilities of project-based learning as an educational technology, the features of using this technology in teaching design for students in professional educational institutions. Project activity should become part of the educational process, as it is closely related to the professional activity of the designer.
- 3) Project-based learning in vocational education should be implemented to achieve the following educational results: the development of creative thinking, the formation of research skills, the ability to work in collaboration, the ability to justify and defend one's opinion.

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## CRITERIA BASED ASSESSMENT AND ITS ADVANTAGES IN HIGHER EDUCATION

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Annotasiya: Mazkur maqolada oliy ta'limda mezonlarga asoslangan baholash va uning afzalliklari yoritilgan. Oliy ta'lim tizimida mezonlarga asoslangan nazorat pedagogik jarayolarnining muhim tarkbiy qismlaridan biri sanaladi. Mezonlarga asoslangan nazorat muayyan fan mazmunini oʻzlashtirish talablarini standartlashtirish ahamiyatiga ega boʻlib, talabalar bilimini xolisona baholashga yordam beradi.

Kalit soʻzlar: mezonlarga asoslangan baholash, individual yondashuv, innovasion ta'lim, interaktiv metodlar, kreativlik.

Аннотация: В данной статье рассматривается критериальное оценивание и его преимущества в высшем образовании. В системе высшего образования критериальный контроль является составляющих одной важных процессов. Критериальный педагогических контроль имеет значение стандартизации требований к усвоению определенного содержания предмета и помогает объективно оценивать знания студентов.

**Ключевые слова**: критериальное оценивание, индивидуальный подход, инновационное образование, интерактивные методы, креативность.

**Abstract:** This article discusses criteria-based assessment in higher education and its advantages. Criteria-based control is one of the important components of pedagogical processes in the higher education system. Criteria-based control has the importance of standardizing the requirements for mastering the content of a particular subject, and helps to assess the knowledge of students objectively.

**Key words:** criteria-based assessment, individual approach, innovative education, interactive methods, creativity.

**Introduction.** Today it is essential to pay special attention to types of control and assessment where criteria are actually used in the higher education system. In particular, students' knowledge is controlled by conducting mid-term and final types of control in higher education institutions. Generally, the mid-term controls are based on a specific subject characteristic in order to assess the student's knowledge and practical skills after the completion of the relevant section of the curriculum during the semester.



In this case, it is determined that it will be held up to two times during training sessions. Also, the type of mid-term control, the form and duration of the examination are determined by the relevant departments based on the nature of the subject and the hours allocated to the subject. Moreover, it is noteworthy when evaluating students in mid-term control, their grades are also taken into account which were received during training sessions.

Assessment of students' knowledge based on criteria-based controls is carried out in the following order:

- "5", i.e. "excellent" will be assessed when students think creatively by making independent conclusions and decisions, conduct independent observation and understand the essence of science to the extent that they can apply the knowledge they have gained in practice, and when they have a deep idea of subject or topic;
- "4" i.e. "good" grade is given when students understand the essence of the topic or the subject to the extent that they can apply the obtained knowledge through independent observation, as well as when they can express it and have an idea about the subject;
- "3" i.e. "satisfactory" grade is given when students apply the acquired knowledge in practice, when they understand the essence of the subject or subject, and when they are considered to be imaginative enough to be able to express and explain;
- when students do not master the subjects specified in the curriculum or do not understand the essence of subjects and have no imagination, they are evaluated with "2", that is, "unsatisfactory" [1].

These rules apply to all mid-term and final examinations conducted per semester in the higher education system in accordance with the regulations. In addition, the conduct of criteria-based control is constantly studied and analyzed by the educational quality control department of the institution. In cases where it is determined that the procedure for administrating the types of control is violated, the results of the types of conducted control may be canceled and the corresponding type of control may be reorganized.

**Research Methodology.** In accordance with the Law on Education and other educational regulations, pedagogical control is carried out on the basis of the use of traditional means or tests. In this case, the main essence of criteria-based control is to analyze the consistent application of the theoretical knowledge acquired by students to practice. Among the components of the teacher's control and evaluation activity structure, it is important to distinguish the content of control and the main indicators of evaluation. After all, in the daily learning process, the results of students' assimilation of new knowledge are identified, evaluated, and analyzed through pedagogical control.

These processes are also referred to as determining or checking the results of pedagogical processes. Inspection in criteria-based control is a component of control, and its main didactic task is to ensure regular communication between the teacher and students is established, to ensure that pedagogues receive objective information about students' mastery of the learning material as well as the lack of knowledge which serves to guarantee to detect defects timely. In the organization of control based on criteria, the purpose of inspection serves as an important basis for determining not only the level and quality of the student's knowledge, but also the scope of his educational



activity. Therefore, the first link in the verification system is the process of predetermining the level of knowledge of students. Therefore, in the higher education system, the types of control based on criteria are organized in several kinds and forms.

Monitoring and evaluation of students' knowledge is carried out in accordance with the current "Regulation on the evaluation system for monitoring student knowledge in higher education institutions".

Mid-term control. This type of control is carried out once or twice during the semester, depending on the teaching hours of certain subjects in higher education. During the academic year, the form of mid-term examinations is prepared in accordance with the curriculum, and its questions are prepared by professors and teachers of the department. As a student-oriented, developmental education system is being formed. Mid-term controls provide an effective opportunity for individual assimilation of new educational material by students, abandoning traditional teaching. Also, various tests and developments of a rapid control nature serve to make these controls effective [2. B. 47].

Mid-term inspections are the processes of checking and evaluating students' knowledge, conducted by professors and teachers based on the results of practical and laboratory exercises and their independent learning.

Various forms of current controls can be provided to check the knowledge of students in the study of abstract science. These are:

- oral examination this type of control is conducted in the form of question-and-answer and discussion of issues after studying one or more sections of the subject;
- written work the type of control that provides for the discussion of the issues raised in separate sections of the science, the analysis of problems, and the performance of practical tasks;
- combined examination conducting both oral and written control types at the same time;
- defense and presentation of homework in order to check whether individual and group homework is done correctly, the student has achieved the skills of summarizing the material learned and presenting it to the audience, observing and controling the logical connection between gained knowledge across topics of the subject;
- tests a form of written control in the form of questions on separate sections of the subject;
- completion of the course project or course work in order to acquire the theoretical material at the expense of solving practical problems, it is foreseen in accordance with the model and working curricula, and it is carried out during the academic semester.

Mid-term monitoring of students' knowledge is authorized in the weeks between and at the end of the semester based on the schedule approved by professors. Current and interim controls are organized by the dean's offices and the academic department. Grades are given in a separate percentage for each subject.

Ongoing control. These types of control are recorded in higher education as control that determines the level of mastery of certain types of subjects by students. The purpose of this control is to constantly monitor the progress of the educational



process by professors and teachers. The implementation of current control allows the professor-teacher to timely eliminate the shortcomings and problems in the educational process and introduce certain changes and interactive projects in the necessary direction. Therefore, the ongoing controls are recognized as controls with a diagnostic character.

Final control. Usually this type of control is the last, generalizing control of a particular subject. Final inspections are recognized as a specific type of inspection organized in order to objectively assess the achievements of students in science, and are organized at the end of a certain academic semester. Final inspections are organized in the form of oral, written or tests, the results of which are recorded as the student's overall grade in a particular subject for the semester. By comparing the results of the final control, the professor-teacher collects the necessary information to improve the efficiency of his work in this area in the future.

Two weeks are allocated for the final control (exam session) in higher education. Class schedules are drawn up and students are given at least 3 days to prepare for comprehensive exams. Final control - exams will be held in all subjects. The exam can be organized in written, oral, computer test and other modern, transparent and fair forms (portfolio, creative work, anti-plagiarism, presentation, etc.) [3. B. 39]. Students are given the opportunity to choose the exam language (Uzbek, Russian or English) for taking the exam. Professors-teachers prepare test tasks, written and oral exam questions in advance. The number of options for written or oral exams is formed depending on the number of students in the academic group, and the questions in each option are formed according to the requirements of the regulations.

In addition, there is another type of control approved by a special regulation for graduates of higher educational institutions of the Republic of Uzbekistan, which is called the final state certification. The final state attestation is approved by the regulation "On the final state attestation of graduates of higher educational institutions of the Republic of Uzbekistan", according to the Law of the Republic of Uzbekistan "On Education" determines the procedure for the final state certification of graduates of educational institutions.

The final state attestation is conducted in accordance with the schedule of the educational process of graduate undergraduate majors and master's study fields of higher educational institutions. The final state attestation is organized for each educational direction (specialty) in the higher education institution and it is carried out by the final state attestation commissions. In the final state attestation, the compliance of the knowledge, skills and degree of proficiencies of the graduate with the requirements of the state educational standards is comprehensively evaluated, and the issue of awarding the bachelor or master academic degree to the graduates is decided based on the results of that attestation. Moreover, it is managed in agreement with the curricula of the educational direction (specialty), and the final state attestation which tests foreign language proficiency of students in non-specialist directions can be held based on the decision of the Council of the higher education institution.

The final state certification is the final stage of the student's educational program and is conducted in order to determine his professional ability. Students who have accumulated the specified number of credits and mastered the curriculum in full will



be admitted to the Final State Certification held in the graduate course. The final state attestation is held in technical higher educational institutions in the form of thesis defense consistent with the State educational standards. It is allowed to write a diploma in a foreign language and to defend it if there is an expert in the specialized department who knows the chosen foreign language and can give advice. During the defense of the diploma work an abstract is to be presented in the national language though the paper completed in a foreign language [4].

Pedagogical control occupies an important place in higher education institutions. According to the field literature pedagogical control in higher education institutions supports criteria-based control as follows:

Main functions: verification, diagnosis, education, fostering, stimulation and development, information, comparison, prediction.

The verification function is assumed the main task of organizing the final control. For managing the education at different levels, its components are clearly defined. Therefore, the implementation of a systematic review of the results of education allows to determine the state of knowledge, skills, and qualifications acquired by students, and is also reflected in the assessment of their educational achievements. From the point of view of the application of results, the function of verification can be related to other levels of educational quality management.

The diagnostic function is fully implemented in the ongoing control, strengthening and increasing its importance is recognized as one of the important factors for improving the quality of education. When the factors affecting this process are analyzed, the difficulties faced by students are due to the individual character's acquirement in the process of teaching. After all, every student can achieve success in learning a new subject, a specific department, only after eliminating the shortcomings that prevent the acquisition of relevant knowledge [5. B. 111].

The teaching function formed through students' self-control and self-evaluation in the answering the questions activity asked by the teacher and while preparing for the test and control work. In this process, the control which is organized with the help of innovative diagnostic tools and methods creates ample opportunities for students' independent acquisition of knowledge. Various pedagogical tests play a decisive role in this procedure.

The organization of pedagogical control in educational institutions allows to study and evaluate students' possession of their quality and merits. At the same time, it creates conditions for identifying the difficulties of students in mastering certain qualities, determining the factors influencing this process, and looking for opportunities to eliminate them. The created conditions serve to form the student's positive qualities, such as interest in knowledge, ability to work systematically, self-control and self-esteem. Thus, these aspects make up the educational functions. The educational function occupies a leading place in the formation of the motivational foundation of learners' educational activity.

It is significant for the student to be motivated in education, and its functions like encouragement and fostering play an important role in it. In education, the control is organized objectively and if the teacher evaluates student's learning and behavior impartially and fairly, then the learners will acquire new knowledge as well as



additional incentives will appear, which point out that pedagogical control is carried out based on criteria. If the situation is the opposite, then the pedagogical control aimed at systematic examination of knowledge will lead to negative results. As a result, students develop an uncooperative attitude towards the teacher along with academic subject. The student rejects to study and the criteria of working on himself, which would guarantee his development as a person [5. B. 81].

The educational motivation of students increases when additional tests and assignment for control tasks are provided. Methodically well-organized pedagogical control, effective arrangement of students' activities, objective assessment of students' acquired knowledge, skills, qualifications, and moral qualities will help students to develop in all aspects. Objectively constructed control teaches students to think, strengthens their memory, and ensures that they acquire skills and competencies to apply in practice. The essence and content of test and control tasks, their practicality, and positive washback increase the development aspect of pedagogical control.

In general, criteria-based assessment is a form of assessment that consists of comparing and measuring the results, knowledge, skills and qualifications of the assessee in the learning process, developed on the basis of predetermined educational goals, and according to common and the same criteria for everyone.

Advantages and disadvantages of criteria-based assessment include: Advantage: □ assessment is conducted according to the educational goal of the subject; □ the student's learning level is assessed objectively; □ assessment is carried out on the basis of its specific indicators; ☐ the learner is aware of the mistakes and shortcomings he made in the grade he received; □ it serves the assessee to detect his lacks and directs to work on them; ☐ it increases assessees' confidence in their knowledge and skills by objectively identifying the strengths and weaknesses in the evaluated field; ☐ it establishes the same knowledge, skills and qualification requirements for everyone; □ it defines the content of education; □ increases the responsibility of evaluatees for the results of their activities. Disadvantage: □ development of these criteria takes a lot of time; numerous requirements for determining the objectivity, truthfulness and accuracy of the criteria; □ various difficulties in the development of criteria for social sciences [6. B. 48].

This type of assessment allows to evaluate the results directly and unbiasedly, further it defines clearly the criteria. Such evaluation form consists of two stages, in the first stage, the assessee's achieved results are determined, and in the second stage, the results are compared based on the criteria.

**Conclusion/Recommendations.** It is of paramount importance to compare and analyze the results of initial, mid-term and final exam in pedagogical controls based on criteria. In particular, a comparative study of the initial and final control results helps

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to determine the effectiveness of the teacher's work. After all, the effectiveness of pedagogic activity aimed at determining the necessary directions of pedagogical activity, eliminating existing problems and strengthening the influence of positive factors on the basis of the information obtained during the initial control will be reflected in the results of the final control.

The predictive function occupies a special place not only in pedagogical control, but also in the overall educational process. In fact, the indicators that describe each and every rating scale ensure the full realization of the pedagogical task by setting perspective in teaching and in educational process, by providing quality education to students, by educating them as mature individuals in all respects.

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#### MODERN PROBLEMS OF PHILOLOGY AND LINGUISTICS

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#### LINGUOCULTURAL ANALYSIS OF THE MUSLIM WEDDING CEREMONY "NIKAH" IN THE TRANSLATION VERSIONS OF ABDULLA QADIRI'S NOVEL "O'TKAN KUNLAR"

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**Annotatsiya:** Mazkur maqola *nikoh* so'zining lingvokulturologik tahliliga bag'ishlangan bo'lib, bunda o'zbek xalqi madaniyatida nikohsiz qurilgan turmush haqiqiy deb hisoblanmasligi hamda *nikoh* o'qish jarayoni qanday va kim tomonidan amalga oshirilishi lingvokulturologik tadqiq qilingan. Shuningdek, tarjimaning qiyosiy lingvokulturologik tahlil masalasi bilan bog'liq leksik muammolari olimlar fikri asosida yoritib berilgan.

Kalit so'zlar: lingvokulturologik tahlil, realia, nikoh, mahr, yanga, domla

**Аннотация:** В статье проводится лингвокультурологический анализ слова никах. Цель исследования - выявление национально-культурных особенностей никаха на узбекских свадьбах посредством их лингвокультурологического анализа. Никах выражает культурные особенности узбекского народа, считается частью узбекского свадебного обряда. Результаты исследования могут быть эффективно использованы для дальнейшего лингвокультурологического анализа специфических для узбекской культуры слов.

**Ключевые слова:** лингвокультурологический анализ, культуроспецифическое слово, реалии, никах, язык перевода (ПЯ), языкисточник (ИЯ)

**Abstract:** The paper examines linguocultural analysis of the word nikah. The objective of the study is to reveal national and cultural characteristics of the nikah in Uzbek weddings by means of their linguocultural analysis. Nikah expresses cultural peculiarities of the Uzbek people, considers as a part of the Uzbek wedding ceremony. The results of the investigation can be effectively used for a further linguocultural analysis of Uzbek culture-specific words.

**Key words:** linguocultural analysis, culture-specific word, realia, nikah, target language (TL), source language (SL)

**Introduction:** Culture is the way of life. People can't live without culture. Because various traditions and occasions, which people celebrate, are considered culture of the nations. And there are a lot of countries with the people of different nationalities in the world. Each nation owns its culture. Therefore culture also differs. People can get information about each other's culture through the translation. But translating literary texts which have cultural values of the original language create problems for the translators. The task of the translator is not to copy what is said. An interpreter who only reproduces the words and sentences of the source text in the target one finds difficulties during translation process. Because there are no languages around



the world which are similar. That's why what an interpreter has to reproduce is not what is said in exact terms. H. G. Gadamer writes about translating and reading translations from foreign languages. The translator has a linguistic text before him, that is, something said either verbally or in writing, that he has to translate into his own language. He is bound by what stands there, and yet he cannot simply convert what is said out of the foreign language into his own without himself becoming again the one saying it. But this means he must gain for himself the infinite space of the saying that corresponds to what is said in the foreign language. [1; 67]

Mildred L. Larson has rightfully contended that translation is the process of studying the lexicon, the grammatical structure, and the communication situation of the source language text, analyzing it in order to determine the meaning, and then reconstructing this same meaning using the natural forms of the receptor language. While translating the lexicon of the two languages will not match. This mismatch will make it necessary for the translator to make many adjustments in the process of translation. [2; 169] For getting the best result, translators use different types of the lexical transformations of the translation process and find some answers from the linguoculturology which learns cultural values of the languages.

The difficulties of the translation are often highlighted when there is the context consisting of the cultural item in the translation process. The translator looks for lexical equivalents between the source language and the receptor language which is considered complicated process of the translation. Here some cultural words become untranslatable because of the cultural difference. They are called non-equivalent words which are one type of the linguocultureme.

Peter Newmark has made much of the concept of the untranslatable words. He writes that "to write off as "untranslatable" a word whose meaning cannot be rendered literally and precisely by another word is absurd, particularly when it could at least be better delineated by componential analysis into four or five words, though as a footnote, not in the text of the play." [3; 79] While translating untranslatable that is non-equivalent word of the source language, translators have to learn linguoculturemes of the target language. As a result, translation and linguoculturology join together. Linguoculturology finds the answer for this question of the translator: "What is the meaning of the untranslatable word?" The main problem of the non-equivalent word is its meaning.

Literature review: According to Said Faiq, misunderstandings of the translation generally occur in particular social structures, particular histories, and prevailing norms of language production and reception. He writes that culture involves the beliefs and values, history and national traditions of the particular social groups. In translation the relationship between language and culture is very important. [4;1] This complex relationship arises while dealing with the translation of the culture-specific words, the so-called realia. This phenomenon reveal the customs and traditions of the original text. Realia has no equivalent word or expression in the target text. In the absence of equivalents, translators use the process of transliteration, which changes the form of the culture-specific word according to the alphabet rules of the target language. This word becomes unknown for the target text readership. Therefore, translators usually



explain it with additional information, with footnotes or endnotes. As a result of the transliteration, this realia becomes borrowing in the TL.

By the beginning of the 21<sup>st</sup> century, linguoculturology has become one of the leading disciplines in world linguistics. V.A. Maslova writes: "Linguoculturology is a science that studies the language both synchronously and diachronically. The object of the linguoculturology is linguocultural feature of the language of a particular people." [5; 20] And a linguocultureme contains linguocultural feature of the language.

V.V.Vorobev introduces the concept of linguocultureme in science as the main unit of the linguocultural analysis. [6; 44] Linguoculturemes reflect a part of a culture. They may be the words, phraseological units, sentences, texts, speech clichés, folklore texts, compound words, and so on. The main point is that they have to contain cultural importance of the language. If there is no cultural value in the above mentioned list, so they are not considered as linguoculturemes.

V.A.Maslova states that there are 9 types of linguoculturemes. They are non-equivalent words, mythological language units, the paremiological fund of a language, phraseological fund of a language, stereotypes, metaphors, stylistic content of a language, verbal behavior and speech etiquette. [7; 20]

The process of linguocultural analysis in the translation between different languages includes the following steps:

- 1. Identification of the linguocultural units of the source text. Because cultural phenomenon contains cultural information of any language.
- 2. Analysis of the cultural information. This process is called linguocultural analysis. Here cultural values of the original text are compared to the culture of the target one and international cultural comparison leads to the interpretation of language as a means of reflecting culture. In order to compare cultural values of the various languages, it is necessary to study cultural space of the translation, which creates problems for the translator, by identifying the units that are considered cultural phenomena. Anyway translators pass this problem. And this phenomenon which shows cultural values of the any aspect of the language is called linguocultureme.

Research methodology: As E.Sepir points out, language is a guiding tool in the study of culture. While learning a language, it is necessary to know not only the words but also the culture, customs and traditions of that country. And this process has led to the evolution of the linguocultural studies. [8] No translation is as understandable as the original. [1; 68] So no translation can replace the original which owns cultural values of the nation. Because the language of the culture which is spoken by the people of the original text differs from the culture of the target one. And here finding lexical equivalent for the culture-specific word makes difficulty for the translators. The cultural value of the source text that has no equivalent in the target language is called linguocultureme. Linguocultureme is a unit of language which reflects culture in its meaning.

Linguoculturological research includes the following issues: 1. Linguoculturological features of a language. It often deals with the language of folklore and myths; 2. The study of the linguocultural concept of the language fiction; 3. The study of the cultural units in a comparative work. In this case, cultural words, mainly in Uzbek, are compared with English; and this article is devoted to the



linguoculturological research which is based on the translated texts which contain cultural values of Uzbek nation. Non-equivalent word *nikah* is the main point of our linguocultural analysis. The following example is presented just for demonstration purposes, without any evaluating aim on translation choices.

Abdulla Qadiri: Nihoyat, yuz adimcha borgandan so'ng, ulardan so'z eshitishka to'g'ri keldi; birisi ikkinchisiga dedi: - To'y bilan nikohni bu kunga qilg'animiz yaxshi bo'ldi. - Nima, juvonga ham to'y boshqa, nikoh boshqa bo'larmidi? Bordi-keldi bitta juvon qizi bor-ku, munga to'yni boshqa, nikohni boshqa qilamiz deganiga hayronman. - Axir qutidor ham boobro' odam-da, - dedi birinchi kishi. [9; 226]

Carol Ermakova: It was only after they had gone ten paces that one said to the other: "It's good we decided today to hold everything all at once – the nikokh and the wedding." "Well, why celebrate them separately? After all, she is no maiden. It's only young girls who celebrate the nikokh and the wedding feast. She has already been wed. Indeed, it is a wonder her father demanded we mark the nikokh and the wedding separately." "Do not forget, Kutidor is a respected citizen here," countered the first. [10; 206]

Mark Reese: Finally, after a hundred paces, he succeeded in catching a couple of words between them. One said to the other, "We made a good decision by planning nikah and wedding celebrations for the same day." "Why should we set a separate engagement date for a divorced woman? She is not a virgin anymore. Only first-time brides have separate engagement and wedding celebrations. I am surprised the father insisted on celebrating them separately." "But Qutidor is well respected in this town." [11; 248]

There is the passage in the ST: "To'y bilan nikohni bu kunga qilg'animiz yaxshi bo'ldi". To'y means wedding in English, but what about nikah? Is nikah known for the readership of the TL? As we mentioned above, some words which show cultural importance of the nation cause difficulties for the translators. They use various methods of translation to avoid this misunderstanding of the translation. Transliteration is the best way of giving cultural words in the target text, because in some cases culture-bound items will not change its form in the receptor language. Because they show the identity of the nation's culture. They are specific only to the place where they used. Therefore, literary translators have to work not only with the source and target languages, but with the cultures too. They can choose several different procedures to deal with this problem. As a result, they present the identity of the source text in the target language.

of In the English translation versions Abdulla Oadiri's "O'tkan kunlar" by Carol Ermakova and Mark Reese, there is the word nikah which is used several times in the novel. Translators gave the transliteration of nikoh as nikokh and nikah. [11; 466] Nikah shows the cultural identity of Uzbek marriage and its culture. Culture has a significant impact on the identity. Here our understanding of identity means the culture of a nation. As Peter Newmark mentioned, translator's intention is to produce the same effect on his readership as was produced on the readership of the original. As there is much cultural overlap, this is theoretically possible. An English readership would however be unlikely to react like an Uzbek readership to this text and one assumes that the translator should attempt to make his



readership envious. The translators show aware of the importance of achieving a strong emotive effect. [3; 278]

Analysis and Results: Before analyzing the word *nikah* linguoculturally, it is necessary to state that religion is an important aspect of life in Uzbekistan. Thus, people follow the tradition of *nikah* before the wedding. Muslim marriage ceremony differs from the wedding ceremonies of the other religions. Marriage in Islam is a contract between two people, a groom and a bride, to live together with their own free wills. In Uzbek families, a wedding will not hold without *nikah*. Many people are confused about the difference between marriage and nikah. Nikah is the religious ceremony of the marriage contract. A mullah will read from the Holy Quran and give a short sermon known as a *khutba*. Mark Reese explains *khutba* as traditional sermon delivered by a mullah at Friday prayers or a special ceremony. [11; 445].

Mark Reese writes that the chapter of the novel which is called "An unexpected happiness" posed some complications for the translator and editors. The first half of the chapter occurs in present continuous, abruptly switching to past tense halfway through the narration. Qodiriy was attempting to depict a customary wedding in a way that would be credible to Central Asians, he used precepts within Islamic Law as part of the narration style. Islamic Law states that the bride and her witnesses, *the Yangas*, must affirm the marriage contract with "I gave in marriage," with the groom and his witnesses replaying: "I have accepted". This part of the wedding ceremony would be referred to as the Nikoh – the actual acceptance by the husband of his new bride. [11; 445]

Abdulla Qodiriy: Kumushbibidan vakolat olish ham juda qiyin bo'ldi. Domlaning: Sizkim Kumushbibi Mirzakarim qizi, o'zingizni toshkandlik, musulmon Otabek Yusufbek hoji o'g'liga bag'ishlamoq vakolatini amakingiz Muhammadrahim Yo'ldosh o'g'liga topshirdingizmi? Degan so'rog'i olti, yetti qaytarilg'andan keyin, shunda ham yangalar qistog'i ostida arang uning rizolig'i olindi. [9; 57] The target text where the word yanga is transliterated by Mark Reese: "It was difficult to get Kumush to agree. The mullah repeated the question six or seven times: "Will you, Kumush Bibi, the daughter of Mirza Karim, give your authority to Muhammad Rahim, son of Yuldosh, your uncle, to offer your hand in marriage to Otabek, son of Yusufbek Hajji, a devout Muslim from Tashkent? Do you agree to this?" she finally acquiesced, though only after her yangas pressured her to accept." [11; 78] Mark Reese explains the word yanga as: ""Sister-in-law" or "wife of an elder brother", but here we could consider them also witnesses to the consummation of the marriage and protectors of tradition and values." [11; 442]

Carol Ermakova gives English equivalent of the word *yanga* as *matchmaker*: "Obtaining the bride's agreement to the marriage turned out to be quite a tricky task; *the mullah* had to repeat his question several times: "Did you, Kumush-bibi, daughter of Mirzakarim, charge your uncle Mohammed Rakhim, son of Yuldash, to give you as wife to this Muslim from Tashkent, Atabek, son of Yusufbek-hadji?" Only after the question had been asked six or seven times and only at the prompting of the *matchmakers*, did they manage to obtain Kumush's reluctant agreement. [10; 60]

During the nikah, the groom gives *mahr*, the gift, to the bride. Mahr can be money or gold jewellery. Mark Reese gives explanation of the word *mahr* in the



endnotes as "bride price". [11; 445] Actually it can be anything that the bride desires. In Uzbek marriage usually ring is used as a gift. There is the text where the word mahr is used in the original passage. Abdulla Qodiriy: "Ko'b tortishqandan so'ng quyidag'I mablag'lar mahr qilib belgulanadirlar..." [9; 58] Carol Ermakova translated this text as: Once the young lads had brought Atabek before the mullah, the negotiations with representatives of the groom's side began. Ziya-shakhichi (acting in place of the father) was negotiating for the groom, and Muhammed Rakhim for the bride. They were discussing the property the groom should give his future wife, in full ownership. After a prolonged negotiation, the following agreement was reached: the bride would receive three hundred gold tilla; the groom would pledge to buy a spacious house in Margilan after the wedding; one milking cow, household goods ... Once Atabek had agreed to all these terms, the mullah moved on to performing the nikhoh rite. As is customary in Islam, he read the prayer exalting Allah, and the prayers honouring the prophet and, finally, he arrived at the most delicate question: "Atabek, son of Yusufbek-hadji, do you agree to take as your wife in sharia, Kumush, daughter of Mirzakarim?" he asked in Farsi. [10; 60] Carol Ermakova can give linguocultural importance of this passage successfully. She translates mahr as "the property". After nikah the groom and bride are considered religiously married. The mullah proclaims praises to Allah, with upturned hands, all participants proclaim "Amen" and with that the marriage ritual will be over. All the recited prayers are for the happiness of bride and groom.

**Conclusion:** In sum, when an equivalent is not found in the TL, translators interpret this word into their native language in the content of the foreign word. The linguoculturological research of the culture-specific word *nikah* reveals that the simpler solution for translating this realia is transliteration and giving explanation in the footnote or endnote. In the given table you can see the words which are difficult to translate because of the cultural difference of the Uzbek and English languages, and how the translators deal with these words in the translation versions of the novel:

Uzbek	English		
source language	target language		
Abdulla Qodiriy	Carol Ermakova	Mark Reese	
Nikoh [9; 58]	Nikhoh [10; 61]	Nikah [11; 80]	
Yanga [9; 57]	Matchmaker [10; 60]	Yanga [11; 78]	
Xutba [9; 58]	Performing the nikhoh rite [10;	Khutba [11; 79]	
	61]		
Domla [9; 58]	The mullah [10; 61]	The mullah [11; 78]	
Omin [9; 58]	Amen [10; 61]	Amen [11; 80]	
Mahr [9; 58]	The property [10; 60]	Mahr [11;79]	
Salovot [9; 58]	The prayers honouring the	Salawat [11;79]	
	prophet [10; 61]		

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#### **UDC: 811**

## STRATEGIES AND TACTICS OF ORAL MEDICAL DISCOURSE IN THE FIELD OF "DOCTOR-PATIENT"

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Annotatsiya. Tibbiy diskurs odamlarning hayoti va sog'lig'iga oid mavzularda kommunikativ faoliyatni o'rganadi va antropotsentrik va funktsional lingvistik yondashuvlar nuqtai nazaridan alohida e'tiborga loyiqdir, chunki turlicha lingvistik ta'sirlarning har xil turlarini tahlil qilish mutaxassislar o'rtasidagi professional muloqotni ham, shifokor va bemorning o'zaro ta'sirini ham qamrab oladi, ikkinchisi esa tibbiy yordamning asosiy ob'ekti va sub'ekti hisoblanadi. Ushbu maqolada professional nutqni o'rganish muammosi kognitiv-lingvistik yondashuv doirasida maxsus maqsadlar uchun ingliz tilini ko'p bosqichli tadqiq qilish jarayoni bilan chambarchas bog'liq.

**Kalit so`zlar:** Tibbiy dislurs, professional nutq, kognitiv tilshunoslik, antroposentrizm, leksikografiya, konseptual metafora.

**Аннотация.** Медицинский дискурс изучает коммуникативную деятельность, касающуюся темы жизни и здоровья людей, и заслуживает особого внимания с точки зрения антропоцентрического и функционального лингвистического подходов, поскольку анализ различных видов языковых



взаимодействий профессиональное общение охватывает как специалистами, так и взаимодействие специалиста и пациента, при этом, одновременно субъектом основным объектом И последний является медицинской помощи. В этом статье изучена проблема исследования профессионального дискурса тесно связана с процессом многоуровневого исследования английского языка для специальных целей в рамках когнитивнолингвистического подхода.

**Ключевые слова**: медицинский дискурс, профессиональная речь, когнитивная лингвистика, антропоцентризм, лексикография, концептуальная метафора.

**Abstract.** Medical discourse studies communicative activities related to the topic of life and health of people, and deserves special attention from the point of view of anthropocentric and functional linguistic approaches, since the analysis of various types of linguistic interactions covers both professional communication between specialists and the interaction of a specialist and a patient, while the latter is at the same time the main object and subject of medical care. In this article, the problem of researching professional discourse is closely related to the process of multilevel research of English for specific purposes within the framework of the cognitive-linguistic approach.

**Key words**: medical discourse, professional speech, cognitive linguistics, anthropocentrism, lexicography, conceptual metaphor.

**Introduction.** Currently, there is no single scientific position regarding the independence of the discipline called medical linguistics, however, some researchers talk about the need to separate it from the circle of linguistic sciences. This problem worries linguists of domestic and foreign linguistics.

The topicality of identifying and describing the linguistic and cultural specifics of a scientific text is due to a number of factors.

**Literary review.** Scientific works of local and foreign linguists studying the problems of medical discourse (L.S. Beilinson, V.V. Zhura, E.A. Kostyashina, Yu.V. Rudova, S.V. Maiboroda, I.F. Shamara, K.A. Kerer, T.V. Kochetkova, M.I. Barsukova, E.A. Rempel, A.Ya. Ramazanova, S.I. Madzhaeva, L.M. Kasimtseva, etc.).

**Research methodology.** The main research methods are descriptive, the method of linguistic observation and interpretation of language units, discourse analysis (structural, contextual, intentional analyses), a quantitative method (to identify the frequency of the studied phenomena), as well as sociolinguistic methods of participant observation and questioning of participants in discursive events.

**Analysis and results.** Taking into account the stylistic coloring in our materials, we can distinguish between official and unofficial etiquette formulas. When studying etiquette formulas in the doctor-patient communication system, we identified three aspects of their functioning in speech:

- 1) formulas for the beginning and end of the conversation (hello, goodbye);
- 2) maintaining a dialogue (please, thank you);
- 3) genre representation of the main groups of speech etiquette (request, advice, recommendation).



In the process of research, we have achieved certain results regarding the lexicographic representation of medical concepts in various types of dictionaries. It follows from the foregoing that, on the one hand, specialized terminological dictionaries represent medical terms in the traditional way, using a known range of linguistic means close to the presentation of a scientific text. At the same time, in some cases, comments are used to explain the meanings of the most complex facts, phenomena, processes and corresponding linguistic expressions. The algorithm for representing concepts related to certain diseases is based on the anthological unity of the fundamental concepts of the conceptual field of medicine, i.e. symptoms, causes, therapy, preventive measures.

Starting to communicate with the patient, the doctor must immediately establish contact with the patient, determine the general tone of the conversation. Units of speech etiquette help to establish favorable contact with the patient, arrange him for yourself, and maintain the desired tone of communication.

There are given some examples and to analyze how well-known medical concepts are presented in dictionaries. Take, for example, the word "headache". The Cambridge Dictionary for Advanced Learners presents this block as "a pain you feel inside your head: I've got a headache" literal and figurative "something that causes you great difficulty and worry:

Finding a babysitter for Saturday evening will be a major headache. [Cambridge Advanced Learner's Dictionary, 2005, pp. 590].

The Longman Word Wise Dictionary contains the following definition: "a pain in your head", followed by the example "*I've got a terrible headache*" [Longman Word Wise Dictionary, 2007, pp. 274]. The Longman Dictionary of English Language and Culture defines "*headache*" in its direct meaning: "a pain in the head:

"I always get headaches after reading. I've got a bad headache"

And figuratively: "a difficult or worrying problem:

Trying to make the children eat is one big headache! [Longman Dictionary of English Language and Culture, 2008, pp. 644].

The dictionary of medical terms contains the following definition: "a pain in the head, caused by changes in pressure in the blood vessels feeding the brain which act on the nerves. Also called "cephalalgia" [Dictionary of Medical Terms, 2008, pp. 171]. Thus, despite the fact that one of the most important features of terms is their semantic uniqueness due to meaning and expression, the use of analogues of Latin or Greek origin is inherent in medical terminology. Another very important point is that a dictionary entry can often be accompanied by a comment that indicates the nature and types of the disease (in our case, a headache):

"Headaches can be caused by a blow to the head, by lack of sleep or food, by eye strain, sinus infections and many other causes. Mild headaches can be treated with analgesic and rest. Severe headaches which recur may be caused by serious disorders in the head or nervous system".

Cognitive metaphors can be used for communicative pragmatic purposes in medical discourse, including ethical issues of communication. At the same time, there are situations in which the use of metaphors does not have any positive effect on patients and can be detrimental in the process of establishing mutual understanding



between interlocutors. As already noted, a lot depends on discourse factors, which include such elements as language features, characteristics of the communication situation, conceptual and linguistic relationships of the communicant's worldview. Metaphors play an important role in some situations of decision-making using specific linguistic means, which are especially important from the point of view of medical communication.

The most representative linguistic means of expressing authoritarianism in medical discourse are verbs, adverbs, adjectives, and stable combinations with the semantics of permission (possible, permitted), prohibition (exclude, impossible, by no means! don't even think about it!); obligation (should). At the same time, performative verbs that mark status speech (demand, order) are not used.

The distribution of types of imperative statements in the doctor's speech depends on the stage of discursive interaction. So, at the stage of questioning about complaints and collecting an anamnesis, the imperatives in the doctor's speech, as a rule, perform the function of encouraging the interlocutor to speak and are represented by verbs in the imperative mood (Tell), while when examining the frequency constructions with infinitives (Bend your legs!). Also, "traditional" forms of demand or command during inspection are statements with verbs in 2 liters. pl. h. (Close your left eye, read!). It is believed that statements of this type contain the idea of joint action, which psychologically smooth out the authoritarian speech. Sometimes as a means of inducing immediate action verbs of the indicative mood are used in the past tense (Breathed! // Bent legs!), "when the speaker prescribes actions to be performed, figuratively presented as having already happened".

Characteristic for the authoritarian type of doctor's and patient's discourse are elliptical constructions with a pronounced directive intonation: Direction! (implied <Give direction>), // Wider! (it means <Open your mouth wider>), etc., in which not only performative verbs (order, demand) are reduced, but also verbs that name the required action. In this case, the speaker's intention is exhibited exclusively by the intonation of the utterance and the context. The positive effects of the choice of the considered language means of authoritarian discourse are provided by the clarity and structural completeness of the doctor's speech. Saving speech efforts, relying on the situation and context enable the specialist to use time rationally. Meanwhile, an overly commanding tone, an increase in the volume of the voice and the absence of polite words can be regarded by the patient as rudeness and ignoring him as a person.

Conclusion and recommendations. Thus, a scientific medical text is characterized by specific functionality, communicative situation and content, i.e. has its own special criteria of textually, is a product of the discursive activity of the author - a participant in a certain communicative situation and has the specifics of expressing the author's position, is fixed in writing, is characterized by a specific compositional-content and structural-speech organization and completeness, i.e. has its own functionality. All of the above gives reason to believe that the scientific medical text should be studied in the context of medical linguistics.

It has been established that the variability of the speech behavior of the participants in the medical discourse is due to the used model of the relationship between the doctor and the patient. The system of interaction between the doctor and



the patient is presented within the framework of the typology of behavior models of non-equal status subjects: authoritarian, model of guardianship (paternalism), contract and collegial. The classification is based on the gradation of the degree of manifestation of power in the communication of individuals.

For the first time, a classification of the main and auxiliary strategies of the authoritarian type of discourse in doctor-patient communication was developed, and a set of speech tactics that implement strategies and are specific to the authoritarian type of discourse was identified. It is theoretically substantiated that the main strategies of the authoritarian type of discourse are the strategies of subjugation and discrediting, which are implemented in the dialogue in a complex and separately. Auxiliary strategies include pragmatic ones: directive strategy, negative motivation strategy, encouragement strategy; rhetorical: attracting attention, control of understanding; dialogue: one-sided control of the initiative and topic in the dialogue, ignoring strategy.

The results of the study made it possible to conclude that a hybrid model of communication is currently used in medical discourse, which includes strategies and tactics of both authoritarian and collegial types of discourse.

The prospects for the study are to clarify the existing classification of strategies, create a similar classification of strategies and tactics of the patient, study the characteristics of the linguistic personality of the doctor and the patient, and create an appropriate classification of the types of linguistic personality.

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### UDC: 811.11 PRAGMATIC FEATURES OF TRANSLATING NOVELS

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Annotatsiya. Ushbu maqola badiiy asarlarni tarjima qilish jarayonida pragmatikaning ahamiyatiga e'tibor qaratadi. Pragmatika so'zlovchilarning lingvistik belgilarga bo'lgan munosabati muloqotga qanday ta'sir qilishini o'rganadi. Tarjimonning vazifasi esa xuddi shu pragmatik elementlarni asl matndan tarjima qilingan tilga yetkazishdir. Agar tarjimon asl matnni modernizatsiya qilsa, bu sifatsiz tarjimaga olib kelishi mumkin, chunki asl nusxadagi pragmatik elementlar tarrjimaning muhim aspektlaridan bri hisoblanadi. Maqolada tarjima jarayonida asl matnning pragmatik elementlarini saqlash muhimligi ta'kidlangan. Tahlil qismiga keladigan bo'lsak, tarjima jarayonida pragmatik xususiyatlar qanchalik muhimligini ko'rsatish uchun romanlardan ba'zi misollar tanlab olingan.

Kalit so'zlar: pragmatika, manba matn, tarjima matni, pragmatik salohiyat

Аннотация. В данной статье исследуется значение прагматики в процессе перевода литературы. Прагматика относится к изучению того, как отношение говорящих к языковым сигналам влияет на общение. Ответственность переводчика состоит в том, чтобы передать те же прагматические элементы из исходного текста в переведенную версию. Если переводчик модернизирует исходный текст, это может привести к некачественному переводу, так как могут быть утрачены прагматические элементы оригинала. В статье подчеркивается важность сохранения прагматических элементов исходного текста в процессе перевода. Что касается анализа, некоторые примеры из романов были выбраны, чтобы проиллюстрировать, насколько прагматические особенности имеют решающее значение в процессе перевода.

**Ключевые слова:** прагматика, исходный текст, целевой текст, прагматический потенциал.

Annotation. This article explores the significance of pragmatics in the translation process of literature. Pragmatics refers to the study of how speakers' attitudes towards linguistic cues impact communication. The translator's responsibility is to convey the same pragmatic elements from the original text into the translated version. If the translator modernizes the original text, it may result in a low-quality translation, as the pragmatic elements of the original may be lost. The article emphasizes the importance of preserving the pragmatic elements of the original text in the translation process. Regarding the analysis, some of the examples from novels were selected to illustrate how pragmatic features are crucial during the translation process.

Key words: pragmatics, source text, target text, pragmatic potential

**Introduction.** Language is a reflection of a person's thought process since it is a cultural product. It is natural that individuals who communicate using different languages have difficulty understanding communications written in those languages as their perspectives on life are different. The same situation holds true for the language



of novels. A translator, or someone who can cross a cultural divide in such a human encounter, is therefore desperately needed.

As Hatim and Munday mentioned, the translation is "a written text rendering process from a source language into a target language" [2;6]. In this case, translation is viewed from its making process rather than a final product. During the translation process, dealing with pragmatics is very important.

**Literature review.** When the Greek term "pragma" is translated, it denotes work and action, which is why pragmatics is significant in translation. In the late 1930s, the word "pragmatics" was first used. Ch. Morris first identified it as a subfield of semiotics. He classified it into three categories:

- 1. Semantics the study of how symbols relate to objects;
- 2. Syntax the study of how symbols relate to one another.
- 3. Pragmatics focuses on the speaker's attitude towards linguistic cues.

Ch. Morris later points out that although these three domains are first grouped together, the concept of "pragmatics" is significantly more expansive than that of syntax and semantics [4;89].

According to some authors, pragmatics was first introduced to science as a concept from philosophy. "Pragmatics is actually a notion from philosophy, which was used even before Socrates, and later philosophers such as J. Locke and E. Kant adopted it from Aristotle", for instance, according to the latter. The stream of pragmatism in philosophy, therefore, came into being. The extensive propagation of pragmatism's concepts became particularly apparent in the 20s and 30s. It is important to emphasize the contributions of C. Peirce, R. Carnap, C. Morris, and L. Wittgenstein to the propagation of this propaganda in America and Europe [7; 40-41].

The pragmatic aspect of the text in its original context enables it to influence the target audience (reader or listener) positively or negatively and aids the receptor in understanding the author's point of view as stated in the text (or speech). The translator is largely responsible for translating the same pragmatic elements from the original into the translation. The modernization of the original text by the translator, which results in the original text changing, might result in the formation of a low-quality translation when the pragmatic elements of the original are recreated in the translation. When assessing the practical utility of the original and the translation, attention is frequently given to the errors and flaws committed by the translator.

There are two directions in pragmatics:

- 1) focused on the systematic study of the pragmatic potential of language units (texts, sentences, words, as well as phenomena of the phonetic-phonological sphere);
- 2) aimed at studying the interaction of communicants in the process of linguistic communication and building predominantly communicator-centric (auto-centric) communication models [7;210].

According to R.Posner, J. R. Searle, and P.Sgall, research in the first approach aims to find a solution to the problem of defining the boundaries between semantics and pragmatics while also addressing linguistic meanings [6;169]. There are tendencies to include situationally conditioned sides of the propositions expressed in linguistic statements and the speech functions of linguistic statements in the field of pragmatics,



and context-independent truth conditions of propositions/statements in the field of semantics.

Pragmatic potential is, particularly, the pragmatic effect of the information in the text on the receptor, that is, the information reflected in the text affects the feelings of the receptor, evokes a certain emotional reaction, and so on. Reflecting the pragmatic possibilities of any text is difficult for the translator for a number of reasons. Let's use the words kindness, love, and compassion as an example when translating the Uzbek language into a foreign language. These words enhance and complete one another with profound meaning. The accurate translation of these idioms into other languages is a challenging task, regardless of how strange it may seem. With regard to translation of novel with cultural references, F.Bekmurodova provided some points on the link between culture and translation and their affect on pragmatic meaning of the text. As she stated, "the expressions analyzed under lingua-pragmatics have a unique value in being used as they are in social interaction: changing them in any way different from the norm would imply either changing the social values expressed by them as in the examples" [1;14]. Moreover, researchers including I.Tukhtasinov and N.Pardayeva, in their articles, discussed some of the problems that can appear during the translation of novels[5;318].

**Research methodology.** Reproducing the original pragmatic elements in the translation is challenging for the translator for a number of reasons. The pragmatic meaning expressed in the original text is partially restored in Russian, fully restored in Uzbek, and vice versa, even though the Uzbek translator does not understand the original text and can express the pragmatic meaning using the native language. Because the original pragmatic meaning does not exist in Russian or Uzbek, pragmatic potential can be entirely restored in Russian and partially restored in Uzbek, as well as conveyed through various sorts of transformations.

In order to get our desired result, we would like to analyze some of the examples taken from Uzbek novels.

**Analysis and results.** To provide the reader a clear understanding of the original pragmatic meaning, the Russian and Uzbek translator added the word "Columbus" to the translation in the example below.

In English: The hotel, into which they were thus summarily introduced, was a rather remarkable specimen for the time and place.

In Russian: Отель, куда они так неожиданно попали, был для того времени и для горда Колумбуса весьма примечательным заведением.

In Uzbek: Ona-bola nogohon ish boshlagan musofirxona o'sha paytlar uchun ham, Kolumbus shahri uchun ham nihoyatda ajib bir dargoh sanalardi.

The foundation for a translation's accurate reproduction of pragmatic indications or signs in the source language is laid by accurate identification of those terms chosen by a translator.

In order to maintain the original pragmatic sense and improve the reader's comprehension, the translator will occasionally translate some sentences based on the context. Let's focus on the translation of the following phrase into Uzbek as an illustration:

In English: "I say, Bill, I've sprained my ankle".



In Russian: Слушай, Билл, я вывихнул ногу!

In Uzbek: Menga qara, Bill, oyog'imni chiqarib oldim! – deb qichqirdi.

It may be translated as "Bill, oyog'imni chiqarib oldim" if the English statement above were translated by a translator who was unaware of the context. Because of this, the context is crucial in maintaining the pragmatic meaning.

However, there are some circumstances in which understanding the context alone is insufficient. In these situations, the translator must additionally be familiar with the phraseological structures, idioms, and phrases used in the original and translation languages. Because the practices, traditions, ideas, and expressions of the people who use this language also represent the pragmatic elements of the original text. The pragmatic potential of the original text is diminished when such pragmatic indications that demonstrate the distinctive characteristics of a national language are dismissed, transformed into a generalizing phrase, or translatedI literally. If we pay close attention to the following sentence and its alternatives:

In English: Bill staggered on through the milky water.

In Russian: Билл ковылял дальше по молочно-белой воде.

In Uzbek: Bill oyoqlarini sudrab sutdek oppoq suvdan kechib borardi.

The translation was a little ambiguous in this case because the word "milky water" was translated literally. The phrase "milky white water" is not utilized in Uzbek hence, it is not natural for Uzbek readers to use it.

One of the things that lessens the creative and aesthetic spirit of the original is the omission of words with pragmatic significance that are present in the original text from the translation, or the replacement of those words with other sentences, or errors in portraying the sequence of events. Here, it would be pragmatically clear it it was translated as "tip-tiniq suv" instead of "milky water". Because the main point here to keep the pragmatic meaning of the source text and deliver it to the reader appropriately.

Conclusion. To sum up, the following factors are taken into consideration while translating pragmatic characteristics from novels. The setting and circumstances portrayed in the work, as well as the time period and culture at the time the work was created, the personalities of the people in the work, and the particular contexts in which the lexical units employed in the original were utilized, are all crucial factors. The translator must maintain objectivity towards the original text when recreating the pragmatic traits of the original in the translation. Otherwise, the translator's personality could alter what the original text means in the translation, making the intended outcome less likely to occur. A complete command of the language is not always sufficient to preserve the original pragmatic meaning because some words are employed in the text to convey meanings that are not indicated in dictionaries. In these cases, lengthy phrases must be translated depending on the context. In other words, the context of these words can be studied to determine their meaning.

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#### MODERN PROBLEMS OF TECHNICAL SCIENCES

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#### ALGORITHMS FOR INVESTIGATION OF AVERAGE DELIVERY TIME AND PROBABILITY DISTRIBUTION FUNCTIONS FOR TIMELY DELIVERY OF MESSAGES (PACKETS) OF THE k -th PRIORITY IN DATA TRANSMISSION NETWORKS

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**Annotatsiya:** Ushbu maqola ma'lumotlarni uzatish tarmoqlarida *k*-prioritetli xabarlarni (paketlarni) oʻrtacha yetkazib berish vaqtini va oʻz vaqtida yetkazib berish ehtimolligining taqsimlanish funksiyasini tadqiq qilish algoritmlarini ishlab chiqishga bagʻishlangan.

Ishlab chiqilgan algoritmlar xabarlar prioritetining turli qiymatlari uchun ma'lumotlarni uzatish tarmogʻining ishonchlilik koʻrsatkichlarini tadqiq qilish imkonini beradi.

**Kalit soʻzlar**: ma'lumotlarni uzatish tarmogʻi, xabar, prioritet, algoritm, ishonchlilik, xabarning kelish intensivligi, xabarlarga xizmat koʻrsatish intensivligi, tarmoqning tiklanish intensivligi

**Аннотация:** Данная статья посвящена разработке алгоритмов исследования среднего времени доставки и функции распределения вероятности своевременной доставки сообщений (пакетов) k-го приоритета сети передачи данных. Разработанные алгоритмы позволяют проводить исследование надежностных показателей сети передачи данных при разных значениях приоритета сообщений.

**Ключевые слова:** сеть передачи данных, сообщение, приоритет, алгоритм, надежность, интенсивности поступления сообщений, интенсивности обслуживания сообщений, интенсивность восстановления сети



**Abstract:** This article is devoted to the development of algorithms for studying the average delivery time and the distribution function of the probability of timely delivery of messages (packets) of the k-th priority of the data transmission network. The developed algorithms make it possible to study the reliability indicators of a data transmission network for different values of message priority.

**Keywords:** data transmission network, message, priority, algorithm, reliability, message arrival rate, message service rate, network recovery rate

**Introduction.** At present, telecommunication technologies are developing at a rapid pace, which are the basis for creating a single information space for the whole society. In turn, the information space is an important component of any type of activity as a set of information resources, information technologies, software and hardware for computing and telecommunications, telecommunications data networks [1, 2].

networks are networks with a complex architecture. The data transmission network includes a large number of equipment of various types and for various purposes with complex software and protocols. This equipment is interconnected by various types of communication lines [3 - 5].

The variety of messages that are transmitted in data networks can be divided into some subsets - categories to which identical requirements are imposed on the part of the control system. In order to meet the requirements of the management system for the relevant categories, regulation of messages by category is used, and each of the categories is assigned a certain advantage rank (priority).

In [6], based on the Laplace-Stieltjes transformation, a mathematical model of the data transmission network control system was obtained with an absolute priority message (packet) service discipline, which allows determining the pre-failure state of the data transmission network for various parameters.

The average delivery time of messages (packets) of the k-th priority of the data transmission network with ideal reliability [6]:

$$T_{k} = \sum_{i=1}^{n} \frac{2\mu_{k} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) - \lambda_{k}}{2\mu_{k} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) \left[\mu_{k} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) - \lambda_{k}\right]} \left(1 + \frac{\mu_{k} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right)}{d}\right). (1)$$

The average delivery time of messages (packets) of the k-th priority of the data transmission network with real reliability [6]:

$$T_{k} = \sum_{i=1}^{n} \frac{2\mu_{k} \left(K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) - \lambda_{k}}{2\mu_{k} \left(K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) \left[\mu_{k} \left(K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right) - \lambda_{k}\right]} \left(1 + \frac{\mu_{k} \left(K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right)}{d}\right), (2)$$

where  $K_A$  - the availability factor of the data transmission network;

 $\lambda_i$  - the intensity of the message arrival of the i -th message;

 $\mu_i$ - message service rates of the i-th message;

 $\lambda_k$  - intensity of receipt of messages of the k -th priority;

 $\mu_k$  - service rates for messages of the k -th priority;



d - intensity of network recovery.

Figure 1 shows an algorithm for studying the average delivery time of messages (packets) of the k -th priority of the data transmission network. The algorithm consists of nine blocks and works as follows.

Block 1. Input of initial data for research (a special case for research is ideal reliability, with  $K_A = 1$ ).

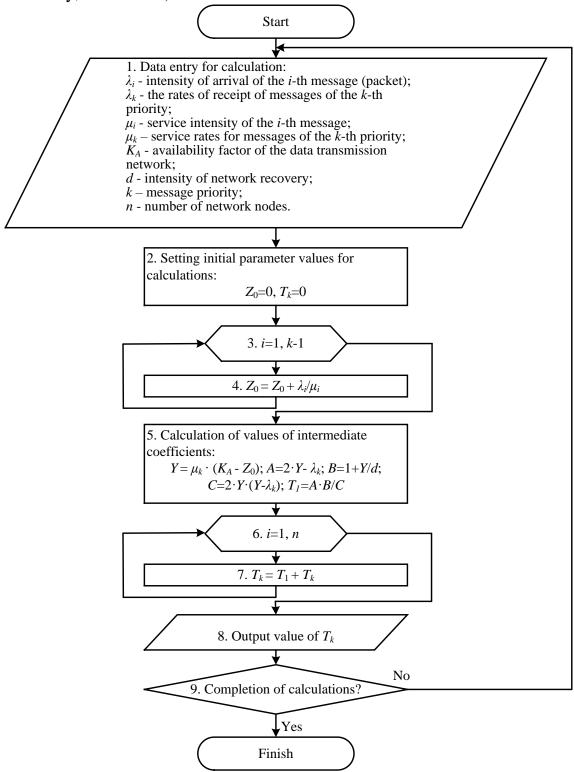


Fig.1. Algorithm for studying the average delivery time of messages (packets) of the k-th priority of the data transmission network



Block 2. The initial values of the parameters of the variables used for further calculations and research are set.

Blocks 3, 4. Organization of the cycle for calculating the value of  $Z_0$   $(Z_0 = \sum_{i=1}^{k-1} \frac{\lambda_i}{\mu_i})$  for a given service priority k-th , used in further calculations.

Block 5. Calculation of the values of various intermediate coefficients, which are used to calculate the average delivery time of messages (packets).

Blocks 6, 7. Organization of a cycle for calculating the average delivery time of messages (packets) for given n nodes.

Block 8. Displaying the value of the average message (packet) delivery time.

Block 9. If it is necessary to continue calculations with other values of the parameters, go to block 1.

In [7], a mathematical model of the data transmission network control system is proposed, which, with an absolute priority discipline of servicing messages (packets), allows to determine the pre-failure state of the network by controlling the excess of the probability of timely delivery of messages (packets) of an acceptable value:

$$W(t) = 1 - \frac{\lambda \cdot V}{C_e \cdot K_A} e^{-\left(\frac{\lambda \cdot V}{C_e \cdot T \cdot K_A}\right)^t}, \tag{3}$$

where  $\lambda$  - the intensity of the flow and message (packets) arrival;

*V* - the volume of the flow and message (packets);

 $C_e$  - throughput of channels, nodes, etc.

T - the first moment of the probability of on-time delivery.

Figure 2 shows the algorithm for studying the distribution function of the probability of timely delivery of messages (packets).

To build the algorithm (Fig.2), in addition to the given variables, according to the analytical expression (3), additional variables were used:

 $t_{BEG}$  - initial value of the calculation time;

 $t_{FIN}$ - the final value of the calculation time;

 $\Delta t$  - the calculation time increment;

 $t_{CUR}$  - the current value of the calculation time;

$$A = \frac{\lambda \cdot V}{C_e \cdot K_A} - \text{scale factor.}$$

The algorithm works as follows.

Block 1. The values of all necessary variables are entered, the initial, final calculation time, calculation time increment are set.

Block 2. The scale factor is calculated.

Block 3. Organization of the cycle from the initial calculation time ( $t_{BEG}$ ) to the final calculation time ( $t_{FIN}$ ) in increments ( $\Delta t$ ).



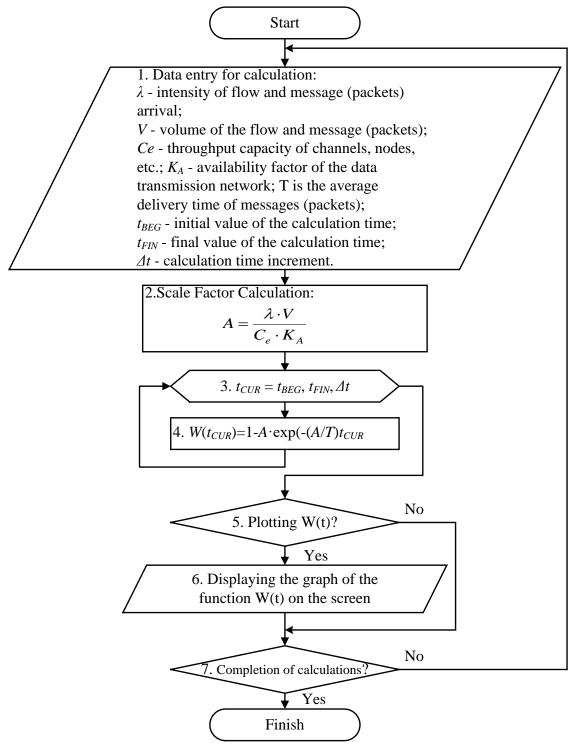


Fig.2. Algorithm for studying the distribution function of the probability of timely delivery of messages (packets)

Block 4. Calculation of the value of the distribution function of the probability of timely delivery of messages (packets) at the current value of time ( $t_{CUR}$ ). Determination of the next value of the current calculation time ( $t_{CUR} = t_{BEG} + \Delta t$ ). If the value of the current calculation time has become greater than the value of the final calculation time ( $t_{CUR} > t_{FIN}$ ), then the loop is exited and the transition to block 5, otherwise the transition to block 3, the cycle continues.



Block 5. Displaying the graph of the distribution function of the probability of timely delivery of messages (packets) to the screen. If the graph needs to be displayed, go to block 6, otherwise go to block 7.

Block 6. Displaying the graph of the function W(t) on the screen.

Block 7. Completion of calculations. If it is necessary to continue calculations, then there is a transition to block 1, otherwise - the end of calculations.

In [6], on the basis of an approximate method, the probability distribution functions for the timely delivery of messages (packets) were obtained. To find the distribution function of the probability of timely delivery of messages (packets) of the k-th priority with ideal reliability, an inverse transformation is defined:

$$Q_{\kappa}(v) = \left[ \frac{e^{-v_{k_i}/\mu_k} (1 - \lambda_k / \mu_k)}{1 - \frac{\lambda_k}{v_{k_i}} (1 - e^{-v_{k_i}/\mu_k})} \right]^n (v_{ki} > 0, \ \mu_k \ge \lambda_k), (4)$$

Where

$$v_{k_i} = v_k \left[ 1 + \frac{\mu_k \left( 1 - \sum_{i}^{k-1} \frac{\lambda_i}{\mu_i} \right) \cdot \left( 1 - \left( 1 - \sum_{i}^{k-1} \frac{\lambda_i}{\mu_i} \right) \right)}{v_k \left( 1 - \sum_{i}^{k-1} \frac{\lambda_i}{\mu_i} \right) + d} \right];$$

 $v_k$ - aging rate of messages (packets) of the k-th priority.

However, due to the complexity of obtaining the distribution function of the probability of timely delivery of messages (packets) of the k -th priority with ideal reliability, we use an approximate method [6]:

$$W_{k}(t) = 1 - \sum_{i=1}^{k} \frac{\lambda_{i}}{\mu_{i} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right)} \exp \left(-\frac{\sum_{i=1}^{k} \frac{\lambda_{i}}{\mu_{i} \left(1 - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}}\right)}}{T_{k}}\right) t. (5)$$

The distribution function of the probability of timely delivery of messages (packets) of the k -th priority with real reliability is determined [6]:

$$W_{k}(t) = 1 - \sum_{i=1}^{k} \frac{\lambda_{i}}{\mu_{i} \left( K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}} \right)} \exp \left( -\frac{\sum_{i=1}^{k} \frac{\lambda_{i}}{\mu_{i} \left( K_{A} - \sum_{i}^{k-1} \frac{\lambda_{i}}{\mu_{i}} \right)}}{T_{k}} \right) t. (6)$$



Figure 3 shows the algorithm for studying the distribution function of the probability of timely delivery of messages (packets) of the k-th priority, which consists of 11 blocks and works as follows.

Block 1. Input of initial data for research (a special case for research is ideal reliability, with  $K_A = 1$ ).

Block 2. The initial values of the parameters of the variables used for further calculations and research are set.

Blocks 3, 4, 5, 6. Organization of nested loops for calculating the value of  $Z_0$  ( $Z_0 = \sum_{i}^{k-1} \frac{\lambda_i}{\mu_i}$ ) with a given service priority k used in further calculations. Calculation of

the values of various intermediate coefficients, which are used in the future when calculating the distribution function of the probability of timely delivery of messages (packets).

Blocks 7, 8. Organization of a cycle for calculating the value of the distribution function of the probability of timely delivery of messages (packets) k-th priority. W(t) is calculated at the current time value ( $t_{CUR}$ ), determining the next value of the current calculation time ( $t_{CUR} = t_{BEG} + \Delta t$ ). If the value of the current calculation time has become greater than the value of the final calculation time ( $t_{CUR} > t_{FIN}$ ), then the loop is exited and the transition to block 9, otherwise the transition to block 7, the cycle continues.

Block 9. If the graph of the distribution function of the probability of timely delivery of messages (packets) needs to be displayed on the screen, go to block 6, otherwise go to block 7.

Block 10. Displaying the graph of the function W(t) on the screen.

Block 11. Completion of calculations. If it is necessary to continue calculations, then there is a transition to block 1, otherwise - the end of calculations.



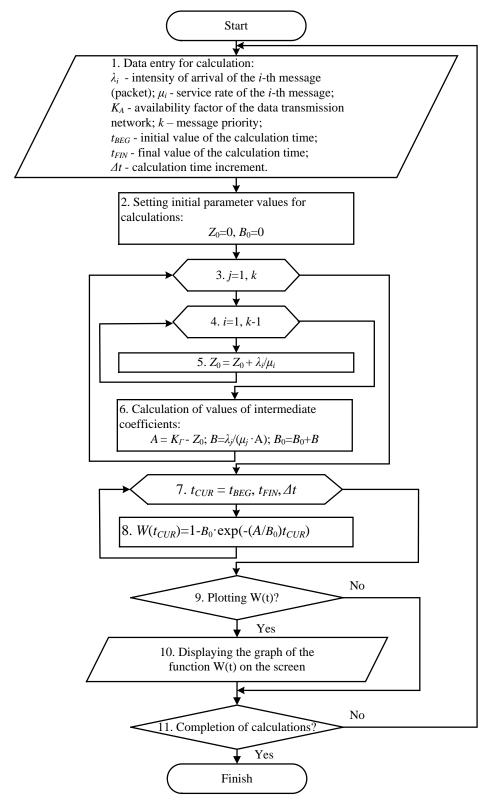


Fig.3. Algorithm for studying the distribution function of the probability of timely delivery of messages (packets) of the k -th priority

On the basis of analytical expressions (2), (3), (6) [6, 7] and the developed algorithms, programs [8 - 11] were developed and numerical simulation was carried out using the application software package MATLAB. The obtained results confirm the correctness of the implemented algorithms.



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#### UDK 621.396.218

# ALGORITHM FOR CALCULATION OF THE FRACTAL MODEL OF THE FLUCTUATIONS OF THE DIELECTRIC CONSTANT DEPENDING ON TWO VARIABLES FOR THE TROPOSPHERE LAYER OF THE ATMOSPHERE

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Annotatsiya: Fraktallar nazariyasi, ya'ni kasr operatorlari orqali hisoblash usuli deyarli barcha sohalarga kirib bormoqda. Shu munosabat bilan fraktallar asosida tekis elektromagnit toʻlqinlarning tarqalishini modellashtirish, ikki oʻzgaruvchiga bogʻliq holda dielektrik yutilish tebranishlarining fraktal modelining algoritmini ishlab chiqish va hisoblash algoritmi yaratildi.

Kalit so'zlar: Yassi elektromagnit to'lqin, fraktal, fraktal muhit, signalning

**Аннотация:** Теория фракталов, т. е. метод вычислений через дробные операторы, проникает почти во все области. В связи с этим на основе фракталов было создано моделирование распространения плоских электромагнитных волн, разработан алгоритм и алгоритм расчета фрактальной модели колебаний диэлектрического поглощения в зависимости от двух переменных.

**Ключевые слова:** плоская электромагнитная волна, фрактал, фрактальная среда, модель распространения сигнала, телекоммуникационные сети, электрические сети, тропосфера, алгоритм.

**Abstract:** The theory of fractals, i.e., the method of calculation through fractional operators, is entering almost all fields. In this regard, on the basis of fractals, the modeling of propagation of plane electromagnetic waves, the development of an algorithm and the calculation algorithm of the fractal model of dielectric absorption fluctuations depending on two variables were created.

**Keywords:** Flat electromagnetic wave, fractal, fractal environment, signal propagation model, telecommunication networks, electric networks, troposphere, algorithm.

**Intoduction**. Usually, solving problems of propagation of electromagnetic waves (signals) in a turbulent atmosphere in a traditional approach  $\varepsilon(x, y, z, t)$  the dielectric constant of the medium is taken as a random quantity, and the scalar differential equation describing wave propagation is taken as a random process. There is no systematic solution of the equation. To solve the problem, certain laws of random variable and random process probability distributions (such as the normal distribution law, Poisson, Rayleigh distribution laws, etc.) are adopted in advance, and then the statistical characteristics of the wave field (statistical characteristics of the propagated signal) are estimated using numerical or simulation modeling methods. is carried out [1-2].



A plane wave in which the values of the field vectors are the same at all points of the wave front is called a uniform plane wave. For this  $\varepsilon = \langle \varepsilon \rangle + \varepsilon_1$  is taken as, here  $\langle \varepsilon \rangle$  — absorption  $\varepsilon$  the average value of and  $\varepsilon_1 = \varepsilon - \langle \varepsilon \rangle$  — fluctuating part. It is known,  $\langle \varepsilon \rangle = 0$  is equal. Small value fluctuations  $0\langle |\varepsilon_1| \rangle << \langle \varepsilon \rangle$  means that. Эканлигини билдиради. This condition is fulfilled very precisely in the troposphere, here  $\langle \varepsilon \rangle$  order is equal to 1,  $\langle |\varepsilon_1| \rangle \approx 10^{-5} \div 10^{-6}$ .  $\langle |\varepsilon_1| \rangle << \langle \varepsilon \rangle$  a must  $\langle \varepsilon \rangle$  can be broken in the layer near the ionosphere, which becomes zero, this case is not considered,  $\langle \varepsilon \rangle = const$  limited by the situation. Then  $\langle \varepsilon \rangle = 1$  if it is considered,  $\varepsilon = 1 + \varepsilon_1$  and  $\langle |\varepsilon_1| \rangle << 1$  is taken. In this case,  $\varepsilon_1$  goes directly to the wave equation. It is a random variable due to the transfer of the wave equation to the stochastic equation.

Of the troposphere through the Weierstrass function n modeling of refractive index fluctuations is reviewed in [1–6]. In a one-dimensional case, this model looks like this:

$$n_{1}(z) = p_{1} \frac{\left\{2\left\langle n_{f}^{2}\right\rangle \left[1 - b^{2(D-2)}\right]\right\}^{\frac{1}{2}}}{\left[1 - b^{2(D-2)(N+1)}\right]^{\frac{1}{2}}} \times \left(1\right)$$

$$\times \sum_{n=0}^{N} b^{2(D-2)} \cos\left(2\pi b^{n} \frac{z}{L} + \varphi_{n}\right),$$

here:  $\frac{\left\{2\left\langle n_f^2\right\rangle\left[1-b^{2(D-2)}\right]\right\}^{\frac{1}{2}}}{\left\lceil1-b^{2(D-2)(N+1)}\right\rceil^{-\frac{1}{2}}}$  coefficient of normalization;

 $p_1$  – in the inertial range  $\langle n_f^2 \rangle$  fluctuations and  $\langle n_1^2 \rangle$  determines the ratio of fluctuations;

b>1 – the spatial-frequency scaling parameter;

D- a fractal dimension that takes the value 5/3 in one-dimensional fluctuations;

N+1- the number of scales or intervals in a logarithmic separation;

 $\varphi_n$  –[0;  $2\pi$ ] an arbitrary phase of a uniform distribution in the interval.

On the basis of the above conditions and (1-2) [1, 2, 5, 6] an improved fractal model of dielectric absorption  $\varepsilon_1(z,t)$  depending on two variables of the atmosphere (in particular, the troposphere) was developed [1, 6]:

$$\varepsilon_{1}(z,t) = \sqrt{2}\sigma \frac{\left[1 - b^{2(D-3)}\right]^{\frac{1}{2}}}{\left[1 - b^{2(D-3)(N+1)}\right]^{\frac{1}{2}}} \sum_{n=0}^{N-1} b^{(D-3)n} \times , \qquad (2)$$

$$\times \sum_{m=1}^{M} \sin\left\{k_{0} b^{N} \left[z \cos\left(\frac{2\pi m}{M}\right) + t \sin\left(\frac{2\pi m}{M}\right)\right] + \varphi_{nm}\right\}$$

here:  $\sigma$  – standard deviation;

b>1 – the spatial-frequency scaling parameter;

2 < D < 3 - fractal dimensionality;

 $k_0$  – wave number;

N and M – number of harmonics;

 $\varphi_{nm}$  – optional phase;

t - time;



- z spatial coordinate.
- (2) the expression fully describes the fluctuations of the dielectric constant of the atmosphere.

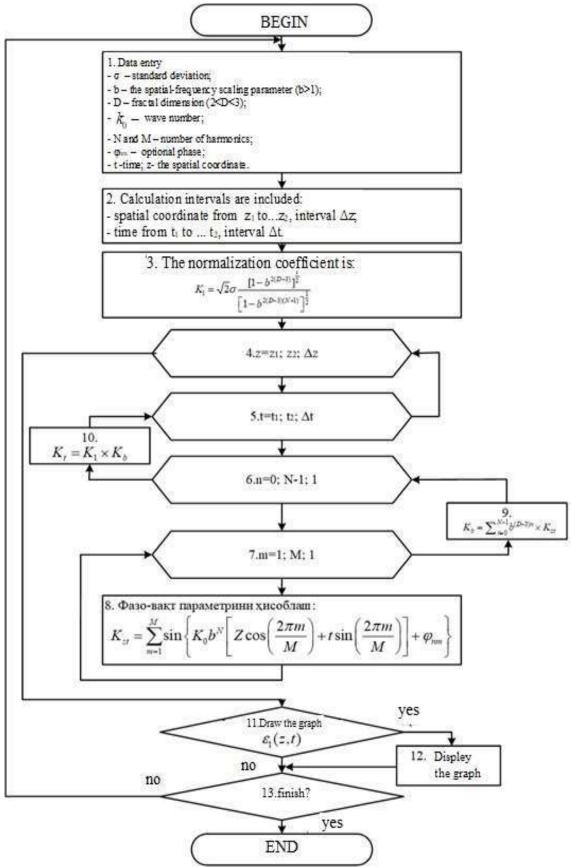


Figure 1. Calculation algorithm of the fractal model of dielectric absorption fluctuations



An algorithm for calculating the fractal model of dielectric absorption fluctuations depending on two variables for the troposphere layer of the atmosphere was developed [1-8]. The working sequence of the proposed structure-algorithm is as follows, and the block diagram of the algorithm is shown in Figure 1.

The sequence of operation of the algorithm is as follows.

Block 1. The following variables are introduced:

- $\sigma$  standard deviation;
- b the spatial-frequency scaling parameter (b>1);
- D fractal dimension (2 < D < 3);
- $k_0$  wave number;
- N and M number of harmonics;
- $\varphi_{nm}$  optional phase;
- t -time; z- the spatial coordinate.

Block 2. Calculation intervals are included:

- spatial coordinate from  $z_1$  to... $z_2$ , interval  $\Delta z$ ;
- time from  $t_1$  to ...  $t_2$ , interval  $\Delta t$ .

Block 3. The normalization coefficient is:

$$K_{1} = \sqrt{2}\sigma \frac{\left[1 - b^{2(D-3)}\right]^{\frac{1}{2}}}{\left[1 - b^{2(D-3)(N+1)}\right]^{\frac{1}{2}}}.$$

4 -, 5 -, 6 -, 7 - blocks. Cycles are organized by z - spatial coordinate, t - time, N and M - number of harmonics.

Block 8.  $K_{zt}$  is a space-time parameter:

$$K_{zt} = \sum_{m=1}^{M} \sin \left\{ K_0 b^N \left[ Z \cos \left( \frac{2\pi m}{M} \right) + t \sin \left( \frac{2\pi m}{M} \right) \right] + \varphi_{nm} \right\} \cdot$$

Blocks 9 and 10.  $K_b$  and  $K_t$  coefficients are:

$$K_b = \sum_{n=0}^{N-1} b^{(D-3)n} \times K_{zt}, \quad K_t = K_1 \times K_b.$$

Block 11. If you need to draw a fractal graph of dielectric absorption fluctuations, go to block 12, otherwise go to block 13.

Block 13. If the calculations are not finished, it goes to the 1st block, otherwise - it is finished.

#### **Conclusion**

An information-graphic model of the flat electromagnetic wave propagation process in the fractal troposphere and an expression of the interdependence of its components, a flat wave incident in the fractal tropospheric environment, dielectric absorption fluctuation and transfer functions of the generator, and a calculation algorithm have been developed.

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#### ACTUAL PROBLEMS IN MODERN ART AND ARCHITECTURE

**UDC: 685.2** 

## INVESTIGATION OF HYGIENIC AND OPERATIONAL INDICATORS OF WORKWEAR OF MINING AND METALLURGICAL PERSONNEL

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Annotatsiya. Ushbu maqolada iste'molchi talablarini hisobga olgan holda maxsus kiyimning gigienik va ekspluatatsion xususiyatlarini o'rganish keltirilgan. Metallurglar uchun ish kiyimlarining xavfli omillari. Shuningdek, maqolada dizaynga qo'yiladigan asosiy ergonomik talab va konchilarning ish kiyimlarini konstruktiv parametrlarini tanlash boʻyicha maʻlumotlar berilgan.

**Kalit soʻzlar**. Kon metallurgiya, konchilar, dizayn, maxsus kiyim, mehnat xavfsizligi, kasb kasalliklari.

**Аннотация.** В данной статье представлено исследование гигиенических и эксплуатационных характеристик специальной одежды с учетом требований потребителей. Факторы вредности спецодежды металлургов. Также в статье



приведены сведения об основных эргономических требованиях к дизайну и выборе конструктивных параметров спецодежды горняков.

**Ключевые слова.** Горная металлургия, горняки, проектирование, спецодежда, охрана труда, профессиональные заболевания.

**Abstract.** This article presents a study of the hygienic and operational characteristics of special clothing, taking into account the requirements of consumers. Factors of harmfulness of overalls of metallurgists. The article also provides information about the basic ergonomic requirements for design and the choice of design parameters of miners' overalls.

**Key words.** Mining metallurgy, miners, design, overalls, labor protection, occupational diseases.

**Introduction.** Globally, consumer demand for special clothing is increasing significantly. According to experts 'estimates, the share of special clothing in the world market in 2016 amounted to 39.4 billion. \$ , 57.2 billion in 2022. dollars. Taking into account the above-established indicators, it is important to develop a special garment that is highly hygienic in order to improve the labor activity of the worker and increase work productivity.[1]

The main requirements for special clothing include protection against the influence of harmful and dangerous factors of production, ensuring labor safety, maintaining the normal functional state of a person and his ability to work. Special clothes themselves should not have a toxic effect on the human body in the process of their use and production.

The main problem of ensuring the safety of workers at the mine is the presence of dangerous and harmful factors of production affecting the human body - gas and dust of the atmosphere at work, high or very low temperatures, high humidity, the human body of water, as well as the impact on individual parts of the body, especially hands, feet, face, head, and also possible mechanical For this reason, occupational diseases are observed in the brogan mine worker, taking long-term work, one of which is pulmonary disease pneumoconiosis. [2]

The biggest influence factor on the human body is dust-80%. The effect of dust depends on many factors: its physical and chemical properties; the size and shape of dust particles; the concentration in the air of the workplace; the duration of its action during the shift and professional experience; other unfavorable production factors and the peculiarities of the labor activity of miners.

The smallest impact on the health of miners is caused by the collapse and impact of objects, moving cars and mechanisms - 25%, electric current, noise, vibration effect - 18%.

Analysis and Results. In this regard, during the work of miners, a survey was conducted on the most characteristic actions. Based on the studies carried out, the following characteristic main actions were identified:

- forward tilt of the body; handshake 50%;
- lateral flexion of body 33%
- the position in which the hands are stretched up, forward, backward 55%;
- bending of the body to the waist-74%;
- knee movement-40%.



Basically, the work of miners was associated with the movement of the lumbar part of the body, which was 73%. The most common occupational disease is radiculitis.

Areas where existing work clothes are most susceptible to friction and pollution

t/r	Custom clothing parts	Friction(in percent)	Pollution (in percent)
1	Shoulder part	44%	53%
2	Upper front	21%	67%
3	Upper middle part	15%	30%
4	Took pants (knee)	80%	70%
5	Side (elbows)	25%	38%

According to Table 1, the most rubbed and, accordingly, contaminated areas are the lower parts of the trousers, as a result of which special clothes become unusable in 3-4 months, not at the required level.

One of the main ones to be applied to the design is the rgonomic requirement. The decisive factor in the choice of constructive parameters of miners 'work clothes is to ensure its dynamic compliance with the characteristic and extreme actions of the worker under certain conditions

A special dress of a mining metallurgical worker.





It was determined from the results of the survey that miners are not very satisfied with the current workwear. Most were protested against the materials produced.

In order to analyze the dynamics of movements, the Navoi mine Metallurgical Combine in Navoi, the Republic of Uzbekistan was carried out in the performance of daily work planned on the shift. The study consisted of studying the condition and types of movement of underground and surface mining workers. Studies have excluded non-character actions and introduced more fast-paced actions.

The object of the study was the sample size of 100 people, accounting for respondents from 25 to 45 years old. As a result of studies, non-character actions were excluded, and more fast-paced actions were introduced (2-table).

## Working positions and actions of miners performed in the process of work. 2-table

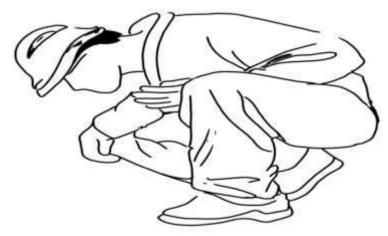
				∠-tat
Unfavorable circumstanc es	a-squatting  B-neck flexion  C-trunk rotation position of the trunk  d-crawling	A  B  C	a-the body is bent at 45 degrees, the knee is completely bent, the body weight falls on the tip of the foot  B-neck side turns front and back  c-the lumbar part of the body turns around the front back and side  d-the body walks in a crawling position	2 % 20
Static States	Relaxed posture or less movement during the day	D  E	The body is in the same position for a long time	Q M
Repeated actions	The same repetitive movement during the working hour	F	A special dress becomes unusable as a result of friction	972



<u> </u>			
Rocking (vibration) movements	Movements that cause the body to vibrate	When using carrier and piercing apparatus, the body has a state of vibration	-NO

Maximum bending of dynamic motion

2-table.



With the working movements of the co-workers of the mining and Metallurgical Combine, the distances between the individual points of the body measured along its surface change. [3]

Indicators of dynamic effects

3-table

maleutors of dynamic effects 5 tuble						
№	Definition of dimensional	The value of dimensional		Dynamic growth	Dynamic effect,%	
			properties		E116Ct, 70	
	properties	statistikada	dinamikada			
1	Og2	104	106,2	2,2	2.3	
2	Vprz	20	23	3	0.6	
3	Dts	44	50	6	2.7	
4	Osh	45	46,5	1,5	0.7	
5	Ot.br	102	106	4	4.08	
6	Shs	42	44	6	2.52	
7	Ob	107	112	5	5.35	
8	Ds	28	33	5	9.24	
9	Dn	74	80	6	4.44	
10	Knee circumference	40	54	14	5.6	
11	Elbow circle	27	42	15	4.05	

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#### **ACTUAL PROBLEMS OF NATURAL SCIENCES**

UDK:551.435.126:910.1.(262.83)

IMMUTABLE SMALL DELTAS ARE "TREE-LIKE" STRUCTURES AND CHANGES IN NATURAL GEOGRAPHICAL PROCESSES IN THEM.

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Annotasiya. Ushbu maqolada Amudaryo hozirgi del'tasida ilk bor ajratilgan kichik del'talar daraxtsimon landshaft komplekslarining invariantligi koʻrib chiqiladi. Shu bilan bir qatorda, kichik del'talardagi tabiiy geografik jarayonlar oʻzgarishining qonuniyatlari ochib berildi. Kichik del'talarning daraxtsimon lanshaft komplekslari oʻzlarining doimiyligi bilan ajralib tursa, u holda roʻy berayotgan jarayonlar kichik del'talarning invariant strukturasi bilan aloqadorligi dala ma'lumotlari negizida asoslandi.

Kalit soʻzlar: del'ta, jarayon, daraxtsimon, invariant, struktura, havza, Amudaryo, irmoq, davr, Sariqamish, Orol dengizi.

**Аннотация.** В статье рассматриваются инвариантность мелких дельт древовидных ландшафтных комплексов, впервые выделенных в современной дельте Амударьи. А также, выявляются закономерности изменения природногеографических процессов в мелких дельтах. Древовидные ландшафтные комплексы мелких дельт отличаются своими постоянством, а тогда взаимосвязь происходивший процесс с инвариантной структурой мелких дельт обоснованы по полевым материалам.

**Ключевые слова:** дельта, процесс, древовидные, инвариант, структура, бассейн, Амударья, приток, период, Сарыкамыш, Аральское море.

**Abstract.** The article examines the invariance of small deltaic tree-like landscape complexes, first identified in the modern delta of the Amudarya, and also reveals the patterns of changes in natural-geographical processes in small deltas. While the tree-like landscape complexes of small deltas are characterized by constancy, the process that took place was based on field data on the relationship of small deltas with an invariant structure.



**Key words:** delta, process, treelike, invariant, structure, basin, Amudarya, tributary, period, Sarykamysh, Aral Sea.

**Introduction.** In a comprehensive study of each object, the knowledge of the history of its formation was of particular scientific importance and remains relevant to this day. The current delta of the Amudarya, which we want to study, has also attracted many naturalists. It was studied by many Russian scientists in the late 19th and early 20th centuries [9]. In the twentieth century, the study of the history of the modern delta of the Amudarya was carried out according to a certain plan and was carefully studied.

It is very important to study the geological history of the relief in order to know the internal structure of the delta, that is, the relationship between the components of nature. The natural structure of the relief of the delta was formed under the influence of the Amu Darya and its tributaries Erkindarya, Kazakhdarya, Raushan, Uldarya, and others. As a result of the geological work of these rivers, "tree-like" landscape systems appeared. Together, these small deltas make up the geosystem, that is, this entire object. In a word, the relief of the delta is flat, and they are distinguished by a very gentle slope towards the Aral Sea. In addition, the site has isolated hills (Kuskantau, Parlitau, Krantau, and Itkir), which consist of marls and gypsum from the Cretaceous, Paleogene, and Neogene periods. Their upper parts are, in some cases, covered with sand.

**Literature review.** Geologist N.A. Kenesarin, taking into account the geological history, divides the process of formation of the Amudarya delta into three stages [1].

- 1. Very old (ancient) stage. At this stage, the Upper Quaternary Akchadarya is formed (after the Khvalynian period). According to our scientists, in the early and middle periods of the Holocene, the main part of the Amu Darya waters filled the Sarykamysh and Aseke-Audan basins and flowed through the Uzbai into the Caspian Sea. This direction of the Amu Darya persisted until two millennia BC, when the Sarykamysh delta was formed. This was confirmed by studies carried out by our archaeologists (Tolstov, 1948; Gulamov, 1959; Akulov, 1960). As a result of the expedition, they found many fossils of hunters and fishermen of the Neolithic era in the vicinity of the Sarikamysh delta, on the shores of the Sarikamysh and Uzbai lakes. According to G. V. Lopatin, the period of formation of alluvial deposits in the Sarikamysh delta is about 10 thousand years. The general geological age of the Amudarya delta is about 17-18 thousand years (Lopatin, 1957). This period also determines the period of the confluence of the Amu Darya into the Arola-Sarikamysh basin.
- 2. New era. After the formation of the Sarykamysh delta in the second millennium and the beginning of the first millennium BC, the Amu Darya again changes its direction towards the Akchadarya delta and flows towards the Aral Sea. According to A.S. Kes (1991), in the second half of the 2nd millennium BC. The Amu Darya flows into the Aroles Basin from the south. It was from this period that the current channel of the Amu Darya and the delta of the Gulf of Arol begin to form. As a result, the current Amudarya delta existed in the first half of the first millennium BC. Depending on the period of formation of the Amudarya delta, it can be divided into two parts: the southern, much more ancient, and the northern, "living", currently dry.



Until the 60s of the 20th century, river sediments were brought and laid in this part. At this stage, the Kyzketken-Chimbay (Takhiatash), Uldarya and Shortambay deltas were formed.

**3. Present period.** During this period, the northern "living" part of the modern Amudarya delta (Erkindarya, Raushan, Kunyadarya-Kazakdarya, Kipchakdarya, Akbashli) arose.

The modern relief of the modern Amudarya delta is associated with the formation of its last tributaries. The relief of the Akchadarya delta was formed in the Upper Quaternary and Holocene, while the relief of the modern Amudarya delta appeared after the 60s of the 20th century. Of course, the main features of the relief of the delta appeared earlier, i.e., during the period of deposition of river sediments. Modern features of the relief are closely related to the construction processes of the delta.

According to A. A. Rafikov (1984), the modern appearance of the "living" part of the delta appeared before 1974, i.e. by that time the delta had completed its stage of swampy development. The modern appearance of the relief of the delta mainly appeared in the middle of the 20th century [1].

An analysis of the above literature shows that the Amu Darya changed its course several times during the development of the delta. During these times, as a result of the work of river waters, a relief appeared in "tree-like" forms. In other words, there are several small deltas in the Amudarya delta, and their directions are also different. In a word, the southern part of the Amudarya delta (the deltas of Kizketken-Chimbay, Shortambay, Uldarya) was formed over 5 thousand years, Akbashli formed about two and a half thousand years (Lopatin, 1957).

Research methodology. A.K. Urazbaev (2002) comprehensively analyzed the geological period of the modern Amudarya delta and identified nine small deltas for the first time. In his recent study (2021), the author considered the elementary landscape groups of small deltas as "tree-like" landscape complexes [2,8] and introduced this concept into the science of natural science. According to the author, their attribute is "tree-like" landscape complexes of small deltas, that is, landscape complexes formed as a result of surface water runoff always have a "tree-like" structure. The "tree-like" landscape complexes of each of the small deltas have their own history of origin and differ sharply from each other in their internal structure.

#### Results and discussion.

Our studies show that all emerging landscape complexes have a "tree-like" structure, but are diverse in form.

Each of the identified groups is distinguished by varying degrees of change in their natural and reclamation conditions. So, for example, since there are no branching "elements" in the extended uplands of the Kiyatjargan sub-delta with an elongated structure, the natural reclamation conditions on these extended uplands are almost the same, and in the Kizketken-Chimbay sub delta, which is an example of a typical "tree-like" structure, branching" with a large number of "elements", the natural and reclamation conditions are very variable even at a short distance. Sharply different from each other "tree-like" landscape complexes of small deltas are the scientific basis



for studying the structure of the soil cover, the runoff of surface and groundwater, and land reclamation.

Small deltas located in the "living" part of the delta (Kunyadarya-Kazakdarya, Raushan, Erkindarya, Kipchakdarya, Akbashli) retain their invariant tree structure even in automorphic mode and fundamentally differ from small deltas in the south (Kizketken-Chimbay, Shortamboy, Uldarya, Kiatdzhargan) from the point of view of their natural geographical processes. The influence of the dry Aral Sea on the small deltas in the north is strong and the desertification process continues very strongly. The process of desertification is intensifying, especially in the lower reaches of Akboshli, Kipchakdarya and small deltas of Kunyadarya-Kazokdarya. The small deltas of Raushan and Erkindarya, although located in the "living" part, since they are close to irrigated territories in the south, and the process of desertification in them is not very active.

Small deltas located in the south (Kizketken-Chimboy, Shortambay, Kiyatzhargan, Uldarya), although they retain their invariant tree structure, are fundamentally different from each other according to the laws of natural geographic processes. Since all areas of the small deltas of Kiyatzhargan, Shortambay and Uldarya are located in irrigated massifs, the salinization process intensifies from the upper part of the objects to the lower one [2,8].

#### **Conclusions**

While all the mentioned small deltas retain their invariant tree structure, all the natural geographic processes occurring in them are primarily related to the internal structure of objects and change in an orderly manner in the invariant tree structure. Small deltas, while maintaining an invariant tree structure, differ from each other in that natural geographical processes are associated with the internal structure of objects.

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UDC: 911.3: 343.9

#### SOME THEORETICAL ISSUES OF HUMAN ECOLOGY

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Annotatsiya: Ma'lumki, ekologiya tushunchasi fanga 1869 yilda nemis biologi Ernest Gekkel tomonidan kiritilgan. Olim "ekologiya" so'zini zoologiya (biologiya)ning barcha tirik mavjudotlarning tashqi muhit bilan o'zaro ta'sirini ifodalovchi bo'limi sifatida ishlatgan. Ekologiya so'zi yunoncha so'z bo'lib, "oikos" - uy, yashash joyi, "logos" - fan, o'qitish degan ma'noni anglatadi. Aytish joizki, ekologiyaga oid g`oyalar Gippokrat, Arastu kabi olimlarning asarlarida tilga olingan bo`lsada, fan sifatida ancha keyin paydo bo`lgan.

**Kalit so'zlar:** ekologiya, inson ekologiyasi, ijtimoiy ekologiya, nozoekologiya, shahar ekologik holati, aholi salomatligi, sog'liqni saqlash ekologiyasi, urbanizatsiya.

Аннотация: Известно, что понятие экология было введено в науку в 1869 году немецким биологом Эрнестом Геккелем. Ученый использовал слово «экология» как раздел зоологии (биологии), выражающий взаимодействие всего живого с внешней средой. Слово экология — греческое слово, означающее «ойкос» — дом, место жительства, «логос» — наука, учение. Следует отметить, что хотя идеи, связанные с экологией, упоминались в трудах таких ученых, как Гиппократ и Аристотель, как наука она возникла гораздо позже.

**Ключевые слова:** экология, экология человека, социальная экология, нозоэкология, городская экологическая ситуация, здоровье населения, экология здоровья, урбанизация.

**Annotation:** It is known that the concept of ecology was introduced into science in 1869 by the German biologist Ernest Haeckel. The scientist used the word "ecology" as a section of zoology (biology) expressing the interaction of all living things with the external environment. The word ecology is a Greek word meaning "oikos" - home, place of residence, "logos" - science, teaching. It should be noted that although ideas related to ecology were mentioned in the works of such scientists as Hippocrates and Aristotle, it emerged as a science much later.



**Key words:** ecology, human ecology, social ecology, nosoecology, urban ecological situation, public health, health ecology, urbanization.

**Introduction.** According to the sources, the development of ecology began with the study and description of nature. The first works in this respect date back to the time when the French scientist John Henry Faber wrote his work Entomological Memoirs (1879). In fact, the development of ecology as a science began with the study of the environment in which certain species of animals or plants live, their mutual relations, and this is the first stage of its formation. The second period of development of ecology is associated with the study of ecosystems and their systems as a whole [1].

The third period saw the development of ideas about the interaction of ecosystems and their interdependence. The fourth period of ecology is focused on the study of the biosphere as a whole, and in the fifth period the study of man's place in the biosphere became relevant. During this period, while recognizing the connection between humans and the biosphere, attention was also paid to its impact. In this case, the study of man's place in the biosphere became relevant to ecology. During this period, recognizing man's connection with the biosphere, attention was also paid to its influence. From this point of view, ecology studies man's place in the biosphere and takes into account his specific relationship with the biosphere.

Literature review. Scientific research on human ecology, prevention of environment and its pollution, study and evaluation of public health, optimization of non-ecological situation of regions in the world's leading organizations, scientific centers and higher education institutions, including: University of Southampton, Ohio State University, Michigan State University, Cambridge University, University of California Berkeley, University of Florida (USA), University of London, Moscow State University (Russia) and others. It should be noted that non-ecological studies, i.e., the issues of population morbidity and their territorial structure, can be found in the works of J. May, Melinda S. Meade, Amber Pearson, Elisabeth Dowling Root, Michael E. Emch among foreign scientists [2].

Such researches were carried out by Tsarist Russia, later scientists of the former Union, including D.K. Zabolotniy, Y.N. Pavlovsky, A.A. Shoshin, A.V. Chaklin, A.P. Avsin, Y.I. Ignatev, B.B. Prokhorov, Y.L. Reich, V.P. Podolyan, A.A. Keller, A.G. Voronov, N.F. Reimers, V.P. Kaznacheyev. was also conducted. Each of the abovementioned scientists contributed to the development of one or another branch of medical geography. For example, in the works of B.B. Prokhorov, there is a definition of the term nozoecology.

In our country, medical geography, which is considered to be a direction inextricably linked with ecology, is closely related to researches related to nozoecology. Kh.T. Tursunov, M.I. Specialists such as Nazarov, N.K. Komilova, I. Turdimambetov, M. Hamroyev, A. Kh. Ravshanov, N. J. Mukhammedova, Z. D. Tillyakhodjayeva were involved. Also, areas somewhat close to non-zoeology, including geoecological research, were studied by A.A. Rafikov, A.A. Abdulkasimov, L.A. Alibekov, A.N. Nigmatov, S.B. Abbasov, A.K. Urazbaev, V.A. Rafikov, K.S. Yarashev and others [2].

Analysis and results (Analysis results). In general, ecology as an independent science emerged in the early 20th century (Odum, 1986). According to G. V.



Stadnitsky, A. I. Rodionov, "ecology is a science that studies the interaction of living beings with the external environment in which they inhabit. In one such definition, he stated that ecology is a science that studies the laws of living beings, the natural environment in which they live, taking into account the influence of the human factor [3].

The science of ecology is traditionally associated with various branches of natural science (biology, chemistry, geography, medicine). For this reason, concepts such as "geographical ecology," "global ecology," "mathematical ecology," and "chemical ecology" have appeared in later years.

However, it is more correct to conditionally divide ecology into two branches, i.e. natural ecology and social ecology. Natural ecology studies the influence of the natural environment on humans and all living things, while social ecology studies the direct human impact on nature and the resulting interactions.

Social ecology emerged much later than general ecology or "natural" ecology. It emerged on the basis of natural and social sciences. Social ecology began to develop rapidly, especially after the First World War.

The impetus for its development came from the General Congress of International Sociologists held in the second half of the twentieth century, more precisely, in 1966. Later, at the congress of sociologists held in Varna in 1970, a research committee of the World Association of Sociologists was created to deal with current problems of social ecology. Social ecology, which first appeared under the name of urban sociology (urban socioecology), carried out work on the necessary organization of the accommodation of people in the cities of Western countries (Park, Borgers).

In addition to social ecology, in particular, the concept of human ecology is also found in the special scientific literature. The famous American scientist Raderick Mackenzie was one of the founders of human ecology (1920). He defined social ecology as follows: "Social ecology is not only concerned with modern ecology. Spatial relations arise as an interaction of human species and are constantly in the process of change as a response to the set of ecological and cultural factors that sustain life. He emphasized that the task of social ecology is to study these processes in order to understand the activities of natural and driving forces.

Mac Kensil described human ecology as the science of human relations as defined by territory and time. Later knowledge in this regard was further developed on the basis of ideas created by L. Schuor and Duncan. A. Hawley, one of the representatives of human ecology, promoted his idea of "social panecology" in the field of ecology. He said that "social ecology must become a comprehensively advanced social science capable of understanding everything" (Komarov, 1977).

Social or social ecology is very close to social geography. Human ecology played a major role in the formation of social ecology. According to some reports, the center of human ecology is Chicago, USA. As a result of the joint development of geography and sociology at the University of Chicago, human ecology was born. Urban ecology (urban ecology) was formed as its important branch. That is why the Chicago School of Urban Studies is known all over the world. At the same time, human ecology has had a significant influence on the development of biogeography.



It should be noted separately that the concept of "human ecology" was one of the first to be used in 1921 by American scientists Bordschairs and Park as part of medical science. The emergence of human ecology as a science or scientific field is associated with the name of Harlen Burroughs of Chicago. In 1923, he wrote a paper entitled "Geography or Human Ecology" and considered these concepts to be equivalent. [4]

Thus, social ecology is the science of the formation of patterns of interaction between society and nature, the relationship between humans and the external environment. In other words, social ecology is a science that studies the interrelations and regularities of man, society and nature.

The subject of social ecology is the study of interaction between nature and man. This science is a complex science, which includes all natural and social sciences. According to G. A. Bachinsky, because social ecology is an aggregate interdisciplinary attribute, it has systemic integrity. In this view, this science is a combination of such sciences as geography, biology, and economics.

It is known that human health indicators are inextricably linked with the external environment. In this regard, according to some scientists, human ecology (anthropoecology), medical geography and environmental hygiene are part of social ecology.

Some sources use the terms human ecology and medical geography as synonyms. But although these fields are very close to each other, there is a difference between them. Medical geography studies living beings in general and the diseases that occur in them, the causes and patterns of their spread, as well as their state of health. So, medical geography is a different and broader concept than human ecology and even its broad interpretation.

Human ecology is a special section of social ecology, studying only issues related to humans and their relations with the environment. "Human ecology" as the natural and social environment surrounding people and their relations to the environment and each other was first used by American sociologists R. Park and W. Borgers. In particular, Borgers interprets that "the task of human ecology is to relate the social relations of the same people to the biological population process" and tries to explain this with the help of concepts characteristic of biological ecology. The American scientist J. May also tried to biologize human ecology.

In general, the extreme pollution of the environment, the limitless domination of man over nature poses new challenges to human ecology, as well as to medical geography, which studies the causes and regularities of the spread of related diseases on earth[5,6].

It is known that nosoecology (ecology of diseases) is the study of diseases occurring among the population and their natural foci, their origin, causes and patterns of spread. In contrast to the object of epidemiology, this scientific object includes not only zooanthroponoses, anthroponoses, endemic diseases, but also cancer and heart, blood and other pathologies, there are species and groups that are directly related to the ecological situation of a particular area. The rapid development of science and technology, the continuous growth of human influence on nature and in connection



with this a number of negative changes in the natural environment have a significant impact on human health.

Unlike the object of epidemiology, this subject includes not only zooanthroponoses, anthroponoses, endemic diseases, but also cancer, cardiovascular and other pathologies.

Health ecology (sanoecology) determines the regularities associated with the influence of environmental factors on the level of health of the population;

Studies of the level of health of the population also show that in recent years the leading place in the world is occupied by diseases related to the cardiovascular, digestive and respiratory systems. It should be noted that the majority of diseases prevalent in the world are mainly in developing and underdeveloped, economically backward countries. In particular, most of the various infectious and parasitic diseases are characteristic of some countries in Africa and Latin America, where the standard of living of the population is extremely low in economic terms. For example, from 1900 to 1950, plague was widespread in most countries of the African continent.

Overall, the extreme pollution of the environment, the limitless dominance of man over nature poses new challenges to human ecology as well as to medical geography, which studies the causes and regularities of the spread of related diseases on earth. Rapid development of science and technology, continuous growth of human impact on nature and in connection with this a number of negative changes in the natural environment have a significant impact on human health.

Issues related to the ecological conditions of the regions play an important role in determining the health of the population. After all, environmental conditions are the main criteria for determining the natural, socio-economic factors and conditions in a particular territory. Today lung, toxic, allergic, endocrine and other pathologies occur as a result of the impact of scientific and technological progress on the environment. As a result of the deterioration of the ecological situation in the regions of our republic various diseases are developing.

The acceleration of urbanization is causing problems such as air, water, and soil pollution. At the same time, cities are now hotbeds of noise, which negatively affects people's mental state. Noise is a major source of damage to the nervous system, the hearing organs, and the heart, especially in today's large industrial and densely populated cities. Development of urbanization process, expansion of cities, creation of huge agglomerations, conurbations and megacities, high concentration of production and acceleration of other life processes create great inconveniences for people to live in such environment.

Urbanites and diseases of development or civilization are common in highly urbanized areas, and they are more directly related to the natural, environmental, economic, and social aspects of these areas. Diseases of development or civilization are common diseases among the population of economically developed countries, which are mostly characteristic of large cities (high noise, hypodynamia, heavy air pollution, etc.). They include hypertension, coronary heart disease, gastric and duodenal ulcers, diabetes mellitus, bronchial asthma, metabolic disorders, neuroses, mental disorders. It can be seen that mortality and population rates in such areas are somewhat higher.



It should be noted that the desire to live in cities, the way of life in them day in and day out attracts people's attention. In 2020, 56 percent of the world's population lives in cities, and this figure is increasing. Today the urban environment acquires complex - natural, natural-anthropogenic, socio-economic characteristics, which increasingly affect people[7].

A person's way of life in the urban environment includes the living environment in the house where he lives, the artificial environment surrounding him (industrial enterprises, various buildings, transport and roads, etc.), various cultural landscapes (parks and avenues), socio-economic and socio-psychological environment has its influence.

To improve the ecological condition of the urban environment, first of all, it is necessary to increase the cultural level of the urban population, to create in the city and its surroundings a quality environmental infrastructure to ensure quality of life. environment, to create an architectural landscape of the city in accordance with environmental requirements in order to meet the needs of the population, energy, industry, transport, water Achieve compliance with consumption, industrial waste, etc. environmental requirements.

In other words, urban ecology is related to collective activity connected with preservation and restoration of ecosystems of urbanized territories (regions, states, districts, cities or settlements) for the purpose of nature protection, creation of scientifically grounded, highly effective quality, environmentally friendly urban living environment.

It should be said that during the next 20 years environmental problems of the urban environment have worsened. The reasons for the emergence of environmental problems in the urban environment can be attributed to the expansion of urban areas, the growing number of agglomerations, the emergence of large urbanization regions, the increase in population density in many countries around the world. The abovementioned situations, in turn, cause unemployment, which leads to an increase in crime, deterioration of sanitary and hygienic conditions, increase in the level of morbidity of the population.

Historical data show that the first cities appeared on our planet 5,000 years ago. Ancient cities began to arise mainly in the valleys, along the banks of the Nile, Tigris, Euphrates, Hind, and Xuanhe rivers, in places suitable for agriculture and cattle breeding. The improvement of living conditions in these residential areas, the possibility of constant communication between people further intensified the development of ancient cities. Thus, by the beginning of our era the population was 1 million people. Rome, Athens, Sparta, and other similar city-states began to emerge. These cities gave mankind the first results of civilization: advances in government, architecture, culture, art, and military prowess.

In the first phase of city formation, the citizens used local water and food sources, used horses and other domesticated animals, and production used mostly manual labor. Environmental waste was mainly accumulated during human life and waste from domestic animals. Among the environmental problems of ancient cities, an example is the contamination of water by these wastes and the resulting infectious diseases that were caused and spread.



The next stage of urbanization corresponds to the development of land and water transport, the appearance of roads, and the use of thermal energy for transport and industrial purposes. Especially in the 16th century, cities and their populations began to grow rapidly. However, at this stage we can say that the level of pollution of the city environment by industrial waste has not yet exceeded the norm.

The third stage of urbanization dates back to the 19th century, and this process is related to the Industrial Revolution, which had a great impact on the environment. By 1900 Britain was literally the first urbanized country, and by the second half of the 20th century all industrialized countries had become urbanized.

By 1800 the urban population was 3%, by 1900. - By the end of the 20th century and the first quarter of the 21st century, the world population exceeded 7 billion. In the year 2020 the world population (56%) will live in cities.

Today scientists recognize that the acceleration of the urbanization process, in turn, causes serious harm to human health. The urban environment particularly affects the human nervous system and the general state of the body. It is advisable to pay attention to a number of factors:

- Noise is one of the main sources affecting public health in cities, especially automobile transport. The noise level on the main streets of cities reaches 95 dB. Noise from streetcars and subway trains does not have a serious negative impact on our body.

It should be said that noise causes changes in the functional state of the central nervous and cardiovascular systems. Coronary heart disease, arterial hypertension, elevated blood cholesterol levels are often observed in people living in noisy areas. Noise affects the central nervous system, causing sleep disorders, chronic fatigue, headaches, reduced performance and resistance to disease. At the same time there are also low-frequency vibrations that are not audible to the human ear (including wind, lightning, sea and ocean waves, etc.), and some man-made sources (transformers, power lines, etc.) can come in. It is assumed that the frequency of oscillations of such devices corresponds to the alpha rhythm, and under their influence in the higher nervous system there are symptoms of seasickness. This can cause permanent fatigue, visual impairment and even death.

- Waste gases and toxic compounds emitted by industrial plants pollute the air and water. This causes respiratory diseases, allergies, and cancer. In economically developed, urbanized countries, cancer mortality is the leading cause of death.

Scientists have conducted a number of studies on the connection between cancer and the environmental situation, that is, there is a connection between the environment, including the environmental situation of the city, and the incidence of dangerous tumor diseases. The urban environment also causes allergic diseases and pathological conditions caused by the impact of pollutants previously unknown to human immunity.

At the moment, when analyzing the dynamics of the amount of pollutants emitted into the atmosphere in Uzbekistan in recent years, it is noticeable that the indicators have slightly increased over the years. This is especially evident in the city and district of Tashkent.

In areas with a high level of urbanization, the rhythmic signals of machines, conveyor lines, machines and other devices, which work in a coherent and coordinated manner, have a great influence on the psyche of people.



- The appearance of the urban environment, that is, the architectural environment, also affects the human nervous system (especially its monotony: modern high-rise buildings, its evenly spaced windows, etc.). Myopia is several times more common in cities than in the countryside. Constant contemplation of the same objects causes pathological conditions associated with the visual system.

It is known that colors have a significant impact on a person's mental state. Bright, that is light colors have a positive effect on the human psyche. People living in the city are exposed to a lot of gray, brown and other colors every day, and this situation causes many mental illnesses. In the air of cities one can smell gasoline, car exhausts, paint, asphalt, and they often cause allergic reactions (also such cases can be observed for perfumes, cosmetics, detergents). The prevalence of a particular odor is directly related to the specialized industries of a city or a particular region. Almost every city has its own odor, by which we can learn about the dominant industry of its economy (metallurgy, chemistry, textiles, food, etc.). The substances emitted into the air affect not only the sense of smell and the nervous system, but also other organs.

Another aspect of life in modern large cities is characterized by the formation and accumulation of large amounts of solid, liquid and gaseous waste of industrial and domestic origin. Liquid waste seeps into the ground, contaminating drinking water sources and groundwater.

Solid waste also significantly contributes to the unenvironmental situation in cities.

Data show that most of the household waste is collected around cities and towns in the country (the bulk of solid waste is paper and food waste, plastics and synthetic materials, which when burned in landfills release many toxic substances (dioxin, fluorine compounds, etc. are emitted into the atmosphere).

Household waste pollutes the natural environment and causes increased epidemiological and toxicological risks. Rodents and other animals accumulate in large numbers in landfills and play an important role in the spread of many infectious diseases.

In large cities, the quality of drinking water and the state of the sewage system are also of great importance. Regular consumption of contaminated water leads to a sharp decrease in immunity and the development of a number of diseases in humans.

Hypodynamia, i.e. low mobility, is also much higher in cities than in rural areas. Low physical activity, irrational nutrition, metabolic disorders lead to an increase in the number of people with excess body weight, the development of cardiovascular diseases, including arterial hypertension, myocardial infarction, stroke, diabetes mellitus.

The urban environment has a significant impact on a person's lifestyle. Man creates a number of complex urban systems for himself, seeks to improve his living conditions for a better, more comfortable life, creates a new artificial environment that enhances the well-being of life. Unfortunately, much later he realizes that all this distances him from the natural environment to which he belongs, and the emergence of increasingly complex conditions related to his health.

Ecology developed further in the second half of the 20th century, and the following scientists made a great contribution to it (table).



table

Some factors that contributed to the development of ecology

Authors	Basic scientific research
Jacques May	The concept of disease ecology as a term was first used by the American
	researcher Jacques May in the middle of the last century. "Ecology of
	Human Diseases" (New York, 1958, 1961) created works.
N.F. Reimers	The scientist suggested the introduction of a new concept of
	"anthropoecology" or "homoecology", which includes the study of
	human relations with the natural and social environment. Author of
	works in the field of nature use, ecology.
V.P. Kaznacheev	He developed a complete and comprehensive concept of human ecology.
	He created works in the field of human ecology, global environmental
	problems. His works: "Essay on theory and practice of human ecology",
	"Human ecology and problems of social and labor potential", "Human
	ecology: problems and perspectives".
B.B. Prokhorov	He revealed the difference between the terms human ecology and social
	ecology. He defined the concept of nosoecology. He conducted research
	in the field of human ecology and social ecology.
S.M. Malkhazova	The results of many years of scientific research are reflected in his
	scientific research on medical and ecological topics: he lectures on the
	topics "Basics of ecology", "Medical geography", "Human ecology",
	"Environment and public health". A number of medical geographical
	atlases were created under the editorship of the scientist.

The table was compiled by the author based on the data

In general, the solution of environmental problems is largely determined by the implementation of socio-demographic and environmental policies on a scientific basis. Ethnicity, way of life and traditions of the population of our country are of great importance in this. In general, each region has its own environmental problems related to the health of the population. Solving these problems, formation of ecologically healthy thinking of population is not without benefit for their health, upbringing of growing young generation mentally and physically healthy. After all, it is possible to bring up a great generation only in an environmentally clean and healthy environment.

#### Conclusion and recommendations.

Human ecology (anthropoecology) is an interdisciplinary science, a part of social ecology, according to V.P. Kaznacheyev, it studies the laws of interaction between people and the environment, issues of population development and preservation is a complex science designed to study the development of human health, studies the physical and mental capabilities of a person [1]. The main tasks of human ecology were determined at the first All-Union meeting held in Arkhangelsk in 1983 and at the first All-Union school seminar in Suzdal in 1984[3].

These include, in particular:

- studying the state of human health; studying the dynamics of health in the aspects of natural-historical and socio-economic development;
- forecasting the state of health of future generations of people; to study the impact of individual factors of the environment and their components on the health and vital activities of human populations (urban, rural, etc.); analysis of global and regional problems of human ecology;



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### ACTUAL PROBLEMS OF HISTORY, PHILOSOPHY AND SOCIOLOGY

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# SATISFACTION OF THE ELDERLY WITH THEIR LIVING CONDITIONS AND SOCIAL PROTECTION

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Annotatsiya. Ushbu maqolada keksalar va ularning ijtimoiy faolligini nazariy va amaliy oʻrganishlar asosida keksalarning oʻz hayotlari, yaratilgan sharoitlar va keksa avlod vakillarini ijtimoiy qoʻllab-quvvatlash borasidagi islohotlardan qoniqish darajasi ochib berilgan, keksalar hayoti, sogʻligʻi va faolligi bilan bogʻliq muammolar va ularni bartaraf etish boʻyicha fikrlar oʻz ifodasini topgan.

Kalit oʻzlar: keksalik, ijtimoiy faollik, turmush sharoitlari, ijtimoiy himoya, keksalik toʻgʻrisidagi qonun, pensiya, keksalar sogʻligi.

**Аннотация.** В данной статье на основе теоретического и и практического анализа пожилых людей и их социальной активности раскрывается уровень удовлетворенности пожилых людей своей жизнью, условиями и реформами в социальной поддержке пожилых людей, проблемы связанными их жизни,



здоровьями и активности с жизнью, здоровьими и социальной активности пожилых людей.

**Ключевые слова:** старость, социальная активность, условия жизни, социальная защита, закон о старости, пенсия, здоровье пожилых людей.

**Abstract.** In this article, based on theoretical and practical studies of the elderly and their social activity, the level of satisfaction of the elderly with their lives, created conditions and reforms in the social support of the elderly is revealed, the problems related to the life, health and activity of the elderly and ideas on their elimination are expressed.

**Key words:** elderly, social activity, living conditions, social protection, law on old age, pension, elderly health.

**Introduction**. Elderly people are considered as a group in need of social protection in every society. Health problems and the low quality and cost of medical services, financial difficulties, and the decrease in attention to the elderly in society indicate the need to strengthen social protection for the elderly by the state. The elderly population will need the care and maintenance of society. Ensuring their health and social protection, lifestyle and opportunities is one of the priorities of the social policy of every country. Institutions of social protection of the population occupy a special place in this. Aging is not an event, but a process<sup>2</sup> [3]. For most aging theorists and practitioners, aging is one of the most neglected issues because older people are seen as frail and under-resourced.

**Methodology and Literature Review.** The increase in the number of representatives of the older generation in the population has a great impact on the economic, political and social processes in the country. Uzbekistan ranks 105th in the world in terms of population longevity. According to the statistics agency of the Republic of Uzbekistan, the life expectancy in our country in 2022 was 74.3 years (72.1 years for men and 76.6 years for women). 3,283,656 of the population of Uzbekistan, that is, 9.1 percent, are representatives of the demographic group of the elderly, that is, 60 years old and older<sup>3</sup>.

In general, old age is an aging process is considered a complex part of human life. The study of human aging focused on changes in demography, that is, the "aging population" characteristic of industrial societies during the 20th century, but in the first decade of the 21st century, this process has become an interdisciplinary and global process.

Population aging is the most important result of a process known as the demographic transition. Demographic transition has two dimensions: a) decrease in fertility, which leads to a decrease in the share of young people in the population; b) measured by the reduction of death, that is, the increase in the longevity of people.

Jean Bourgeois Pichat (1979) interprets the demographic transition as two processes: basic aging and advanced aging. Basic aging occurs when the proportion of children decreases due to a decrease in the birth rate, while hyper aging occurs when the number of elderly increases due to a decrease in the death rate in old age. Population

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<sup>&</sup>lt;sup>2</sup> Laslett P., A Fresh Map of Life: the Emergence of the Third Age. / P. Laslett. – London. – 1990.

<sup>&</sup>lt;sup>3</sup> The calculation was made based on the data of the Statistical Agency of the Republic of Uzbekistan.



aging involves a transition from high mortality/high birth rates to low death/low birth rates and the resulting increase in the proportion of older people in the total population [4].

Economists and sociologists do not considered elderly as a class or status group. Although 10 years ago aging is a universal process was viewed as a natural and evolutionary process, and there was little effort to seriously investigate it. Until the 1980s, the problems of the elderly in developing countries were not addressed at the national level.

One of the problems of the sociology of old age is the definition given to the concept of old age. There are several definitions of this. From a medical point of view, there is a biological age that determines the physiological changes that occur in a person. For example, according to the WHO classification, 60 to 74 years old is considered early (active) old, and 76 to 90 years old, and after 90 years, longevity begins [1].

In the 50s of the last century, another concept, the concept of "third age" was introduced to science [5]. It is defined as a new, active period of life that comes after a young person retires, and is considered equivalent to previous age stages.

Sociological survey on the topic "Formation of a healthy lifestyle and increasing social activity in the elderly" was conducted by Makhalla and Family" Research Institute in Uzbekistan in 2022<sup>4</sup>. Field research of survey was carried out through interview was used as method of field survey in research. The aim of survey is to develop effective suggestions and recommendations for living a decent life and increasing social activity of old people.

During the research, special attention was paid to revealing the following issues: ✓ to determine the level of satisfaction of the elderly with their living conditions, the attention paid by the state, and the level of material protection of the elderly;

- ✓ identify problems in the system of health care of the elderly and its provision;
- ✓ determining the level of social protection;
- ✓ to reveal the problems of effective organization of free time of elderly pensioners.

Analysis and Results. It is clear in many cases a person's level of satisfaction with his life determines his mood, confidence in the future, his social activity, physical and mental health. When answers to the question addressed to determine the level of satisfaction of elderly with the attention paid by government in our society were analyzed, the majority of respondents (42%) considered they were partially satisfied.

Also, 36.6 percent of those who were completely satisfied with the current situation, 16.1 percent of those who were not satisfied in most cases, and 3.2 percent of those who were not satisfied at all. Through these indicators, it is shown that about 60 percent of our elderly are completely or partially dissatisfied with the existing conditions in society and the measures taken regarding the policy of the elderly Therefore, it is important to determine the reasons for such dissatisfaction.

Table 1.1. Reasons for the elderly to be dissatisfied with their living conditions (percentage)<sup>5</sup>

<sup>&</sup>lt;sup>4</sup> The study was conducted in September-October 2022 among 1200 elderly people.

<sup>&</sup>lt;sup>5</sup> The disproportions between the percentages in the answers are explained by the possibility of assigning up to 3 answers to the question.



### If you are not satisfied with certain aspects of your life and living conditions, can you explain why they are so?

Point of views	percentage
Lack of money is always felt	
My health problems are increasing every year	
Lack of infrastructure (sports-healthcare, cultural-educational institutions) for the elderly to spend their time productively	
Being retired and unemployed makes me feel useless	31,9
The condition of the house I live in is not good, it needs to be repaired	
It is very difficult to travel by public transport	
Not enough attention from the mahalla	
My family does not give enough care of me	

The main task of each survey is to analyze the problems that each elderly person has in determining the level of satisfaction with his life and the specific aspects of these problems. Answers to the question to find out what exactly the elderly are dissatisfied with include financial insufficiency (38.9%), increasing health problems (38.2%), lack of infrastructure for the elderly to spend their time productively (36.6%), and being unemployed and neglected after retirement (31.9%) were recognized by the majority as the main reasons. In addition, the conditions such as the fact that the house in which he lives is under repair, the difficulty of moving by public transport, and the lack of attention to the elderly by the mahalla (local self-government) and the family are indicated (Table 1.1).

The above results are confirmed by the answers to the next question and their analysis. In particular, about half of the elderly citizens of our country (41.7%) noted that the society's respect and attention to the elderly is decreasing, which has a negative impact on their lifestyle and quality of life, and causes some problems (Table 1.2).

Table 1.2. Point of views of the elderly about their main problems (percentage)

What are the main problems of the elderly in the area where you live?		
Point of views	percentage	
Respect and attention to the elderly is decreasing	41,7	
Material deficiencies	34,1	
Lack of quality medical care	33,4	
Lack of infrastructure (sports-healthcare, cultural-educational institutions) for the elderly to spend their time productively	24,5	
Lack of opportunities for domestic tourism among representatives of the older generation	22,3	
Lack of a public organization that protects the interests of the elderly	18,0	
Misunderstandings and disagreements in the relationship between the elderly and the younger generation		
Lack of attention from local governments		
Difficult to answer		



Because of there is given the opportunity to answer up to three questions in the questionnaire, the total sum of the percentage corresponding to the answer options can be more than 100 percent

At the same time, such as problems material shortages (34.1%), the quality of the provided medical services is not always good (33.4%), the lack of infrastructure for the elderly to spend their time productively, that is, sports and health care, cultural and educational institutions (24.5 %), lack of domestic tourism opportunities for elderly citizens (22.3 %) were highlighted as urgent issues among older people.

Also, during the research there are find out some problems like the absence of a public organization that protects the interests of the elderly (18.0%), the existence of mutual misunderstandings and disagreements in the relationship between the elderly and the younger generation (15.6%), insufficient attention to the elderly citizens by local governments (15.1%).

So, it can be said that material shortages, health problems, the lack of a sufficiently formed infrastructure to occupy the free time of the elderly and not giving enough attention to them by government after retirement have a negative effect on the decrease in the level of satisfaction of the elderly with their lives and, at the same time, on their social activity and health.

Financial insufficiency is a pressing problem for many of our seniors, as confirmed by the majority of responses. Their main sources of income are pensions (46.6%) and support from their children (24,5%) (*Table 1.3*). It is regrettable to say that in some cases, in order to financially secure their lives, our elderly citizens are engaged in work activities that are not suitable for their health, for example, seasonal or daily earnings. This has a negative impact on their health and longevity, of course. Some of our elderly continue their work even after retirement due to the small amount of pension. The amount of monthly salary and pension received will provide them with enough opportunity to live. It was revealed during the research that elderly people who were unable to work and need help, and sometimes become disabled, support their lives financially with the help of their mahalla or relatives and state support.

Table 1.3. Sources of living needs of the elderly (percentage)

On what sources are you primarily meeting your living needs in retirement?		
Point of views	Percentage	
Pension	46,6	
My children help	24,5	
Salary	11,1	
Mahalla helps	4,7	
My relatives help	3,3	
Renting a taxi	2,9	
Food and hygiene products provided by the state	0,9	
Seasonal income (homestead)	6,0	
Total	100,0	



Increasing the amount of pension will be done gradually. This requires solving a number of problems and developing mechanisms. Therefore, it is appropriate to create alternative ways to meet the material needs of the elderly. It is known that every second senior citizen cannot always do his favorite work after retirement. As a result, some of them fall into a state of depression. This can be explained, on the one hand, by the loss of learned performance, and on the other hand, by material deprivation. From this point of view, it would be appropriate to offer the types of activities that match the knowledge, potential and health of the elderly, taking into account the wishes of the elderly within the framework of the state policy.

When asked about the employment of the elderly and the type of activity, work schedule and quality suitable for them, in most cases they prefer part-time or several days work a week (19.6%), work at home (14.9%) or household work (14.3%). They also considered it would be convenient for them to continue their work (12.4%) or engage in social activities. At the same time, there are also those who want to work remotely, temporarily, seasonally (*Table 1.4*).

Therefore, if the elderly are offered work, according to the results of the survey, they prefer to work from home or in an area close to home, which does not require a lot of time and effort.

In fact, keeping the elderly busy with social activities in order to prevent them from getting bored and using their knowledge and experience can be beneficial for both the society and the elderly. Financial incentives for such social activities serve as motivation for the elderly.

Table 1.4. Pont of views of the elderly about the types of activities they should engage in (percentage)

What do you think retired people should do if they like to work?		
Point of views	Persentage	
Part-time or several days work a week	19,6	
Work at home	14,9	
It is enough for them to work in the homestead	14,3	
It is desirable that they are engaged in social activities (being an activist in the Mahalla)	12,4	
They should continue their regular work	12,4	
Distance work	9,0	
Must be employed on a temporary basis (seasonal, during a specific project, etc.)	8,0	
After retirement, you should not work as much as possible	7,5	
Other answers	2,0	
Total	100,0	

Social assistance refers to the support of the population in need of material and physical support. Usually, the elderly fall into this category due to chronic diseases, poor health, lack of a caregiver, and financial difficulties. During the research, what percentage of them use such services and their knowledge about it was checked.



Accordingly, it was found that only 16.4% of respondents use one or another type of social assistance.

However, the above data showed that the majority of the elderly have financial and health problems, as well as lack of attention. The results of the question asked to find out the reason for this showed that some respondents, although they need help, did not use it because they didn't feel like it (18.8%) or because their children didn't want it (5.8%).

A fifth of the elderly (about 20%) do not know where to apply for social assistance (12.5%) and what types of it (8.3%) due to lack of information (ignorance). And every tenth respondent is deprived of the social support that should be provided to them due to corrupt obstacles. 31 percent of respondents in the survey not really need social assistance. Some elderly people (11.3%) are able to meet their own needs even after retirement because they are busy at work (Table 1.5).

Therefore, the main reasons why the elderly do not use social assistance are the fact that they are ashamed of using social assistance, they do not see it in themselves; ignorance; corruption barriers and lack of real social support needs. It is desirable to fight at the state level and continuously against the barriers of ignorance and corruption among the elderly (*Table 1.5*).

Table 1.5. Reasons for the elderly not using social assistance (percentage)

Why don't you use social assistance?	Percantage
I don't need it	31,0
Because I'm still working now that I'm retired	11,3
I don't prefer it myself	18,8
My children do not want this	5,8
I don't know where to apply for social assistance	12,5
I don't know what types of social support there are	8,3
I face corrupt obstacles in my access to social assistance benefits	10,0
Difficult to answer	2,5
Total	100,0

In most cases, respondents who use social assistance are provided with free medical patronage service at home (33.5%). It was also found that there were elderly people who received a warrant for free treatment (31.2%). The provision of free food and hygiene products (17.5%) is used by the elderly alone. 12.2 percent of the respondents were provided with free medicines, and 5.7 percent were provided with free prosthetic-orthopedic products.

When the elderly turn to the state organizations regarding the issues that bother them, it is known that in many cases they are not satisfied with their attention. According to the obtained data, in most cases, employees are cold-hearted (28.6%), problems are not solved in practice (27.1%), and employees collect documents that



they can get and wander to the elderly (paperwork) (14.9%). is being thrown. At the same time, the elderly expressed their displeasure with the lack of opportunity to get advice on the questions they are interested in, the loss of documents in organizations, and rude treatment.

When the elderly who use social assistance were asked about what needs to be changed in this area, it was found out that it is important for them to get social assistance quickly and qualitatively (27.6%). Of course, there are certain barriers to access to social assistance benefits and the quality of services is not always satisfactory. It is possible to achieve certain changes in the field by increasing the legal knowledge of the elderly (23.8 %), monitoring the socio-economic status of the elderly in need of assistance (19.7 %). Adoption of the Elderly Law should serve to regulate the sector and ensure the rights of the elderly. But it was approved by only 14 percent of respondents. This may indicate a lower confidence in the power of the law among the elderly. The issue of improving the professional skills of employees providing social services (14.1%) is also important in the development of the sector, because their skills are a factor that directly affects the quality of services (*Figure 1*).

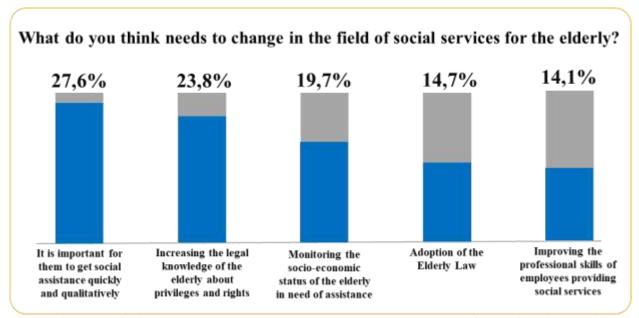


Figure 1. Opinions on the changes that should be made in the field of social services for the elderly (in percentage terms)

**Conclusions**. Based on these conclusions, it is recommended to implement the following suggestions in order to further improve the current situation and support the elderly:

- adoption of the Law on the Elderly in order to ensure the rights and freedoms of the elderly, to establish order in the field. In this, using the support of relevant Ministries and organizations, creating mechanisms for increasing the legal knowledge of the elderly;
- reform the pension calculation procedure, to allow citizens to choose one of two types of pension payment procedures, paid by the state and private sector, based on foreign experience;



- increase the amount of pension and to form alternative ways to meet the material needs of the elderly, that is, to encourage the elderly to engage in business activities, to create suitable jobs for the elderly, to sponsor the elderly;
- review and reform the system's working mechanisms in order to eliminate elements of personal interest and corruption, identify and eliminate excessive red tape, unnecessary procedures in the system of social assistance, healthcare and sports;
- development the health insurance system and its guarantees, which will be saved for the representatives of the elderly generation, taking into account that the main expenses are spent on medical services and medicines.

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#### LIFE AND SCIENTIFIC HERITAGE OF JALAL AL-DIN RUMI

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Annotatsiya: Mazkur maqolada Jaloliddin Rumiy hayoti va ilmiy merosi ilmiy nuqtai nazardan oʻrganilganligi aks ettirilgan. Jaloliddin Rumiy asarlari ilmiy-falsafiy jihatdan shoirlar va faylasuflar ijodiga katta ta'sir koʻrsatib, "Masnaviyi ma'naviy" asari xalqlar orasida keng tarqalgan. Jaloliddin Rumiy hayoti va ijodiga bagʻishlangan turli tillardagi ilmiy tadqiqotlar mutafakkir ta'limotining asl mohiyatini ochib berishga xizmat qiladi.

Kalit soʻzlar: Tasavvuf, tariqat, mavlaviya, "Ma'naviy masnaviy".

**Аннотация:** В данной статье с научной точки зрения рассматривается жизнь и творчество Джалалиддина Руми. Произведение Джалаладдина Руми оказали большое влияние на творчество поэтов и философов с научно-



философской точки зрения, а особенно произведения «Маснавий манавий» была широко распространена среди народов. Научные исследования на разных языках, посвященные жизни и деятельности Джалалиддина Руми, служат раскрытию сути учения мыслителя.

Ключевые слова: суфизм, тарикат, зикр, Мавлави, Маънави Маснави.

**Abstract:** This article reflects the study of Jalaluddin Rumi's life and scientific heritage from a scientific point of view. The work of Jalaladdin Rumi had a great influence on the work of poets and philosophers from a scientific and philosophical point of view, and especially the work "Masnaviy manaviy" was widely distributed among the peoples. Scientific research in different languages, dedicated to the life and work of Jalaliddin Rumi, serves to reveal the essence of the thinker's teachings.

Keywords: Sufism, tarikat, dhikr, Mavlavi, Manavi Masnavi.

Introduction. Jalal al-din Rumi, one of the leading figures of Sufism, was born on September 30, in 1207 in the city of Balkh of northern Afghanistan, in the family of the great sheikh Muhammad Bahauddin Valad, who was honored the name of Sultan al-Ulama. His father, Bahauddin Valad, was a Sufi and scholar of jurisprudence, who was invited to the palace by Sultan Muhammad Khorezmshah (1199-1220). However, Bahauddin Valad rejected his offer and was busy with schooling and scientific and creative work. Jalal al-din's mother was from Khorezm and was the daughter of Khorezmshah in the family tree. Bahauddin Valad set off on a trip to Mecca with his family, visited the cities of Khurasan and Iran, and talked with the great sages of his time. After that, Bahouddin Valad settled with his family in Kunya (Konya), Turkey. Bahauddin Walad, who was welcomed with honor by the Seljuk sultans, settled there and worked as a madrasa teacher. After his father's death, Jalal al-din Rumi continued his work in the position of headmaster of the Kunya madrasa. Maulana Rumi married Gavhar, the daughter of Sharafuddin Lolo Samarkandi in 1225. Maulana had two sons from this marriage, Sultan Valad and Alauddin Chalabi, who later founded and continued the Mevlevi order under the name of Jalal al-din Rumi. Hereafter, he became well-known as a great philosopher, thinker and mystic as soon as he wrote "Ma'naviyi masnavi" consisting of about twenty-seven thousand verses and as a poet after composing "Devoni Shams" with about thirty thousand verses, following the founder of the Mawlawiya sect, as well as succeeding as a famous sheikh who praised music as an auxiliary element of dhikr.

Research Methodology. Rumi considered himself neither a philosopher nor a poet in the traditional sense, but he knew himself a person who showed infinite love to Allah. Studying the scientific legacy of Jalal al-din Rumi, researchers pointed out that his work had been greatly influenced by the religious views of Imam Ghazali, Sufi poet Sanai and Fariduddin Attar's creations. It should also be noted that the popularity of Jalal al-din Rumi's composition "Masnaviyi Ma'navi" is associated with the name of Jalal al-din's son Sultan Valad and Hisamiddin Hasan Chalabi - his caliph and the first leader of the Mawlawiya sect. Moreover, the contributions of Sheikh Shams Tabrizi and Farididdun Attar are incomparable as they helped him to rise to a high level in philosophy, mysticism and poetry.

It is mentioned in several sources that Sheikh Fariduddin Attar predicted about Jalaluddin Rumi entering the world of Sufism. Sheikh Fariduddin Attar met Bahouddin



Valad and his son when they reached Nishapur who were on the way to Makkah. Satisfied with the conversation of the teenager, he dedicates his book "Asrornoma" ("Mystery") to him and prophesies to his father: "Your son will soon set fire to the hearts of all those who are burned in the world" [1. P. 327-328].

After Jalal al-din Rumi followed the path of the Order and he became a disciple of the poet Saeed Burkhaniddin. Then he became friends with the Qalandar Sufi Shamsiddin Muhammad Tabrizi whom shortly after he declared his "pir".

Jalal al-din Rumi's first conversation with Shamsi Tabrizi on November 12, 1244 is recorded in the sources as "the meeting of the two seas". Shams Tabrizi taught Jalal al-din Rumi philosophy, in particular Sufism, for three years. Rumi himself says in one verse: "If Attar gave me a soul, Shamsi Tabrizi held the key to magic" [2. P. 5]. However, this cooperation did not last long. Rumi, deeply affected by Tabrizi's death, started writing ghazals under the pseudonym Sharif. In particular, he wrote the work "Devoni Kabir" - "Great Devon" (the second name is "Devoni Shamsi Tabrizi"), consisting of forty-two thousand verses, dedicated to him. The reason why this work became famous under the name "Devoni Shamsi Tabrizi" is that Rumi used the pseudonym "Shamsi Tabrizi". A few years after Shams Tabrizi's death, Jalal al-din Rumi was accompanied by Salahuddin Zarqubi and Husamiddin Chalabi.

Jalaluddin Rumi's scientific and literary legacy is huge, and he left five important and valuable works to the generations after him. These are:

- A work known as "Devoni Kabir", "Devoni Shamsi Tabrizi", "Devoni Shamsul Haqaiq", consisting of ghazals and rubai;
- An indispensable moral and educational work consisting of twenty-five thousand verses called "Masnaviyi Ma'naviy";
- "Ichindagi ichindadir" ("Fiyhi ma fiyhi") is a philosophical and educational work consisting of Maulana's conversations;
- "Mawaizi Majolisi Sab'a" is an invaluable work covering the seven teachings and advices of Rumi;
- "Maktubot" is a collection of letters written by Maulana to his contemporaries in different periods.

Another great scientific legacy of Jalal al-din Rumi is "Masnaviyi Ma'navi" which is a Sufi-philosophical complex consisting of six notebooks mentioned above. This masterwork has a place in the hearts of all people due to its meaningful and attractive verses. "Masnaviyi Ma'navi" was created for more than ten years, and it was finished before the death of Jalal al-din Rumi, i.e. in 1269.

The greatness of "Masnaviyi Ma'navi" is that more than one hundred and fifty comments have been written on this memoir [3. P. 81]. Also, "Masnaviyi Ma'navi" is the most read and noteworthy book in the Muslim world. A reader who gets acquainted with Rumi's "Masnavi" understands the essence of life, fosters self-awareness, acquires the culture of dealing, approaches every issue from the point of view of fairness and justice, learns what conscience is, what false and true are, what honor is, what halal and haram are - they become a person who can distinguish all these from each other, leaving behind actions that lead to evil and performing kindness in life. People who have developed such features are the face, pride, and prestige of the society and the nation.



In addition, the thinker gives many examples of the unique folklore masterpieces of the peoples of the East in the form of stories, as well as evidence from the verses of the Holy Qur'an and hadiths. "Masnaviyi Ma'navi" is a significant source that changes human thinking and glorifies high spiritual and moral education. Also, the great philosopher promotes religious and ethical education views and describes communication, relationships and events between people by using symbolic birds (falcon, duck, goose, peacock, crow, rooster, sparrow, crow, parrot) and animals (camel, lion, rabbit, wolf, fox, ant, ox, cow, cat) and gave philosophical conclusions in his work. He skillfully used cities such as Sham, Iraq, Samarkand, Bukhara, India, Herat, Turkestan, Chin, Damascus to show the names of places. Furthermore, Rumi's work "Masnaviyi Ma'navi" described as "Quran in Persian" gained wide fame not only in the East, but also in the West as an encyclopedia of human spiritual life from the 17th-18th centuries. The book "Open the eyes of your heart... Wise words from Maulana Rumi" enables a reader to understand Rumi, to enjoy his spiritual world, and the wisdoms of this classic invite a person to serious reflection and inspiration.

In "Masnavi", a number of issues related to human life, nature and society, spirituality and enlightenment are described in an artistic and mystical way, absorbing the meanings of the Holy Qur'an and Hadith. It consists of six volumes, the first part of which is called "Naynama" written by Jalaluddin Rumi, and the later parts were recorded directly by Rumi's student Hisamiddin Chalabi when he was speaking with his teacher Maulana. After the death of Hisamiddin Hasan Chalabi (1264), Rumi worked on this work for another ten years.

"Masnavi Ma'navi" contains the meanings of the Holy Qur'an and Hadith, and all issues related to human life are described in an artistic style. The work includes more than two hundred and seventy stories and hundreds of pieces of advices, quotations from the verses of the Holy Qur'an are given in seven hundred and sixty places, and the hadiths are used in seven hundred and forty-five places.

This work stood out with an ability to provide enlightenment and spirituality with intelligence and great poetic artistry in a unique style and manner which it had never been seen before both in the Eastern and Western world. Philosophical and mystical views of the author have found their artistic expression in a simple, pleasant and in a fluent poetic style. Consequently, the high artistry together with the wealth of logic and philosophy will have a strong impact on the reader.

Taking into consideration Jalal al-din Rumi and his art of words, Alisher Navoi, in his book "Mahbub ul-Qulub" thinks about him to be one of the poets belonging to the first category as he divides the people of the pen into three groups: "... Mavlana Jalal al-din, that is, Mavlavi Rumi, whose goals are more spiritual, a diver of close sea (a diver in exact knowledge), whose goals are more divine than nazm, and no one is such Enlightened as him in an exemplary scribe". According to Navoi, Jalal al-din Rumi worships the owner of the earth and the sky - Allah, and his caliph on earth - Hazrat Man in all his works, as he gives a description of the enlightened quality of a thinker [4. P. 24-25]..

**Analysis and Results.** Jalal al-din Rumi explores human nature and inner world in his books. He analyzes the evils that can be caused by the human's greed and behavior and explains the ways to get rid of them. Jalal al-din Rumi appears as a fighter



for individual excellence and encourages people to realize their identity. His works teach us to hate badness and to be proud of the goodwill that mortals do.

Rumi compares the Spirit to a pearl in the sea, and says that the more a person understands the essence of things, the more he begins to understand himself and his identity. A self-aware person is a happy person. Self-awareness is realized through the soul. He also admits that the soul of a person who realizes his identity guides his body [5. P. 97].

Man has always sought to know who he is and what he is. In all countries, in all social systems, a person is the supreme virtue. History and historical development are based on human activity. A person with the highest value is that who strives for material, spiritual, socio-political, national and universal values; makes nature healthy, society beautiful and prosperous; sets peace and true justice as a rule of life; and endeavors for a life worthy of a human. He comprehensively analyzed man's attitude to the world, the ways and methods of changing his environment, even himself, and the fact that he is a great being who determines his own destiny. He created various ideas and teachings about himself and his spiritual development. Above and beyond that people's ideas about themselves have changed over time.

The greatness of Jalal al-din Rumi's work is not due to its diversity, but also due to the fact that it is imbued with mystical and philosophical views. According to the recognition of the German philosopher Hegel, Jalal al-din Rumi's explanation of the phenomena of constantly growing and altering nature and society; disappearance of the old things and emergence of the new ones; or "the world is a battle of the unity of contradictions" led to creation of his dialectical method. German professor Annemarie Schimmel said that "people who have learned philosophy from Hegel and Marx, Schopenhauer and Kant, after enjoying the work of Jalal al-din Rumi, they will be sure that all the ideas have already been mentioned in Rumi's works" [6. P. 47].

Jalal al-din Rumi's mystical-philosophical perfection lies in the fact that he puts forward an idea that is unique to all religions, namely, glorifying the love of God and faith in His power, and praises purity of man's intentions and actions. For example, the thinker writes: "The paths may be different, but the ultimate goal is the same - to go to God" [7. P. 14]. Maulana Jalal al-din Rumi preaches equality before Allah in all his views. Besides, Rumi's literary work revolves around philosophical observation, and regardless of the glory of the world, he puts the value of a person in the first place, saying, "Stop thinking small of yourself, you are a world that can walk".

One of the great qualities of Jalal al-din Rumi is that he does not encourage others to follow the path he has not taken. Rumi's views have a high spiritual content, and the ideas encourage people to have high morals, regardless of their race, nationality and religion. It unites all the paths leading to the human soul and discovers the eternal being, leading humanity to tolerance and spiritual perfection [8. P. 59].

Jalal al-din Rumi states that the role of graceful and pure behavior is of paramount importance in the spiritual and moral formation of a person. While keeping the Eastern traditions, the characters of teacher and student, father and son, love, humanity, youth, and wisdom are skillfully interpreted in the images presented through stories and poems. In particular, he notes that the teacher should first of all be well-educated, inculcate knowledge in the heart of the student, and love them.



Jalal al-din Rumi's inheritance occupies a vital place in shaping non-material and moral education of an individual. The basis of his creative activity is mystical rules such as directing a person on the right path, learning science, overcoming the ego, and being patient. Since the thinker sees the development of society in inner and moral supremacy, he proposes distinctive views that lead people to spiritual accomplishment. If the philosopher's views and ideas were placed in a certain order according to the expressed meaning and content, a special moral book would be created which could educate a perfect person.

Jalal al-din signed his works with different pseudonyms. For example, he was born in old Balkh, therefore, he was named "Balkhi", and "Shams Tabrizi" to the memory of his friend and spiritual teacher Tabrizi, and his most common and famous nickname is "Rumiy", referring to his second homeland.

Conclusion/Recommendations. Maulana Jalal al-din Rumi, who summed up his life with the words "I was raw, cooked, burned", died on December 17, 1273. According to his will, Sadriddin Konyavi had to read Maulana's funeral. However, Sadriddin Konyavi lost his beloved person and fainted at the funeral. Hence, Qazi Sirajiddin read Rumi's funeral. Maulana accepted the day of death as a day of rebirth and knew that as soon as he died, he would reach his beloved, that is, Allah. Therefore, Maulana calls the day of death "Shabi arus", a word that means wedding day, and instructs his friends not to weep after his death. Jalal al-din Rumi claims "After we die, don't look for our graves on the ground! Our grave is in the hearts of scholars!".

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## THE FIELD OF NEW VALUES BASED ON NATIONAL DEVELOPMENT

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**Annotatsiya:** Maqolada mamlakatimizda amalga oshirilayotgan ma'naviysiyosiy islohotlar milliy va umuminsoniy qadriyatlarning asosi ekanligi, qadriyatlar sohasida ma'naviyatning yangilanishi, yangi qadriyatlar tizimining ijtimoiy-siyosiy asoslari va oʻziga xosligi iqtisodiy bozor munosabatlarining xususiyatlari oʻrganiladi.

**Tayanch iboralar:** Milliy taraqqiyot, ma'naviy-siyosiy islohotlar, milliy va umuminsoniy qadriyatlar, yangi qadriyatlar tizimi, ijtimoiy taraqqiyot, yangi qadriyatlar tizimi, iqtisodiy islohotlar, ma'naviy yetuklik.

**Аннотация:** В статье рассматривается тот факт, что реализуемые в нашей стране духовно-политические реформы являются основой национальных и общечеловеческих ценностей, обновления духовности в области ценностей, социально-политическими основами новой системы ценностей и конкретной спецификой. Исследуются особенности экономических рыночных отношений.

**Ключевые слова:** Национальное развитие, духовно-политические реформы, национальные и общечеловеческие ценности, новая система ценностей, социальное развитие, новая система ценностей, экономические реформы, духовная зрелость.

**Abstract:** In the article, the fact that the spiritual and political reforms implemented in our country are the basis of national and universal values, the renewal of spirituality in the field of values, the socio-political foundations of the new value system and the specific features of economic market relations are researched.

**Key words:** National development, spiritual and political reforms, national and universal values, new value system, social development, new value system, economic reforms, spiritual maturity.

Introduction: As the turning periods in the history of humanity lead it to the path of high development, it becomes the necessity of an important vital need to determine the specific priority directions of a certain stage of development and current tasks for the fate of the peoples living in it. The reforms implemented in the spheres of social development are primarily aimed at raising the morale of the people, preserving the rich historical heritage, traditions and customs based on national and spiritual values, science, education, culture and art. development, most importantly, is inextricably linked with the change and rise of human thinking. After all, it is an important task of today to educate young people who are perfect in every way, who recognize their rights and rely on their own potential, who can independently approach the events happening around them.

The spiritual and political reforms implemented in our country are formed on the basis of national and universal values, and are mainly aimed at realizing the national identity, preserving and appreciating our spiritual and cultural heritage in the path of



the development of New Uzbekistan and turning it into an invaluable masterpiece of the world scientific heritage. As President Sh. Mirziyoyev noted, "Abu Rayhan Beruni, Muhammad Musa Khorezmi, Mahmud Zamakhshari, Najmuddin Kubro, Pahlavon Mahmud, Nasriddin Rabguzi, Suleiman Bakirgani, Sakkoki, Munis, Feruz, Ogahi, who left an indelible mark in the history of our nation, the names of Bayani and other scholars, poets and thinkers are written in golden letters regarding the history of world civilization"[1,241]. In fact, the scientific and spiritual heritage of our great scientists has become the priceless spiritual heritage of the whole world.

Along with the change of eras and the growth of human thinking, the values are updated according to the change of times. Material and spiritual life and social thinking are gradually growing, traditionalism, inheritance.

Renewal in the field of values, first of all, represents the process of their change, improvement and enrichment. The events that happen in people's lives and in society as a whole cause certain changes in the individual's consciousness and value system. Secondly, values greatly influence the origin and occurrence of changes in reality. Renewal is a phenomenon related to the essence of values. If the values are not polished, updated and enriched, it will very soon become obsolete and become a phenomenon that hinders progress.

Analysis of the literature on the topic: the traditionality of values and its gradualism, the transmission of the material and spiritual values accumulated by our ancestors over the centuries to generations on the basis of succession, in this regard, the manifestation of processes that are gradually enriched or renewed in accordance with historical criteria and the requirements of social life. represents This situation, which is consistent with historical development, is a process in continuous motion.

Studying the practice of formation of a new value system in the development of new Uzbekistan based on the works of President Shavkat Mirziyoyev allows to understand the priority features in this direction. It is important to analyze the specific features of the practice of stabilizing values in the current period.

In the fifth section "Spiritual Development" of the President of the Republic of Uzbekistan Sh.Mirziyoyev's "New Uzbekistan Development Strategy", educational reforms and upbringing of a mature generation, new Uzbekistan and spiritual renewal, and national and universal values great attention is paid to the issues of harmony. As President Sh.Mirziyoyev emphasized, "Development of scientifically based indicators for evaluating spiritual education ... defining the most important directions for raising children in the spirit of high moral values from infancy" [2,278] is the most important aspect of spiritual development is one of the important tasks.

Renewal of society is connected with continuous renewal of spirituality. As Professor K. Nazarov emphasized, "Spiritual life is based on social norms that apply in society. ... renewal and vitality of spiritual life is the main responsibility of the citizens of this society. The spiritual growth of the individual and the preservation of the spiritual wealth of the society are important circumstances.... Spiritual growth is the basis for further enriching the meaning of human life and achieving perfection as a person"[3]. In fact, the spiritual world of each individual should be in accordance with the rules of spiritual life that exist and apply in society.



According to the scientist M.Nurmatova, "spiritual maturity of a person is a process in which every moment he becomes a person, realizes his life goal and works tirelessly to achieve it. has a deep understanding of universal human values necessary for people"[4].

**Research methodology:** changes in the system of values in the period of the turning point in the development of society, fundamental reforms, the influence of values on the processes taking place in society increases. After Uzbekistan gained independence, great attention was paid to restoring national and spiritual values, instilling them in the minds of the youth and population. This had a strong influence on the change of people's consciousness, lifestyle, attitude to events in society, and the formation of a modern worldview.

The processes of formation of the new system of values based on the national development of the new Uzbekistan require a scientific study of changes in the social, economic, political, and spiritual spheres, directions of increasing the effectiveness of the value factor. However, the history of our people, which belongs to one of the most ancient civilizations in the world, and whose roots cover more periods, is the spiritual foundation that lays the foundation stones of the new value system that is being formed in New Uzbekistan.

"Social development makes its way through historical series, various contradictions and conflicts. Such a movement of his progress in time is a general social law of the development of society. This law is general for value systems and the dialectic of changes in their components. The change of value systems under the influence of the changes of time and their adaptation to the realities of the time is also subject to this process. In this process, changes occur in the form of a sequence of events and events in time"[5,232]. Dialectical thinking is a reflection of this continuity, a means of understanding it. It allows us to understand the process of changing values and the emergence of new value systems. To imagine the process of the emergence of a new system of values, which is formed through various imbalances, trends and problems of the current era, it is necessary to resort to dialectical thinking and methods of scientific knowledge.

New value systems do not appear by themselves. In this complex process, people's understanding of values, thoughts and views change over a relatively long period of time, which includes gradual changes.

As the development of new Uzbekistan climbs to the top, references to the pages of history are increasing. No matter how colorful and rich history is, it cannot fully cover today's and future changes, but only serves as a basis for the processes that will become history in the future.

Analysis and results. Stabilizing the new system of values based on the national independence of the new Uzbekistan, achieving a dialectical harmony of value forms in this system, and creating ample opportunities for the manifestation of human value, ability, and talent have become the content of urgent tasks.

To fill the new Uzbekistan meaningfully with universal, national, personal and other aspects, to implement fundamental changes in the political, economic, cultural and spiritual spheres, to ensure the peace and well-being of the people, to create a way



of life based on democratic laws, great work is being done to create opportunities for every person to show their maturity, ability and talent.

It covers the period of the emergence of a new value system in our society, the implementation of changes in the activities of people living in the society based on mutual solidarity, agreement, and cooperation.

The emergence of a new system of values in new Uzbekistan, in which the old one is replaced by the new one, and the transformation of modernity into a stable system corresponds to the period of transition from the old system to the new one. In this process, there was a need to stabilize values, to eliminate differences, conflicts, contradictions in their practice, to take into account various needs, interests, goals and aspirations in this regard. It was this necessity that demanded not to be deceived, careful and steady in choosing and implementing the ways and methods of effective implementation of this process. At the same time, it necessitated fundamental changes in the social, political, economic, spiritual and ideological spheres.

"The possibilities of strengthening the new system of values in the new Uzbekistan are based on the following socio-political foundations:

- going on the path of independent development, the republic becoming an equal subject of international relations in the world, the fact that New Uzbekistan as a sovereign state is a member of the UN and other international organizations;
- the priority of world civilization and the principles of a democratic state in social and political life, adherence to the principles of democratic elections, multipartyism, formation of state authorities on a legal basis;
- the rule of law has been established in all spheres of society, strong social policy is being pursued, the rule of law is being built, people have equal rights and are equal before the law, regardless of age, gender, nationality, religion and other social characteristics.;
- that the main attention is paid to stability and harmony between members of society in social and political life, that reforms and changes are implemented step by step, that values are restored and strengthened in all aspects, and that this process is based on the principle of gradual development, and others" [5,235].

The foundations of the process of improving the new value system in the sociopolitical sphere require the establishment of a legal state and civil society that fully stabilizes human rights and freedoms, the implementation of laws, presidential decisions and decrees, and a responsible approach to tasks in this regard.

These processes, which are harmonious and closely related to each other, determine the tasks of the republic and national level. Taking into account the multi-ethnicity of the population of New Uzbekistan and the fact that the young generation is the majority in its composition, they are of great importance in ensuring the harmony of universal and national values and increasing the value of the individual, the campaigns and measures conducted among the population - it is important to pay special attention to the characteristics of all social subjects, strata and parties, to the principles that unite them in the interests of independence and ensure their mutual solidarity, in the implementation of the measures.

The basis of any gradual change is social stability, which is solidarity and cooperation between the main subjects and groups in society based on certain values.



In such a situation, the most difficult, most complex and most diverse tasks remain for the state: the state maintains social stability, implements changes within this stability, ensures the well-being of the people, and replaces the old with something eliminates problems, it is necessary to ensure the gradual implementation of changes.

The adoption of seven priorities based on the principle of "From the strategy of actions to the strategy of development"[6] of the Decree of the President of the Republic of Uzbekistan "On the development strategy of New Uzbekistan for 2022-2026", the political development of New Uzbekistan - serves to strengthen the legal, socio-economic, spiritual and educational foundations.

As President Sh.Mirziyoyev noted, "In the new Uzbekistan, based on the principle of "State for Man", the issues of promoting, protecting and enforcing human rights have become the most priority direction of our reforms. This is the reason for the recognition that not only in our country, but also in the whole world, these reforms are in accordance with the most democratic principles, their ultimate goal and the priority direction of the state policy is aimed at ensuring human dignity and benefits, rights and freedoms" [2,58].

Indeed, the strategy of Development, "establishing a people-friendly state by raising human dignity and further developing a free civil society; on the principles of strengthening the security and defense potential of our country, conducting an open, pragmatic and active foreign policy[6], establishing a people-friendly state through the development of a free civil society, ensuring peace and security in our country, and developing international cooperation, based on this goal the fact that a lot of work is being carried out is a great help in strengthening the social and political foundations of the modern value system in New Uzbekistan.

The material basis of the socio-political structure and general value systems that are characteristic of any stage of society's development is related to economic processes and the changes taking place in them. In order to fully stabilize the practice of values in New Uzbekistan and to ensure the primacy of human values, attention is paid to fundamental changes in the social and political sphere, as well as to strengthening the economic and spiritual foundations.

"The scientific and axiological study of the economic foundations of the new value system, changes in the economy, labor and production spheres made it possible to study what values economic reforms are aimed at, what values their perspective can stabilize and what kind of value system can be created in the future" [5,236]. Such an analysis is extremely important for the current era, when the foundation stones of the life of the 21st century are being laid and the foundations of the future building are being strengthened.

For example, fifteen goals were defined in the third priority direction "aimed at rapid development of the national economy and ensuring high growth"[6], developed based on the principle of "Strategy of Actions, Development Strategy".

In fact, the transition to free market relations through the implementation of economic reforms and fundamental changes is an objective process, which requires the solution of extremely diverse tasks in a certain period of time, taking into account the existing conditions. indicates that it requires. In this process, it was shown that a certain time is necessary for increasing the influence of the factor of values, for people to adapt



to new criteria, to change their needs, values and aspirations in accordance with the requirements of the times. The new system of values appeared in the economic sphere as the gradual emergence and realization of the old one.

Specific features and aspects of market relations, which are a means of forming new values:

- division of labor made it possible to effectively use modern methods of organizing production and managing economic processes;
- led to the appearance of productivity, activity, creativity and open competition in production, developed initiative and put an end to the mood of arrogance, expanded the opportunities of a person in the economic sphere;
- completed the administration of ownership, ensured the equality of different forms of ownership and moved the protection of the rights of owners to a modern basis;
- lost the monopoly of product manufacturers in setting prices, ensured rapid changes in production in accordance with modern processes and consumer demand, and was now responsive;
- accelerated the application of scientific and technical achievements, new technologies to economic processes, encouraged working people to improve their talents and skills in accordance with the demands of these innovations;
- made it necessary to use economy-based methods in production, created economic mechanisms that save material resources and prevent property theft.

In the course of conducting economic policy in new Uzbekistan, the new values that arise in this regard are based on the following situation: an attempt was made to change people's attitude to economy, production and labor, that is, to establish a dialectic of economic thinking and economic reform appropriate to the times. Internal and external aspects of national, regional and global importance were taken into account in the performance of these tasks.

In the development of the new Uzbekistan, the privatization of state property, which provides an opportunity for members of society to demonstrate their abilities and talents, and helps to implement in practice various forms of ownership based on healthy economic competition, is of great importance, and the legal basis for changing state property defines the basics.

The landscape of the new system of values, the position, importance and prospects of its components consisting of specific values depend to a large extent on how these criteria and material bases are strengthened.

The process of changing the value system in the new Uzbekistan, in many ways, requires the formation of high spirituality, the fundamental change of people's attitude to their life, livelihood and activities, and the creation of a new way of thinking and worldview in them. Reforms in the spiritual sphere of the new system of values depend in every respect on human activity, creative activity and initiative, conscious attitude to one's work, loyalty, and spiritual maturity.

The diversity and innovations emerging in society require spiritual changes in people and their political and ideological preparation. After all, any society matures on the basis of a variety of social, political, and ideological criteria similar to it. In such conditions, the importance of spirituality, national idea and ideology has increased in the spiritual education of the members of the society, ensuring their unity. The national



ideology of new Uzbekistan is based on the diversity and diversity of thoughts and ideas, views, positions, needs, demands, interests and aspirations. It corresponds to the interests and rights of citizens living in the society, defines their lifestyle and behavior and is considered a set of views that reflect the development of our country on the basis of universal values and true democracy.

As President Sh. Mirziyoyev admitted, "The ideology of the New Uzbekistan that we are building will be, first of all, the ideology of humanity, goodness and creativity" [2,280].

In fact, the national ideology is scientifically based, it is a spiritual factor that unites different strata of the population, all nations towards great goals, expresses the diversity of ideas in our country, and brings our country to perspective. It is a social process in which progress towards the future is made to strengthen a new value system. This idea envisages the cultural and spiritual development of the people for the benefit of all social groups, generations, categories, castes and parties. Its purpose is to have an ideological influence on every person, to strengthen human dignity, national and universal values.

Many events are being organized in our country to further improve the spiritual and educational conditions, to promote the exemplary traditions and values that have been refined in its bosom for thousands of years. On this topic, scientific-popular, journalistic works, documentary films and TV shows are created, and various exhibitions are organized. The direction of activity in this field is to inculcate the national idea in the mind and heart of everyone, to raise a mature generation, to educate goodness, tolerance, humanity, kindness, faith, national-ethnic foundations of spiritual values. and aims to harmonize modernity.

When we talk about spiritual maturity and its ideological foundations, it should be emphasized that a high sense of patriotism is a necessary quality for every civilized person, and the necessity of forming this feeling is constant. "Everyone should have love for the Motherland, the land where he was born and raised, a sense of pride in the history of our country, past achievements, and these feelings should be related to brotherly peoples, brotherly nations and Achieving harmony with the workers of other countries, with a sense of solidarity with all those who are working for development, peace - safety on earth is the most basic principle in this regard"[7].

Conclusions and suggestions. Strengthening the independence of the new Uzbekistan created an opportunity for the formation of a unique new system of values. Independence is the socio-political guarantee of this value system and the main condition for its strengthening. In the Constitution of the Republic of Uzbekistan, in the works, speeches and articles of the President of Uzbekistan Sh. Mirziyoyev, one can see a clear picture of the new value system that is being formed in our country and imagine the perspective in this regard. In fact, the main principles from Action Strategy - Development Strategy have started a new phase in this field as well.

In this sense, the new system of values, based on the independence of New Uzbekistan, has become an independent link of the universal social value system, its unique component. By the present time, the general axiological system and its components, specific to our republic, are gaining a modern meaning, in which the primacy of universal aspects, the ancient values of the East, our region and our people



are being combined with the general axiological requirements and principles that are leading on a global scale.

In New Uzbekistan, which is on the way to independence, the importance of these issues is increasing from the point of view of thoroughly studying the importance of new values in the life of society, ensuring the priority of universal principles in our life. First of all, studying the development of new values specific to the civilization of our country, the legacy of our scientists, thinkers and scholars who left an indelible name in the history of this civilization is one of the good things in this regard. The work in this direction enriches with more modern evidence that our civilization made a great contribution to the development of universal values, had a significant impact on other civilizations and international culture, and that our country was one of the hotbeds of world culture.

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