

**ZAMONAVIY FAN, TA'LIM VA TARBIYANING DOLZARB  
MUAMMOLARI**

**АКТУАЛЬНЫЕ ВОПРОСЫ СОВРЕМЕННОЙ НАУКИ,  
ОБРАЗОВАНИЯ И ВОСПИТАНИЯ**

**ACTUAL PROBLEMS OF MODERN SCIENCE,  
EDUCATION AND TRAINING**



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**MODERN PROBLEMS OF PEDOGOGY AND PSYCHOLOGY****UDK: 373.25****PSYCHOLOGICAL ADVISORY ACTIVITIES IN THE EDUCATION OF PRESCHOOL CHILDREN**

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**Annotatsiya.** Maqolada maktabgacha ta'lim tashkiloti psixologi tomonidan psixologik maslahat (konsul'tasiya) ishlari muammolari muhokama qilinib, maktabgacha ta'lim muassasasida psixologik maslahatni tashkil etish va o'tkazishning asosiy jihatlari ochib berilgan.

**Kalit so'zlar:** maktabgacha ta'lim tashkiloti psixologi, maktabgacha yoshdagi bolalar, psixologik maslahat, pedagogik metodlar, syujetli-rolli va didaktik o'yinlar, tarbiyaviy faoliyat, tematik maslahat vazifalari.

**Аннотация.** В статье рассматриваются проблемы работы психологического консультирования психологом организации дошкольного образования, раскрываются основные аспекты организации и проведения психологического консультирования в дошкольном учреждении.

**Ключевые слова:** психолог организации дошкольного образования, дети дошкольного возраста, психологическое консультирование, педагогические методы, сюжетно-ролевые и дидактические игры, воспитательная деятельность, тематические консультативные функции.

**Abstract.** The article discusses the problems of psychological advisory by a psychologist in the organization of preschool education, reveals the main aspects of organizing and conducting psychological counseling in a preschool institution.

**Keywords:** psychologist of the organization of preschool education, preschool children, psychological advisory, pedagogical methods, role-playing and didactic games, educational activities, thematic advisory functions.

**Introduction:** Thematic advisory (consultation) plays an important role in the activities of the psychological service and performs *informational, preventive, and propaganda* functions. Psychological consultations by child psychologists are the most "popular" in preschool education. Psychologists themselves consider it important, giving them professional satisfaction and the opportunity to participate in the educational process of the institution. This type of activity, according to their estimates, allows not only to help pupils, but also to develop technologies for teaching children, to form their own positions on preserving the specifics of the educational process in different age groups.

**Literature review:** An analysis of the questions addressed by educators to psychologists (psychological counseling of 20 psychologists with at least three years of experience) showed that this is first a group of questions about the psychological conditions of the educational process, then a question about the discipline of children

in the classroom, expressing the specifics of raising children. Summarizing questions are a tool of choice for children interested in the lesson.

Thus, educators often seek advice from a psychologist on how to organize the learning process, how to best use the thematic learning environment, and how didactically select and present learning content. However, unfortunately, educators do not consult with a psychologist from a professional point of view when raising children. This indicates that the activity of pupils does not have a sufficiently developed reflexive side, and most psychologists do not have the competence to give advice.

Therefore, in the process of conducting psychological advisory on raising children, the psychologist develops the reflexive qualities of pupils, their sensitivity to the situations being taught, solving the questions posed to him.

The work of psychological advisory is not limited to the implementation of the educational function of a psychologist, but also largely includes a propaganda function, because a person asking a question to a psychologist is now ready to learn and understand something, change himself.

We will try to give an example of these rules in the scenario of a psychologist's work on the issue of child discipline in the classroom and the informational order of answers to some questions from teachers to psychologists.

**Analysis:** Discipline (from the Latin disciplina - order, ordered structure; sequence) - a strict order, a rule that a team or members of a particular team must follow [1].

Usually, teachers think about discipline for two reasons: firstly, in the absence of it, the impact on effective learning decreases, and secondly, the violation of the daily routine of children in the classroom interferes with the teacher, reduces his learning opportunities, and leads to disruption of his activities.

The work of a disciplinary psychologist in kindergarten can be multidimensional and multi-stage.

The first stage is diagnostic, which consists in examining the causes of indiscipline in the educational activities of children. For this, the psychologist monitors the progress of the classes in groups, records the facts of disciplinary violations and analyzes the reasons that lead to them. For example, this could include:

- nervousness of the educator, excessive tone of communication, dissatisfaction with children and the emergence of negative experiences in the group as a result of their actions;
- alienation of children from group goal setting, independence in the choice of methods of action, separation from the assessment of results, stereotypes of educational tasks, insufficient intellectual and emotional saturation of the content of classes, lack of regularity and stereotypes, reproductive capacity, creativity;
- inability of the educator to use the means of communicative development (mediation, support of initiatives, acceptance, approval of the processes of teaching children, etc.);
- the use of authoritarian techniques and techniques of the teacher to interact with children in the classroom (direct instructions, strict orders, prohibitions, strikes, criticism, etc.);

- lack of clarity and consistency in the organization of classes, irregular rhythm, violation of the requirements for the time of classes, lack of adequate and complete teaching materials and equipment for each child;
- environmental problems from a hygienic point of view (training in cramped, semi-dark, cramped rooms, uncomfortable furniture, exposure to distracting noise);
- children are not interested in lessons because of the complexity and incomprehensibility of the lessons;
- the level of development of the skills of intellectual activity due to a violation, absence or weakness of the motivational basis of children's cognitive and educational activities, lack of interest in new information, the child's lack of confidence in thinking about activities, lack of self-control skills, lack of independence in general (attention, memory, contemplation, imagination ) lead to underdevelopment;
- manifestation of certain formal dynamic features of temperament in the form of behavior and activity (imbalance, increased physical activity, decreased mobility, inertia, fatigue, stiffness, etc.);
- poor development of communicative components of interaction with peers and teachers (conflict, inability to coordinate their actions with others, lack of adequate speech, lack of understanding of "role" positions in the lesson, lack of reflective abilities).

The second stage is informational, preventive and propaganda work that a psychologist conducts with teachers in a group to prevent and eliminate factors leading to disciplinary violations.

These can be individual and group psychological consultations, master classes, discussion of the problems of organizing classes in order to improve their developing impact. The method of verbal interaction on how to learn to communicate with children in the classroom, the use of teaching methods to "remove" negative emotions in order to overcome the emotional stress of children in the learning process. These are the types and forms of work of a psychologist with all participants in training to improve the professionalism of teachers and their personal growth.

It is especially important for educational psychologists to form a rational attitude towards the manifestations of high reflexivity in the analysis of children's indiscipline and its causes. (Often children are accused of hooliganism in the group, rather than looking for flaws in the content and didactics of teaching). It is important to understand that educators need to master polite forms of commenting on child abuse.

The psychologist can use role play to achieve this goal. For example, a group of educators should be given a "lesson" in teaching a new technology for developing game reality for narrative role-playing games. It also simulates special situations (lack of necessary tools, lack of suitable places to work, distractions, vague instructions, "poor" content materials, explanations of individual abilities, etc.) that cause difficulties and "failed" actions.

Then all these negative moments are eliminated, and "education" is created in a new way on a positive emotional "background" and a convenient "didactic" basis. The experience is discussed by teachers. Thinking professionally helps raise awareness among pupils by waiting for minutes to disrupt the group schedule. Their experience



helps pupils develop a sensitivity to finding suitable, humane means to tidy up the group.

After the role play and discussion, the participants can be asked to answer the questionnaire.

The third step is the work of the psychologist on solving disciplinary problems in the classroom, helping children when they have difficulties with self-regulation in their behavior and activities. The forms of his work can be different. Special classes to develop children's voluntary attention, "lessons" to develop the ability to listen, accept, store and complete teacher assignments, trainings to develop children's confidence, communication skills and relationships with others in the group, psycho-gymnastic work such as resistance to failure, exercises in development and many other types of work with children to develop mechanisms for self-regulation of behavior and activity.

Therefore, in conclusion, since the discipline function in teaching has three variables, they are as follows:

1. The teacher's subordination to a well-established, meaningful and didactic order in the group;
2. Specific possibilities, skills and habits of children that are objectively necessary in the learning process, i.e self-regulation and self-control of children in the group;
3. Awareness of the interaction of all subjects of the educational process. Maintaining a certain order of reason, consciousness, and freedom (freedom is a recognized choice).

It is difficult for teachers to distinguish an educational task in the educational process from a practical one. Psychological propaganda on this issue primarily involves familiarizing teachers with the views of leading psychologists.

There are also changes in the topic of solving practical problems. However, these changes are not the main goal of the movement and the main result of activity, but an addition. For example, a child makes a vegetable salad. The main result is cooking, an additional result (using a knife) is the formation of cutting skills, knowledge of the properties of vegetables, emotional experience, changes in motivation and much more.

The main result in the educational task is the change of the subject (knowledge, skills, abilities, thinking processes, personal development, awareness, different competencies, etc.). The purpose of the educational and practical task is distinguished by the main and additional final result.

Nevertheless, it is conditional to differentiate these tasks according to this indicator. There is no change in the subject itself outside the process of changing the objective reality of the subject. Therefore, a child's learning activity must be a subject activity that makes a difference in the subjects.

For a kindergarten psychologist, the end product of a study assignment and the fundamental importance of the problem of a practical assignment is that in educational practice, a practical assignment is often a solution to the problem when replacing an educational assignment in a group. For example, a teacher focuses only on the results of production activities (drawings, manuscripts, sketches, etc.). The child's experiences, methods of action, volitional tension, attitude to activity, motives and other manifestations of personal experiences and changes in them remain "strangers".

This requires a different solution to diagnose the child's development in the learning process. A psychologist must explain to educators that the specifics of an educational task is not a specific object that needs to be learned, in which the child acts in solving it and makes changes by his actions.

When conducting classes in kindergartens, when the entire group of children simultaneously performs certain educational activities, the teacher will inevitably not see ways to solve the educational problems of most children. The only thing that seems to him is changes in these objects (traces on a blank sheet of paper, modifications of pieces of plasticine, etc.). That is, the final result of completing subject tasks, teachers indirectly assess the development of the child, his cognitive abilities and changes in his competence.

Thus, the definition of the concept of "educational task" in the learning process in kindergartens and a clear understanding of its final result confirms the need for educational activities with young children.

Distinguishing between practical and educational tasks in the group requires a psychological analysis of the results of children's learning activities, as well as goal setting in the lessons and a comprehensive analysis of all its didactics in this context.

What is the role of exercises, repetitions, that is, what are sometimes called "hand training" in the upbringing of young children? This question is often asked by educators to the psychologist in connection with poor memory of the material by the children in the group.

There are two limits to the answer to this question. Some consider "hand training" to be the main way of raising a child, since his consciousness is not yet sufficiently developed. Secondly, in order to properly criticize the mechanical nature of repetition, exercises in educational practice sometimes lead to a denial of the value of consolidating other knowledge, skills and competencies. People have two important conditions for correct behavior: the strength of habit and the strength of thinking. While the former is sufficient to operate under normal stereotyped conditions, the latter is necessary in changing conditions. Both are necessary and conditional. In the development of the child, the value of habits and new ways of acting does not differ. Both are the essence of life, the usual patterns of behavior created in the process of thought, and the replenishment of new ones.

Since the first days of life, the child is in a relatively stable environment of life, when he needs familiar ways to act in any thoughtless and changing environment, to give up energy-intensive habits to find a new way of acting, i.e. creative solutions to evolving problem situations, exercise role, i.e. Adapts to "hand training". Exercise is very important in teaching. They allow the child to have prior experience in solving life problems, or to use this reinforced experience to re-integrate it into new situations based on new information.

Thus, teaching is important both in stereotypical contexts and in the development of creative processes. Some educators, who firmly deny the incorrect traditional methods of identifying another teaching material through practice and repetition, may consider it a novelty. The child's hands will only be able to take on the control function by repeating the movement over and over again. Surveillance cannot be avoided without hands-on training.

**Discussion: *What pedagogical methods are effective in education?*** Pedagogical methods should not adversely affect a child's personal development. This question arises in the analysis of the work of a particular educator for kindergarten stylists. The psychologist should approach this issue with great responsibility and discuss it in detail with the educators.

There are many ways to master the material and remember it in the classroom. There are methods that increase the effectiveness of education, but collide with the conditions for the full development of the child's personality. Among them are two groups, which are coercion under the threat of punishment and the second, techniques of a competitive nature, comparing the successes and failures of one child with others. The first group of compulsory pedagogical methods has been comprehensively analyzed and discussed not only in terms of harm to personal development, but also as a didactogenic risk factor for the physical health of the child.

Very little is said and written about the negative consequences of constant competition in educational activities for the personal development of children. At the same time, competition as a didactic device that activates children's activities is gaining popularity in the work of pupils. (For example, in a kindergarten educator's speech, always say, "Look, Madina's did well", "Put the best things at the top and put the things of the kids who didn't succeed today", "Choose the funniest thing", "Whose story did you like?", "Who is the fastest ... " and so on).

How should a psychologist relate to this competitive environment in groups? In such cases, the recognition of the level of activity of some children and discrimination of others by some indicator, the exact outcome of the activity, is often discussed by solving a simple topic task rather than a learning task. In fact, assessing the success or failure of educational activities, or, conversely, self - esteem, some children 's objections are insufficient, there is a risk of uncertainty or an increase in self - confidence. All of these personality traits can occur at a pre-school age, or at least can be the basis for a child's impaired development of self-awareness.

The psychologist of the preschool organization should pay special attention to the procedure for evaluating the results of children's activities in the group. It leads the educator to understand the harmfulness of competition in the learning process, to use very carefully the elements of comparing the activities of one child with another. The principle of "personal achievement" should always be kept in mind when evaluating learning activities. L.S.Vigotskiy wrote about the importance of the concept of "relative success" in pedagogy. Relative success does not mean absolute success [2].

Thus, it is not correct to compare a child with another on the success of educational activities, and even more so to organize a team struggle (competition) in the learning process. A child's success today can only be compared to his or her own achievements yesterday, the assessment is relative, not absolute, in scientific activity. Only with this approach to the evaluation of the results of children's activities in the educational process will be the basis for talking about the humanization and individualization of education in preschool organizations. The use of common methods of comparing a child to other and constant competition to achieve good results can negatively affect children's self-awareness and self-esteem.

There are a number of issues related to child rearing in small rural kindergartens. In addition, very often the living conditions of urban and rural children are assessed in terms of their education. What is unique about the work of urban and rural kindergarten psychologists on issues of person-centered education? The benefits of urban children's personal development are compounded by their alienation from the creative work of adults.

There are limited opportunities to imitate creativity because of the behavior of loved ones at home, in which children often interact with adults they have witnessed, mainly related to communication at home "What does a person have to do to have bread at home? When asked, 72% of six-year-olds in the city said they had to go to the store, and 28% said they had to make money. The children of the village said, "We must plant and cultivate wheat". The children in the city are alienated from the whole movement (to the question "What should I do to have water in the house?", The child says "I turn on the tap", "If he needs hot water" – "I don't know". "What do you do if the food comes?" He says, "I ask my mother," "I get it from the refrigerator"). In order for children to avoid domestic dependence, the preschool child should be involved in creative activities (growing plants, caring for animals, cooking, working with fabric and wood, etc.). The curriculum content of an urban children's education program should contain more materials that can be involved in creating a child.

**Conclusion:** Rural children, unlike urban children, have the opportunity to experience natural information, to develop thinking, a unique emotional experience. But mental development is not determined only by personal experience. Personal development education involves the development of a child's unique experience and the mandatory inclusion and recognition of the value of other people's experiences (various social associations) and universal experience.

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**UDK: 377.:517.2(575.2)**

## **METHOD OF TEACHING ORDINARY DIFFERENTIAL EQUATIONS ON THE BASIS OF INNOVATIVE TECHNOLOGIES**

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**Annotatsiya:** Ushbu maqolada oliy ta'lim muassaslarida birinchi tartibli oddiy differensial tenglamalarni innovatsion texnologiyalar asosida o'rgatish usullari, ularning samaradorlik darajalarini aniqlashga oid tajriba-sinov ishlarini tashkil etishga oid taklif va tavsiyalar berib o'tilgan.

**Kalit so'zlar:** innovatsion texnologiya, differensial tenglama, case-study, ven diagramma, chalkash mantiqiy zanjir, funksiya, uzluksiz.

**Аннотация:** В данной статье приводятся предложения и рекомендации по методике преподавания простых дифференциальных уравнений первого порядка в высших учебных заведениях на основе инновационных технологий, организации экспериментальной работы с целью определения их уровня эффективности.

**Ключевые слова:** инновационная технология, дифференциальное уравнение, тематическое исследование, диаграмма вен, сбивающая с толку логическая цепочка, функция, непрерывность.

**Abstract:** This article provides suggestions and recommendations on the methods of teaching simple differential equations of the first order in higher education institutions on the basis of innovative technologies, the organization of experimental work to determine their level of efficiency.

**Keywords:** innovative technology, differential equation, case-study, vein diagram, confusing logic chain, function, continuity.

**Introduction.** There is a wide range of research in the world, including the use of innovative technologies in the teaching of all subjects related to mathematics, thereby ensuring the quality of education, developing students' creative abilities, increasing the effectiveness of practical applications of mathematics and interdisciplinary student orientation. This, in turn, is particularly important in the application of innovative strategies in mathematics, including the section on differential equations, independent learning, and the widespread application of acquired knowledge in practice [1].

**Review literature.** Research on the methods of teaching mathematics belongs to the national scientists B.S.Abdullaeva, A.A.Akmalov, I.T.Aliev, G.R.Alimatova, S. Alikhonov, Z.A.Artikbaeva, M.Barakaev, M.S.Divanova, K.S.Jumaniyozov, U.M.Mirsanov, N.M.Mukhitdinova, A.A.Rakhimkoriev, M.M.Sultonov, M.Tojiev, D.I.Yunusova, E.O.Sharipov and research has been conducted by scientists of the Commonwealth of Independent States such as, Ye.V.Abramov, N.V. Akamova, J.I.Zaytseva, I.V. Kuznetsova, L.N.Lavrikova, L.P.Martirosyan, A.V.Mukhamedshina, V.I. Snegurova, and L.F.Solovev



The results of the analysis show that the research is aimed at improving the use of information and communication technologies in the teaching of mathematics in general secondary schools, vocational colleges, academic lyceums, higher education institutions, the development of students' creative abilities through the introduction of innovative technologies. aimed at developing innovative potential [2]. However, in the research of these scientists, higher education institutions do not pay enough attention to the teaching of mathematics, including first-order simple differential equations on the basis of innovative technologies. Therefore, a comprehensive study of teaching methods focused on this topic is relevant.

**Research Methodology.** The general purpose of the topic "Differential Equations" can be defined as "Definition of differential equations, general and special solutions of differential equations, integration of linear differential equations of the first order, separating the integral line and the variable." Focusing on the application of problems related to differential equations to physical, biological, and economic processes encourages students to think [1]. Therefore, it is important to fully apply the application of differential equations to the minds of students of higher education institutions. To do this, it is advisable to use the methods of teaching "Case-study", "Venous diagram", "Confused logical chain" [3-4].

Case-study English "case" - a suitcase for documents, "study" - means research, study, education. *Case-study* is an optimal set of educational information, communication and management in an orderly manner that provides a guaranteed achievement of predictable learning outcomes in the process of achieving the set learning objectives and solving the practical problem situation described in the case. is an educational technology consisting of a set of methods and tools [5].

The purpose of the case-study method is to analyze the situation arising from the specific situation of the work, that is, the "case" that is manifested in the actual work process, to develop and present practical solutions with the combined efforts of a group of students. A case is a written description of a specific, real situation in a process. During its use, students are asked to analyze the situation, consider the nature of the problem, suggest possible options and choose the most appropriate one [5-7].

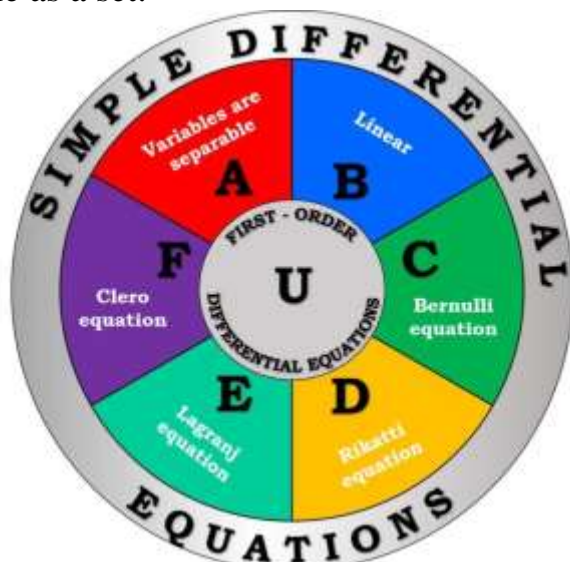
The stages of working with Case are: acquaintance with the situation and its stages; separation of the main problem, separation of factors and individuals; Suggest concepts, topics, questions for "brainstorming"; decision-making, analysis of consequences; case solving - offering one or more options; show ways to prevent problems from occurring [6-7].

The purpose of the Venn diagram method is a form of teaching using a graphic representation, which is represented by two or more intersecting circles. This method allows you to consider the analysis and synthesis of different concepts, principles, assumptions through aspects, to identify their commonalities and differences, to compare. The procedure for applying the Venn Diagram method is as follows: participants are divided into groups of two or three, and they are asked to write down specific, different aspects of the concept or framework under consideration in circles or separately; in the next step, participants are grouped into small groups of four, and each pair introduces their analysis to the group members [8].

The "confused logic chain" method is used to study the connections of an event. The order of its application is as follows: the set of facts studied is presented to students in violation of the chronological order of cause and effect [9].

Considering the possibilities of the above teaching methods, we will consider the teaching of "Simple differential equations of the first order".

In the diagram below, the first-order simple differential equations are arranged in a circle as a set.



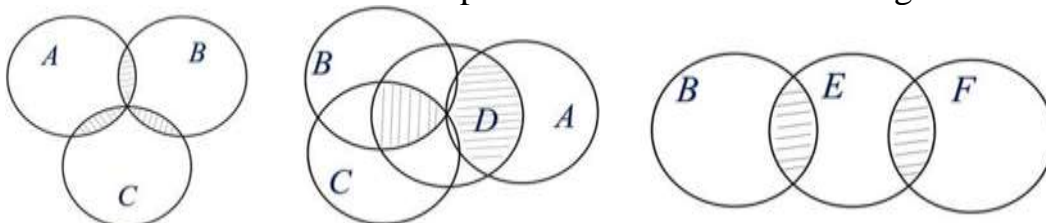
### SIMPLE DIFFERENTIAL EQUATIONS

- A. Variables are separable
- B. Linear
- C. Bernulli equation
- D. Rikatti equation
- E. Lagranj equation
- F. Clero equation

### U FIRST ORDER DIFFERENTIAL EQUATIONS

Using this picture, Case questions and assignments are as follows:

1. Arrange the data in a confusing logical chain table in order.
2. Write information about the painted areas in the Venn diagram:



3. Solve linear, Bernoulli, Ricatti, Lagrange equations.
4. Fill in the data analysis table:

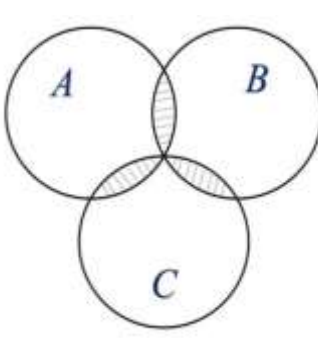
DA name	DA view	DA solution methods

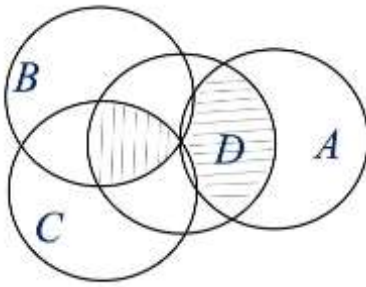
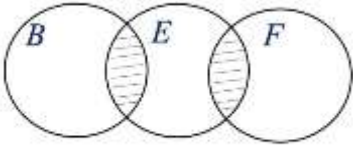
**Way out of the case 1:** Students complete the task using the literature provided in advance by the teacher to arrange the information in the confusing logic table in order.

No	Set	View of the Differential Equation	Solution of the Differential Equation

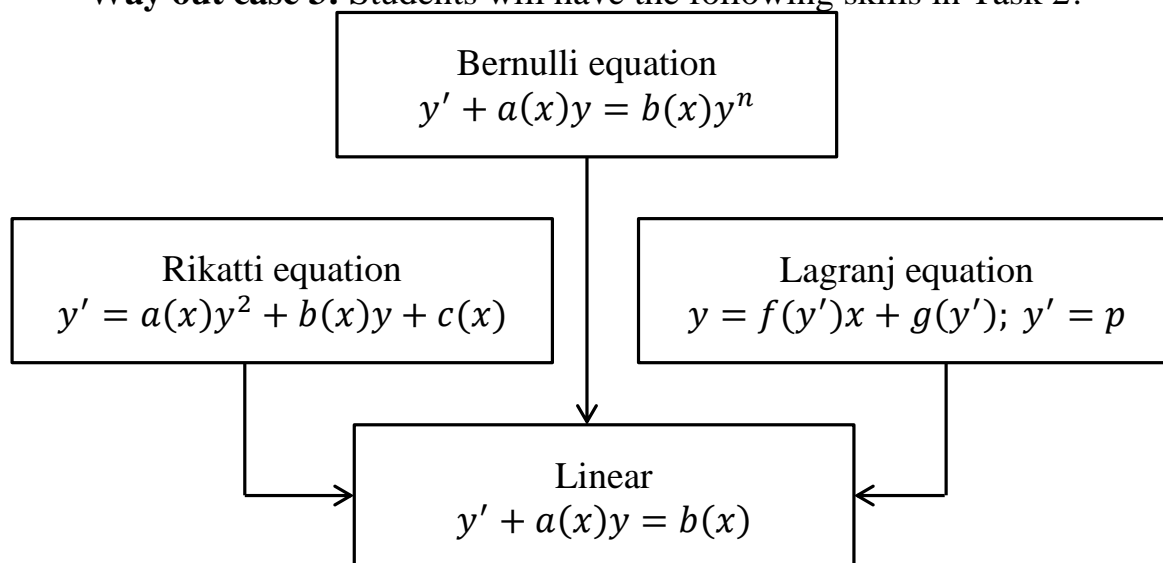
1	A	$\frac{dy}{dx} + a(x)y = b(x)$	$y = e^{-\int a(x)dx} \left[ (1 - n) \int e^{(1-n)\int a(x)dx} \cdot b(x)dx + C \right]^{\frac{1}{1-n}}$
2	B	$\frac{dy}{dx} = f(x) \cdot g(y)$	$y = e^{-\int a(x)dx} \left[ \int e^{\int a(x)dx} \cdot b(x)dx + C \right]$
3	C	$\frac{dy}{dx} = a(x)y^2 + b(x)y + c(x)$ Special equation $\frac{dy}{dx} = Ay^2 + Bx^m$	$\begin{cases} x = C\omega(p) + \alpha(p) \\ y = f(p) \cdot [C\omega(p) + \alpha(p)] + g(p) \end{cases}$ here $p = y'$
4	D	$\frac{dy}{dx} + a(x)y = b(x)y^n$	$y = y_1 + \frac{1}{u} y_1$ – private solution $u(x)$ – continuous function In the special equation A,B, m are unchangeable numbers $n = \frac{m}{2m+4}, n \in \mathbb{Z};$ $x^{m+2} = t; y = \frac{u}{x}$
5	E	$\begin{cases} x = -g'(p) \\ y = -p \cdot g'(p) + g(p) \end{cases}$ here $p = y'$	$\int \frac{dy}{g(y)} = \int f(x)dx + C$
6	F	$y = xy' + g(y')$	$y = f(y')x + g(y')$

## 2. Way out of Case 2:

1		<p><b>a) <math>B \cap A</math>:</b></p> <ol style="list-style-type: none"> <li><math>g(x) = 0, y' = -f(x)y;</math></li> <li><math>f(x) = 0; y' = g(x);</math></li> <li><math>a, b = const y' = -ay + b</math></li> </ol> <p><b>b) <math>C \cap A</math>:</b></p> <ol style="list-style-type: none"> <li><math>n = 1, y' = y(-a(x) + b(x))</math></li> <li><math>y = u(x) \cdot e^{-\int a(x)dx}</math> by changing <math>u'(x) = g(x)u^n(x)e^{(1-n)\int f(x)dx}</math></li> </ol> <p><b>c) <math>C \cap B</math>:</b></p> <ol style="list-style-type: none"> <li><math>n = 0, y' + a(x)y = b(x)</math></li> <li><math>y^{1-n} = z</math> by changing <math>z' + (1-n)za(x) = (1-n)b(x)</math></li> </ol>
		<p><b>a) <math>D \cap A</math>:</b></p> <ol style="list-style-type: none"> <li><math>a, b, c = const \frac{dy}{dx} = ay^2 + by + c;</math></li> </ol> <p>In the special equation</p> <ol style="list-style-type: none"> <li>if <math>m = 0 - y' = Ay^2 + B</math></li> </ol>

2		<p>3. if <math>m = -2</math>, <math>y = \frac{z}{x}</math> by changing</p> $\frac{dz}{dx} = (B - Az^2 + z)x$ <p>b) <math>D \cap B/C</math>:  <math>a(x) = 0</math> bo'lsa, <math>\frac{dy}{dx} = b(x)y + c(x)</math>;  c) <math>D \cap C/B</math>:  if <math>c(x) = 0</math>, <math>\frac{dy}{dx} = a(x)y^2 + b(x)</math>  d) <math>D \cap B \cap C</math>:  <math>y = y_1 + \frac{1}{u}</math> by changing  <math display="block">\frac{du}{dx} + (2a(x) + b(x))u = -a(x)</math></p>
3		<p>a) <math>E \cap B</math>:  <math>y' = p</math> by changing if <math>f(p) \neq p</math>, <math>\frac{dx}{dp} =</math>  <math display="block">-\frac{f'(p)}{f(p)-p}x - \frac{g'(p)}{f(p)-p}</math>  b) <math>E \cap F</math>:  <math>y' = p</math> by changing if <math>f(p) = p</math>, <math>y' = xp + g(p)</math></p>

**Way out case 3:** Students will have the following skills in Task 2!



That is, they determine that the real cause of the problem in solving the above differential equations is the linear equation. It is determined that the solution of the remaining equations can be easily solved by solving a single linear differential equation.

**Method 1:**

$$b(x) = 0, \frac{dy}{dx} = -a(x)y$$

$$\frac{dy}{dx} = -a(x)y \Rightarrow \int \frac{dy}{y} = - \int a(x)dx + C \Rightarrow y = Ce^{-\int a(x)dx}, C = const$$

If the solution found does not satisfy the equation, it is checked by placing it in the equation. If we take  $C = C(x)$  as a function, and in case  $b(x) \neq 0$  the previous solution can be the solution of the linear differential equation.

$$y = C(x)e^{-\int a(x)dx}$$

$$y' = C'(x) \cdot e^{-\int a(x)dx} - C(x)a(x) \cdot e^{-\int a(x)dx}$$

$$C'(x) \cdot e^{-\int a(x)dx} - C(x)a(x) \cdot e^{-\int a(x)dx} + C(x)a(x) \cdot e^{-\int a(x)dx} = b(x)$$

$$y = e^{-\int a(x)dx} \left[ \int b(x) \cdot e^{\int a(x)dx} + C_1, C_1 = \text{const} \right]$$

This solution satisfies the equation.

**Method 2:** Select any arbitrary function  $I(x) \neq 0$  that is continuous. According to the rule of differentiation, the following equation holds

$$\frac{dI(x)y}{dx} = I(x) \cdot \frac{dy}{dx} + I'(x)y$$

Now we multiply the function  $I(x) \neq 0$  by the equation

$$I(x) \cdot y' + I(x) \cdot a(x)y = I(x) \cdot b(x)$$

$$I(x) \cdot \frac{dy}{dx} + I(x) \cdot a(x)y = I(x) \cdot b(x)$$

$$I'(x)y = I(x) \cdot a(x)y \Rightarrow \frac{dI(x)y}{dx} = I(x) \cdot b(x)$$

$$dI(x)y = I(x) \cdot b(x)dx \Rightarrow \int dI(x)y = \int I(x) \cdot b(x)dx + C_1$$

$$I(x)y = \int I(x) \cdot b(x)dx + C_1 \Rightarrow y = \frac{1}{I(x)} \cdot \left[ \int I(x) \cdot b(x)dx + C_1 \right]$$

Let's get this solution. To express the solution in full, find the function  $I(x)$ . To do this:

$$I'(x)y = I(x) \cdot p(x)y \Rightarrow \int \frac{I'(x)}{I(x)}dx = \int a(x)dx \Rightarrow I(x) = e^{\int a(x)dx}$$

$$y = \frac{1}{e^{\int a(x)dx}} \cdot \left[ \int e^{\int a(x)dx} \cdot b(x)dx + C_1 \right]$$

**Method 3:** We describe the equation in the following form:

$$M(x, y)dx + N(x, y)dy = 0; [a(x)y - b(x)]dx + dy = 0$$

$$M(x, y) = [p(x)y - q(x)], \quad N(x, y) = 1$$

Since  $a(x) \neq 0$ , the solution of this equation depends on the integral multiplier

$$\frac{\frac{\partial M}{\partial y} - \frac{\partial N}{\partial x}}{N} = a(x), \quad \mu(x) = e^{\int a(x)dx}$$

Multiply the equation by  $\mu(x) = e^{\int a(x)dx}$ .

$$e^{\int a(x)dx} \cdot [a(x)y - b(x)]dx + e^{\int a(x)dx} \cdot dy = 0$$

We integrate the resulting equation with  $y$

$$\varphi(x) + \int e^{\int a(x)dx} \cdot dy = C \Rightarrow \varphi(x) + e^{\int a(x)dx} \cdot y = C$$

The result is  $x$ .

$$\varphi'(x) + a(x) \cdot e^{\int a(x)dx} \cdot y = 0$$

According to the property of the complete differential equation,  $\varphi'(x)$  is

$$\varphi'(x) = e^{\int a(x)dx} \cdot [a(x)y - b(x)]$$



$$e^{\int a(x)dx} \cdot [a(x)y - b(x)] + a(x) \cdot e^{\int a(x)dx} \cdot y = C$$

By simplifying, we get:

$$y = e^{-\int a(x)dx} \left[ \int b(x) \cdot e^{\int a(x)dx} + C \right]$$

**Method 4:** Express the function that is the solution of the equation in the form  $y = u \cdot v$ . Let  $u = u(x)$ , and  $v = v(x)$  be continuously unknown functions, let us choose one of them:

$$\begin{aligned} y = u \cdot v &\Rightarrow y' = u'v + v'u; \\ u'v + v'u + a(x) \cdot u \cdot v &= b(x) \Rightarrow (v' + a(x) \cdot v)u + u'v = b(x) \\ v' + a(x) \cdot v &= 0 \Rightarrow v = e^{-\int a(x)dx} \\ u' &= \frac{b(x)}{v} \Rightarrow u = \int b(x)e^{\int a(x)dx} + C \\ y = u \cdot v &= e^{-\int a(x)dx} \cdot \left( \int b(x)e^{\int a(x)dx} + C \right) \end{aligned}$$

**Method 5.** Solving the equation using the Maple program [11].

Get out of the situation **4:**

Students express their knowledge and skills in the form of a thesis

D E name	D E view	D E solution method
Variables are separable	$f(x)dx + g(y)dy = 0$	Integrates
Variables are separable	$\frac{dy}{dx} = f(x)g(y)$	$\int \frac{dy}{g(y)} = \int f(x)dx + C$
Linear	$\frac{dy}{dx} + a(x)y = b(x)$	a) Lagranj b) Bernulli c) $\mu(x) = e^{\int p(x)dx}$ through integral multiplier d) unknown $I(x) \neq 0$ Subtraction under the differential multiplication
Bernulli	$\frac{dy}{dx} + a(x)y = b(x)y^n$	a) $z = y^{1-n}$ b) $y = u(x) \cdot v(x)$
Rikatti	$\frac{dy}{dx} = a(x)y^2 + b(x)y + c(x)$	a) $y_1 = mx + n$ b) $y_1 = \frac{m}{x}$ c) $y = y_1 + \frac{1}{u(x)}$
Lagranj	$y = f(y')x + g(y')$	If $y' = p, f(p) \neq p$ , through linear differential equation
Klero	$y = xy' + g(y')$	If $y' = p, f(p) = p$ , a) $\frac{dp}{dx} = 0$ b) $x + g'(p) = 0$

**Analysis and results.** Using the above method, experimental work was carried out with the participation of students of higher education institutions. Students were divided into experimental and control groups for experimental work. Their results were processed on the basis of one of the methods of mathematical statistics, the method  $\chi^2$ . The analysis showed that the mastering rate of the experimental group was higher than that of the control group. That is, the mastery rate increased by 7%.

**Conclusion/Recommendations.** The study proved that the proposed teaching method is more effective than the traditional teaching method, and the results of the experiment were analyzed and demonstrated using mathematical and statistical methods, which proved the validity of the proposed scientific hypothesis. Therefore, we recommend the use of the above methods to teach the topic "Simple differential equations of the first order." This will increase students' interest in mathematics and their ability to make independent decisions. As a result, thinking about the science of mathematics increases.

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UDC: 37.013.46

## THE ROLE OF PEDAGOGICAL AND AESTHETIC ASPECTS OF TOURISM IN EDUCATING YOUNG GENERATION

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**Abstract:** The following article attempts to study the role of pedagogical and aesthetic aspects of tourism in educating young generation. It also refers to the essence of aesthetic education through the means of tourism activities.

**Key words:** tourism, tourism pedagogy, aesthetic education, pedagogical aspects, education

**Аннотация:** Ушбу мақолада ёш авлодни тарбиялашда туризмнинг педагогик ва эстетик жиҳатлари ўрганилган ҳамда туристик фаолияти воситалари орқали эстетик тарбиянинг асл моҳияти ёритиб берилган.

**Калит сўзлар:** туризм, туризм педагогикаси, эстетик тарбия, педагогик жиҳатлар, таълим-тарбия

**Аннотация:** В статье рассматривается роль педагогических и эстетических аспектов туризма в воспитании молодежи, а также раскрывается сущность эстетического воспитания средствами туристской деятельности.

**Ключевые слова:** туризм, педагогика туризма, эстетическое воспитание, педагогические аспекты, образование

**Introduction.** Since the humankind has emerged, the most pressing, difficult task has always been the issue of nurturing the youth. It is no coincidence that great thinkers, scholars and intellectuals have linked the development, peace and tranquility of society with the upbringing and education of young people.

Today, the world experience shows that new, modern methods and tools of teaching are being introduced to the educational process and are being used effectively. More specifically, most of these methods emphasize that the teacher should not be the only source of knowledge, but also students should actively participate in educational process and become the organizer, manager of the independent work process.

While educating young people is now one of the most important tasks, various methods are being used in its implementation. However, not enough research has been done on the use of tourism activities in educating young people.

The aim of this article to discuss the opportunities of using tourism activities in educating young people as well as pedagogical and esthetic aspects of tourism.

**Literature review.** For most education as a whole seems to be a kind of social methodology that promotes the optimal use of a person's abilities for the good of society, the formation of the ability that helps to reckon with the interests of others. "The main goal of education is to prepare a mature, holistic personality," stated L. Kolberg, and in this the most far-sighted Western educational methodologists - G. Masson, T. Parsons (USA), D. Wright, J. Bilson, (Great Britain), E. Schutz (Germany), and many others support him. Most of them associate the solution of this problem with the creation of a "new methodology of education." Development of "friendly environment", "fair community" for children and adults is considered as a priority task for advanced Western societies and a number of international organizations nowadays.

In the modern world, the importance of education as an important factor in the formation of a new quality of the economy and society is increasing along with the growing influence of human capital. Education is defined as a process and result of assimilation of systematized knowledge, skills and abilities, it is complemented by a target setting to reflect the general scientific picture of the modern world, presented in globalistics, and is also interpreted as a mechanism for the transfer of knowledge continuously generated by science and culture.

In this regard, it should be noted that tourism carries a huge socio-cultural potential and is, first of all, an important element not only of the physical, but also of the environmental, moral, aesthetic and other spheres of culture and education.

In modern socio-cultural conditions, universal human values receive the highest priority, which are based on a cultural and national basis. It is obvious that the process of socialization of a young person's personality needs pedagogical instrumentation, which makes it possible to exclude or at least smooth out the negative impact of the unorganized social environment on the developing personality. In this regard, one of the most important tasks of nurturing young generation is the development of national consciousness, the formation of valuable attitude towards their historical roots, mentality, culture, traditions, native language, which is achieved through the organization of tourism activities.

The research has shown that at present time the processes of familiarizing young people with the values of culture and art and the search for new pedagogical ways to implement new forms of education require close attention.

Any person at any age at least once go for travelling and become a tourist. During travel, spiritual and physical qualities are formed. It is essential to reveal the determinants that form the personality of the tourist, the factors that affect mental and physical strength.

Tourism as a multidimensional phenomenon performs a large number of functions that can be subdivided into several large groups.

Social and humanitarian functions:

- cognitive and educational function - obtaining and deepening the knowledge, acquaintance with nature, history, culture of not only your own region and country, but also other countries and peoples' culture;
- educational function, i.e. the formation of moral and aesthetic qualities, provoking the sense of love for the surrounding world;
- cultural function - raising the cultural level of citizens; [2]

**Research methodology.** The author used the methods of analysis of pedagogical literature and comparison. In the following work the author attempted to carry out exploratory research regarding the relationship between education of young professionals and tourism and also analyzed aesthetic and pedagogical aspects of tourism.

**Analysis and results.** The means of upbringing that form a personality in pedagogy are such activities as work, cognition, communication, game, physical education and sports.

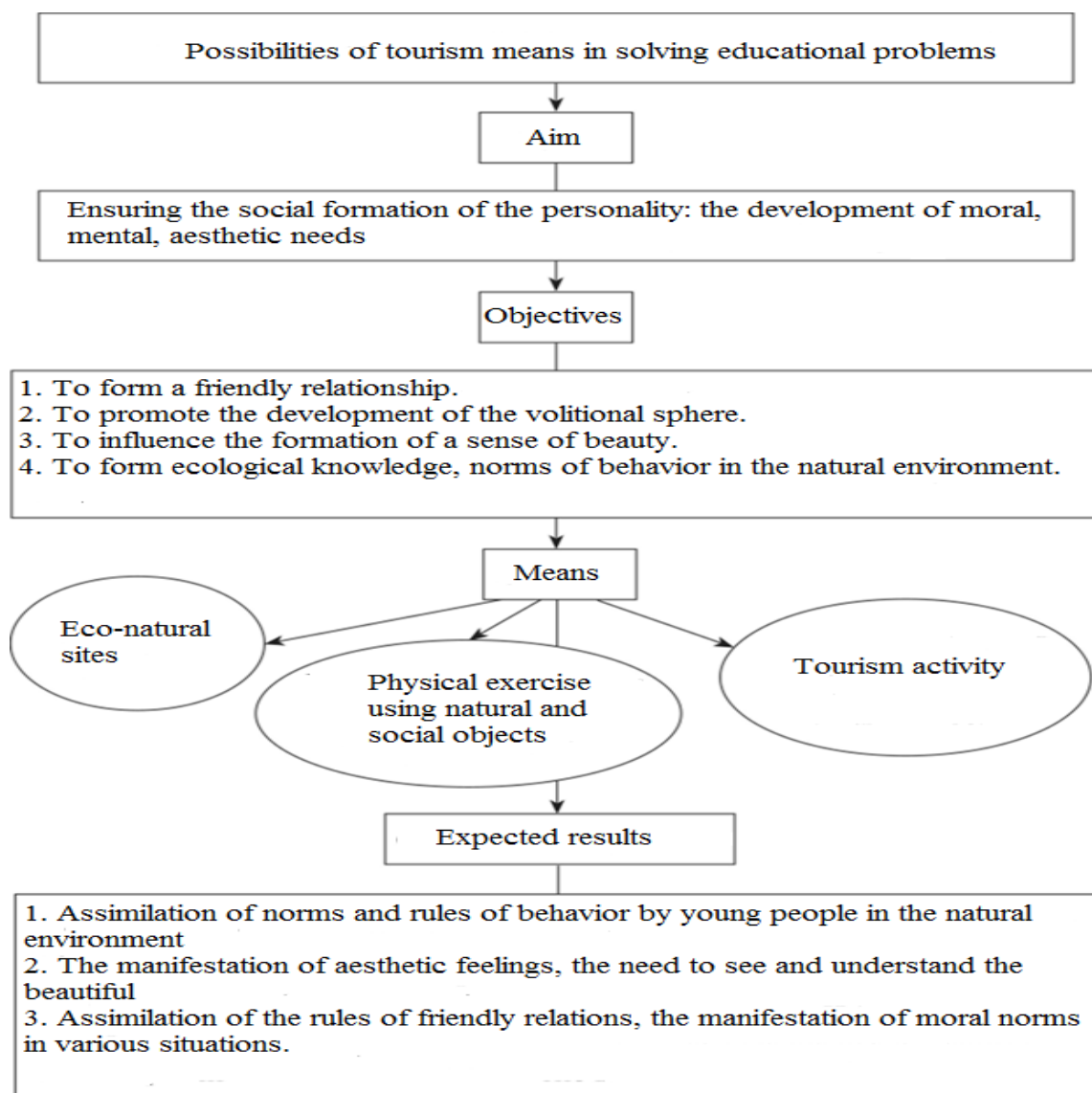
For young people, travelling is a form of learning, a kind of way to meet other people, a way to have contact with other cultures, a source of career development, a means of self - development, an essential part of everyday life, a brief escape from reality. Young people are adventurous and want to develop their own knowledge. Often chooses to work in the places they choose to visit. They have an important role in attracting new visitors to their destination. Young people are adventurous and want to develop their own knowledge.

Tourism with active modes of movement, as a means of physical education, is a special type of activity that can include all of the listed activities in a certain ratio. The prevalence of this or that type of activity will depend on the targets, both for the entire trip, for a particular day, and on the nature of special tasks performed by young tourists during trip. [4]

In the process of activity, pedagogically directed, a positive experience of behavior is accumulated; favorable conditions are created for the formation of the moral qualities of a person. [5]

The pedagogical impact of tourism means is to ensure the social formation of the personality through movement of a young person, in introducing him or her to a wide range of universal human values of knowledge, in particular the acquisition of natural history, ecological knowledge, as well as available knowledge related to the organization of simple tourist walks and excursions. The educational orientation of tourist activity is also in knowing oneself through various tourist positions that correspond to the age and individual characteristics of children (Fig. 1.).





Methodological functions of tourism pedagogy:

- nurtural - the formation of a sense of collectivism, moral and ethical values, the development of the skills of dialogical interaction;
- educational - obtaining, replenishing and consolidating knowledge of history, cultural studies, recreation, natural science, etc.;
- health improvement - compliance with the optimal regime of physical activity, the use of the beneficial influence of natural factors on the state of the body, compliance with the rules of personal and public hygiene, the development of adaptive capabilities.

Aesthetic education associated with tourism is designed to teach the younger generation to notice, appreciate, cherish, seek, find and create beauty, as well as not put up with disgrace, overcome and mitigate the heartbreaking indifference to beauty and damage that is being done to the environment. [3]

The aesthetic function of tourism is understood as the opportunity provided in a tourist trip to enjoy the beauty of nature, the creations of architects, sculptors, artists. The aesthetic function is closely related to the emotional and mental function. It is understood in tourism science as an opportunity to relieve stress and fatigue after hard

work, to gain positive emotions from meeting people, impressions from interesting tourist sites or overcoming natural obstacles in a sports or active tourist travel.

Tourists, in their pursuit of freedom and beauty, constantly include large nature in their aesthetic field of vision. Contemplating beautiful natural landscapes, getting acquainted with historical sights, local customs, food, they comprehensively activate and expand the field of vision, increase their aesthetic level. Even before going on a trip, they try to learn more about the places they go to, the way of life existing there. Practice shows that tourism contributes to the growth of cultural knowledge of people, raises the level of their cultural education. [1]

An important goal of tourist activity is to experience the feeling of beauty, and beauty is precisely contained in the cultural objects of tourism, which are its sources. These sources in all countries and regions of the world have their own peculiarities. Tourists, traveling to famous places, get an impression of the natural beauty. All peoples of the world have their own special folk culture, and tourists have the opportunity to feel the specific charm of folk customs.

Tourism, like no other type of human activity, introduces those involved in tourism activity to the beauty in nature and society, fills life with spiritual content, makes it more beautiful, richer, helps to better understand the world around. In many research works conducted by scholars on the role tourism in aesthetic education it is evident that nature and surrounding environment regarded as an excellent educator for the younger generation. In nature and any specific tourist site, a person meets with the beautiful objects and places created by nature and people, also with the harmony of colors, with the boundless space of forests, fields, rivers, lakes, mountain ranges.

An integral part of the educational impact of tourism is aesthetic education, which begins with the impact of nature and the environment on a person. The person's ability to perceive nature aesthetically enriches imagination and thinking.

Thus, in the practice of tourist activity, the following components of aesthetics can be distinguished: aesthetic education, the purpose of which is the formation of the theoretical and value foundations of the aesthetic culture of the individual; aesthetic self-education, the purpose of which is personal self-improvement.

The theoretical and practical aspects offered in this work have a research nature and are considered as pedagogical foundations necessary for teachers and educators to implement a systematic approach to educating a student's personality in the process of tourist activity. The reliability of the implementation of the proposed model is ensured by the author's many years of practice-oriented activity and the representativeness of the results obtained.

**Conclusion.** It can be concluded that tourism, which is considered as an active type of human activity, as well as a unique means of education, contributes to:

- the formation of a comprehensively developed and physically healthy personality;
- familiarizing the younger generation with a healthy lifestyle through communication with nature, as an alternative to drugs and bad habits, fostering will and spirituality;
- practical knowledge of the native land, acquaintance with the monuments of history and culture, with the surrounding nature;
- organization of active leisure, summer recreation of the youth;
- formation of the foundations of ecological and aesthetic culture;

- instilling skills in labor, social activities, research work, vocational guidance.

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UDC: 37.013.46

## EDUCATIONAL OPPORTUNITIES OF YOUTH TOURISM

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**Abstract:** The following article attempts to study the educational opportunities of youth tourism. It also refers to the importance of youth tourism in educating young generation.

**Key words:** tourism, youth tourism, educational tourism, pedagogical aspects, cultural aspects

**Аннотация:** Ушбу мақолада ёшлар туризмнинг таълим-тарбиявий имкониятлари ўрганилган ҳамда ёшлар туризмнинг ёш авлодни тарбияладаги ўрни ёритиб берилган.

**Калит сўзлар:** туризм, ёшлар туризми, таълим туризми, педагогик жиҳатлар, маъданий жиҳатлар

**Аннотация:** В этой статье исследуется образовательный потенциал молодежного туризма и подчеркивается его роль в обучении подрастающего поколения.

**Ключивые слова:** туризм, молодежный туризм, образовательный туризм, педагогические аспекты, культурные аспекты

**Introduction.** The Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 sets specific goals for radically improving the welfare and quality of life, comprehensive and rapid development of society and the state, modernization and liberalization of all spheres of life.

In other words, we must transform Uzbekistan into a stable market economy with a high share of innovation and intellectual contribution to production, a competitive industry in the modern and global markets, as well as a rapidly developing country with a favorable investment and business environment.

These goals cannot be achieved without the full transition of Uzbekistan to an innovative model of development, which requires the creation of an effective system of state support for innovative activities in the country and encourage the implementation of innovative ideas, developments and technologies in public administration, priority sectors of the economy and society.

Today, in the era of a dynamically developing world community, globalization and digitalization of all spheres of human life, the problem of educating Uzbek youth is being put forward as a priority. Local scholars note that it is vital to attract all social institutions and structures of Uzbek state and society that are related to the younger generation. It is necessary to search for new forms, means and mechanisms that could contribute to the effective solution of the problems of educating the younger generation. [2]

Tourism today is becoming one of the main elements of the civilized world; it is rightfully called the phenomenon of the 21<sup>st</sup> century. Tourism plays an essential role in social and cultural life of the people.

There is no doubt that the economic and cultural potential of any country significantly depends on the state of the tourism industry. The state should be interested in the development of both tourism and the tourist educational and pedagogical paradigm, giving these areas priority state significance.

In obtaining those above mentioned goals, training and educating young people are considered as essential by using various kinds of educational tools and methods such as tourism activities.

In this, a huge role belongs to youth tourism, the pedagogical significance of which can be fully recognized by teachers, parents and students who are directly related to this phenomenon.

However, there is a literature gap in identifying the role of tourism activities and in particular youth tourism in training and educating young generation. There is no enough evidence in national literature which explains integration of pedagogy and tourism.

The aim of this work is to study the educational opportunities of youth tourism in educating and training the young generation.

The following article starts with literature review where the authors attempts to analyze previous works done by several foreign scholars regarding the topic of education and tourism as well as to identify the importance of youth tourism in educating young people.

**Literature review.** Education and learning are considered as the main purposes of youth travel, the reason for that is young people have a desire to discover and study the world around them. Education plays a crucial role in assisting young people to prepare for adulthood. Learning occurs more intensively during young years of a person than any other phases of the life cycle. Education is irreplaceable in the development of physical or cognitive skills, the acquisition of knowledge, and the shaping of values, attitudes, and beliefs.

Among the various means that contribute to the formation of a new person, a special place belongs to tourism and local history, which occupy strong positions in the educational process at school, vocational school, in institutions that work with children at the place of residence, in family education. Tourism and local history solve the tasks set in the upbringing of the younger generation with the help of specific content, forms and methods. [5]

According WISE (The World Youth Student and Educational) youth tourism is a form of tourism that include independent travelers (young people are not accompanied by a parent or guardian personally) for periods of less than one year , with ages between 15 and 29 years. Individuals are motivated for such kind of tourism to experience new culture and to take advantage form new learning opportunities in an unknown environment that is different from normal everyday life.

Youth tourism has a range of socio-cultural advantages, such as increasing youth awareness in matters of culture, acquiring personal qualities, being acquainted with surrounding world. Because of journeys, young people become more tolerant to each other, friendlier, more confident in themselves. Youth tourism assists young people to learn to solve problems and cope with stress.

At present time, there are various definitions of youth tourism (some of them are presented in Table 1).

Author	Definition
WYSE Travel Confederation	Youth tourism includes all independent trips (less than a year) of people aged 16 to 29 years who are motivated, in part or in full, by the desire to learn the world, gain



	life experience and/or benefit from formal or informal learning outside the usual environment a habitat.
du Cros & Jingya [1]	Youth tourism involve young people who travel for several purposes such as education and culture.
Haigh, R [3]	Young travelers who prefer cheap accommodation, place an emphasis on meeting other travelers, independently or in an organized manner, having flexible travel schedule and taking longer rather than brief holidays

Source: Developed by the author

Youth tourism can include several types of tourism and educational tourism is one of them. The aim of traveling with educational purpose is not new and its popularity is expected to grow in the future.

The aim of this kind of tourism is to improve the education process, to enrich the educational experiences by providing excursions, trips to camps, fieldtrips. It also includes summer schools, and theme camps that are organized on a national and international level. [7]

M.D. Birzhakov who is one of the scientists specialized in youth tourism believes that tourism is an integral part of a young person's life, and travel is a lifestyle of a developed human society. The specified researcher adheres to the point of view that at the stage of the beginning of life paths, when there is no family, children, young people should see the world, get acquainted with the peculiarities of the life of other cultures [6]. In the future, this will help the young man find his own path in life and form his own life principles, as well as broaden his horizons.

Therefore, it can be noted that youth tourism is a special type of travel for young people both within the country and abroad, which allows you to combine educational and other goals with recreation. The structural elements of youth tourism include such types of tourist activities as excursions, specialized camps, tourist competitions and events, extreme activities in the natural environment.

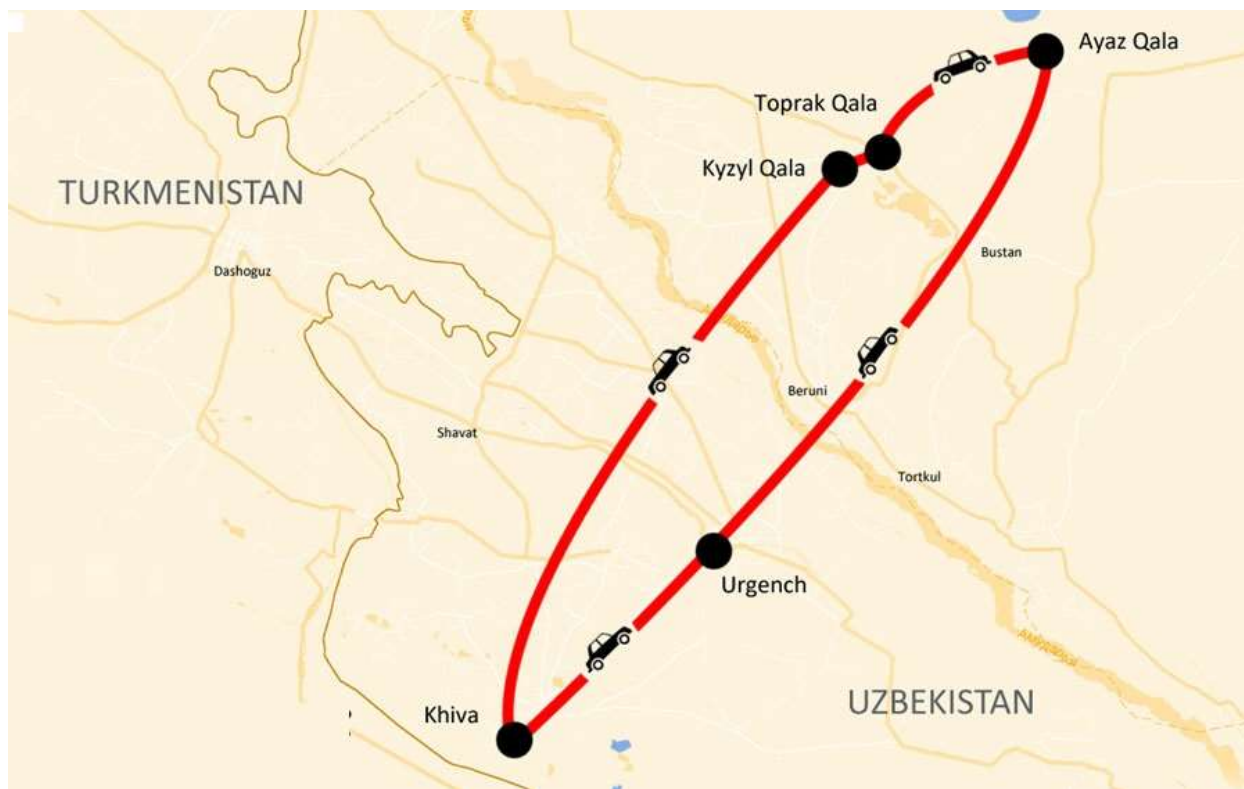
**Research methodology.** The author carried out analysis of research works conducted by local and international scholars regarding the pedagogical aspects of youth tourism as well as attempted to conduct exploratory research related to pedagogical benefits that youth tourism generates. In the following work author, also designed one day tour route designed specifically for high school and university students to the ancient fortresses situated in lower Amu Darya region and also explained the pedagogical and cultural value that one day trip to the mentioned destinations can bring to young people.

**Analysis and results.** Youth tourism is a great way of development of young generation (children, adolescents), including a more mature youth aged 18-35 years

old, implemented in the form of recreation and socially useful activities, a characteristic component of which travel (excursion, walk, hike, expedition). This definition, first of all, indicates that all the main directions of human upbringing such as ideological, civil-patriotic, environmental, aesthetic, physical, etc. should be integrated in youth tourism.

Considering the development of youth tourism in Khorezm region, it can be concluded that the region has historical value and has a great advantage due to its geographical location. Once it used to be main stop of caravans travelling along the Silk Road. On its territory, there are unique natural resources, objects of cultural and historical heritage. Apart from that there is huge flow of tourists to the region since it is considered as one of the main tourist destinations in Uzbekistan. Statistics show that young people travel more, as it has become more accessible and, at the same time, fashionable, prestigious and interesting. However, taking into account pedagogical and cultural value of tourism, this type of trips not in demand these days. Thus, there is an important socio-pedagogical problem in the organization and implementation of this direction in Uzbek youth tourism. It is necessary to offer young people a new, interactive and fascinating historical journey to the ancient desert capitals of Khorezm and learn the most interesting legends about them. People who lived more than two thousand years ago near lower Amu-Darya region had to build fortresses to protect against invasions of nomadic tribes who lived in the Kyzylkum desert.

One-day trip includes a visit to the fortresses Toprak-Kala, Kyzyl-Kala, Ayaz-Kala. (Picture 1)



Picture 1. Route map for one-day trip.

Kyzyl Kala (Red Fortress) was built as a defensive fortress and was part of a chain of Khorezm fortifications, created by the state for protection of north-east borders of ancient Khorezm.

Another interesting fortress Tuprak Kala castle is a rectangular structure with dimensions of 500 x 350 meters. The total length of the perimeter walls is more than a kilometer, and the height reaches 8-9 meters in some places.

Ayaz Kala (Fortress in the wind) is situated on a hilltop overlooking the Kyzylkum Desert. The fortress remained unfinished and it never became habitable.

The expected result of the trip is:

- an increase in the number of young tourists arriving in the Khorezm region
- development of pride in Uzbek youth for the motherland, the formation of feelings of patriotism in them;
- broadening the horizons of the younger generation, developing the desire to learn about the history of Uzbekistan, its diverse geographic landscape, rich nature, historical cultural heritage.

**Conclusion.** Based on the above mentioned data it can be concluded that it is necessary to intensify the processes of implementation of social youth policy, directly and indirectly related to the development of domestic youth tourism, popularization and improvement of the quality of youth sports and tourism events, promotion of a healthy lifestyle among young people, creation of optimal conditions for youth to travel both within their own country and abroad.

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UDC: 159.9.072.5

**FORMS AND METHODS OF PREVENTION OF OCCUPATIONAL STRESS**

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**Аннотация:** В статье дан анализ научной литературы о формах и методах профилактики профессионального стресса в деятельности врача общей практики. Показано, относительно большое разнообразие форм и методов проведения предупредительной работы. Среди наиболее популярных можно выделить профилактических мер, основанные, как правило, на учение гуманистической психологии. С учетом особенностей объекта настоящего исследования, полагается целесообразным также выделить рационально-эмотивный подход, который является наиболее эффективным для людей, способных к интроспекции, рефлексии, анализу своих мыслей. В связи с этим, рационально-эмотивные средства выделены могут быть эффективными в работе с будущими врачами общей практики.

**Ключевые слова:** врач общей практики, профессиональный стресс, эмоциональ, когнитив.

**Аннотация:** мақолада умумий амалиёт шифокори фаолиятидаги касбий стресснинг олдини олиш шакллари ва усуллари хақида илмий адабиётлар таҳлили келтирилган. Адабиётлар таҳлилидан келиб чиққан ҳолда, бугунги кунда профилактика ишларини олиб бориш шакллари ва усуллари нисбатан хилма-хиллиги кўрсатилган. Уларнинг ичида гуманистик психологияни ўқитишга асосланган профилактик тадбирлари ажратиб кўрсатилган. Ушбу тадқиқот объектининг хусусиятларини инобатга олган олда ўз фикрларини интроспекция қилиш, акс эттириш, ва таҳлил қилиш қобилиятига эга одамлар учун энг самарали бўлган оқилона эмотионал ёндашувни ажратиш ўринли деб ҳисобланган. Шу муносабат билан, оқилона ҳиссиёт воситалари бўлажак умумий амалиёт шифокорлари билан ишлашда самарали бўлиши мумкинлиги таъкидланган.

**Калит сузлар:** умумий амалиёт шифокори, касбий стресс, ҳиссий, когнитив.

**Abstract:** The article analyzes the scientific literature on the forms and methods of preventing occupational stress in the activities of a general practitioner. A relatively large variety of forms and methods of conducting preventive work is shown. Among the most popular, one can single out preventive measures, based, as a rule, on the teaching of humanistic psychology. Taking into account the features of the object of this study, it is also considered appropriate to single out a rationally emotive approach

that is most effective for people capable of introspection, reflection, and analysis of their thoughts. In this regard, rationally emotive means allocated can be effective in working with future general practitioners.

**Keywords:** general practitioner, occupational stress, emotional, cognitive.

**Introduction.** At the same time, our country is actively improving the health system, where a special place is taken by the development of primary health care based on the principles of General (family) practice. At the center of this process are doctors, who largely depend on the effectiveness of this direction as a whole. "...We must take practical measures to strengthen the role and status of doctors in society, increase respect for them among our people, create decent working conditions for these specialists and increase their income" The most important characteristics of professional activity of these specialists are tension, increased responsibility for decisions made, their consequences, the presence of a wide range of responsibilities, saturation with a variety of communication situations with patients and their family members, characterized by their non-standard and, as a rule, emotional background. In addition, the complexity and specificity of professional tasks that are currently being solved by General practitioners in the field, as well as constant socio-economic changes, cause a significant intensification of their professional activities. All this leads to an increased risk of professional stress in this category of specialists, corresponding to negative processes, which greatly actualizes stress-prevention measures. As practice shows, among the most effective ways to prevent occupational stress is to prevent its occurrence in the process of professional training of future specialists.

**Purpose:** to identify the forms and methods of prevention of professional stress in the activities of a General practitioner.

**Literature review.** The analysis of scientific literature devoted to the problem of prevention of stress States in General, and professional stress in particular, showed a relative diversity in the choice of different scientists forms and methods of work on the prevention of stress States. Some scientists do not offer systematic sets of preventive measures, but only sets of individual, most effective recommendations. So, U. Beling gives a number of recommendations for the prevention of stress, such as setting on self-respect, self-knowledge, self-education of character, awareness of your own emotions, the ability to reduce the intensity of the situation through gaming, focusing on the positive in life, and so on. [1]

V. D. Troshin, considering the life style of an individual from the perspective of preventing stressful States, gives recommendations for organizing a healthy lifestyle and notes that the optimal organization of interpersonal communication is a preventive anti-stress tool [23].

Interesting are the recommendations developed by A. A. Osipova, which suggest the reorganization of the objective content and conditions of professional activity, taking into account the seven main directions. This approach affects functional States by improving the structure of work. This is confirmed by empirical data. However, in many situations, the application of such objective measures is significantly limited or simply impossible [17].

The corresponding recommendations are formulated more generally in the work of E. Yu. Korzhov. Thus, the greatest success can be achieved if you directly influence



all the components of stress-cognitive, emotional, behavioral and somatic, taking into account the temperament and personality of the employee, his adaptation skills, behavior characteristics and real stress and tension that he feels [9].

A number of scientific studies reveal complex approaches to preventing negative emotional States. Thus, Frankenheuser M., L. A. Kitaev-Smyk, and others distribute methods for managing stress States according to the classification of stress factors based on the control level. An effective way to overcome stress is to be able to distinguish between stressors that can be controlled from stressors that cannot be controlled. For certain types of stressors, there are various coping techniques associated with focusing on problems, i.e. on stress factors to be controlled: self-confidence training; time management; social skills training.

Examples of techniques that can be effective when focusing on emotions (i.e., stress factors that are beyond control) are: deep breathing; muscle relaxation; and visualization.

Cognitive strategies for coping with stress that relate to stressors that are perceived subjectively are changing inappropriate beliefs, unwanted thoughts, and training inoculation of stress [8], [25].

In the approach of I. V. Kuprygin, S. O. Leonova, the main methods of stress prevention are neuromuscular relaxation, voluntary regulation of breathing to relieve excessive stress. The authors also suggest a method of mimic actions, psychomotor actions, self-regulation, attention switching, ideomotor training, autogenic training, etc. [11].

V. N. Vasiliev distinguishes among the methods of preventing the occurrence of stress States: anti-stress mode of breathing; autogenic training; relaxation States; concentration, etc. [2].

The results of research by M. N. Kurasova indicate positive results of using autogenic training by various specialists during the educational process. As a result, the number of conflicts decreases, the level of comfort increases, and a more stable positive attitude appears [12].

I. G. Timoshchuk, E. V. Ulybina, and others use various types of training as an effective method of preventing stress, including professional ones. In particular, scientists offer training procedures designed to inoculate stress, increase self-confidence, and develop social skills. Certain methods of influencing feelings, thoughts, and behavior attract attention: visualization, suppression of unwanted emotions, and changing thoughts and beliefs [22].

N. M. Goncharuk, as a means of protection from stress offers training psychic self-regulation, which involves learning how to diagnose your state of mind and personality, learning the basics of muscle relaxation, self-regulation of emotional States using music and meditations, learning the methods of volitional self-control and endurance of the individual [4].

The next level identified by us is psychophysiological. Within this level, the impact of stressors is explained as certain changes at the physiological level, i.e. the result of the activity of the sympathetic part of the nervous system, which can then be manifested in the behavior of a specialist. This reaction of the body to the external environment is usually interpreted as a non-specific reaction of the body or stress

reactivity. A long stay in such an altered state negatively affects the specialist's body as a whole [14], [20]. In this regard, the technologies of influence on the employee, which are listed below, are aimed at rapid restoration of optimal functioning of the body after exposure to stressors or during their action [21]: meditation is one of the most practical relaxation techniques. It is a procedure of intensive reasoning in order to penetrate the essence of the object of observation by contemplation, concentration and concentration on this object. The analysis of the literature on the problem under study indicates that there is a significant positive impact of regular meditative classes on both the organic and psychological sphere of the corresponding specialist; breathing techniques - which has a huge impact on the functional state of the specialist's body. Arbitrarily changing the modes of breathing and the number of cycles of inhalation and exhalation per minute, you can influence the activity of mental activity, this is the result of changing the proportionality of oxygen and carbon dioxide in the blood. According to the results of research, it has been proved that certain types of breathing contribute to relaxation and normalization of many psychophysiological indicators; progressive muscle relaxation - allows you to relieve tension and restore a sense of peace. In addition, with long-term use of this technology, there is a high efficiency in the fight against headaches, back pain and in overcoming anxiety and depressive States; autogenic training - it is based on the principle of deep muscle relaxation, which positively affects the normalization of the psychophysiological state of the specialist. This technology provides a system of exercises that form the specialist's ability to evoke vivid visual representations. It is based on the concept of interaction of the conscious and unconscious parts of the " I " in the life of the employee. Many studies show the effectiveness of this technology in the treatment of migraines, insomnia, hypertension, as well as to overcome anxiety and increase resistance to stress; biofeedback - this technology involves the use of special devices to reflect psychophysiological processes that occur in the human body automatically and may not be realized. The functions of the body that with this technology can be conquered by conscious (volitional) control include the occipital alpha rhythm, heart rate, blood pressure, peripheral blood circulation, skin-galvanic reaction. At the same time, these devices can only record the real, objective state of the body, and the regulation of these functions is performed using special relaxation techniques (creating special visual images, eye movements, respiratory regulation, relaxation and tension of individual muscle groups, auto-suggestion, etc.). an Important feature of this technology is the ability to observe objective changes in functions that can be subordinated to conscious control. This allows you to quickly master the techniques of normalization of the physiological state of the body. Many studies confirm the effectiveness of this technology in the treatment of asthma, hypertension, dystonia, migraines, and it also allows you to regulate mental States.

In General, all techniques of the level of psychophysiological influence are aimed at activating the parasympathetic division of the nervous system. This stimulates the recovery of the specialist's body defenses and allows you to quickly mobilize forces in a situation of exposure to a strong stressor.

The final selected level is psychological. According to the prevailing number of researchers, the majority of psychological technologies that are used in modern training

programs on the problem of overcoming and preventing occupational stress are based on a cognitive-behavioral approach. This is due to several features of the phenomenon of professional stress [13]: first, stress is an individual assessment of a difficult situation, i.e. the reason for its occurrence lies in the cognitive sphere of the individual. Of course, this statement does not in any way reduce the role of individual psychological characteristics that leave their mark on the formation of the cognitive map of the individual. And, at the same time, the active impact on the individual in order to overcome stress occurs in its cognitive sphere; secondly, after the perception of the stressor as a threatening situation, the consequences of such a reaction are manifested, in addition to the organic sphere, and in the behavior of the individual. Therefore, conceptually psychological techniques for dealing with professional stress also contain blocks of classes aimed at mastering behavioral skills to combat this phenomenon. We will analyze the technologies that are usually used in the framework of psychological training, which are most often found in modern research and are aimed at preventing and overcoming professional stress. Thus, most of the cognitive approaches used to prevent occupational stress are based on cognitive theory. Its General conclusion can be summarized as events in the world that people evaluate through the prism of their own perception. In turn, the peculiarities of individual perception provoke the appearance of stress [5].

Under this approach one may select analysis techniques stress, which focuses on the cognitive awareness of the subject's own behavioral reactions, emotional condition from the subjective perception of a stressful situation. The consequence of using this technique is to become aware of the peculiarities of one's own professional stressors and take responsibility for one's own emotional and behavioral reactions due to their influence [3], [15].

The next highlighted technique is selective perception, which is aimed at making the specialist aware of the peculiarities of his perception of the environment and at revealing the mechanisms of such perception. This cognitive concept is based on the following principles: perceived reality is not objective reality. The image of perceived reality is limited due to the peculiarities of human sensory functions - hearing, vision, smell; the integration of sensory sensations depends on such cognitive processes as the integration and differentiation of stimuli. This interpretation may be false; a person has the ability to use automatic, non-adaptive thoughts without thinking and preliminary reflection. They can determine feelings, reactions to actions, and circumstances that occur; maladaptive thoughts can be controlled by changing them, or consciously switching them to others; as you train, you can increase your awareness of thoughts and learn to take responsibility for their occurrence.

In General, this technique allows us to understand the responsibility and control of personal responses to stressors [19].

The technique of positive thinking involves mastering the technique of self-observation, analysis of the causes of your own emotional reactions and allows you to develop the ability to control your own mental state. Another of the achievements of this technique is the specialist's awareness of the multivariability of their own behavior and mastering the technique of flexible choice of strategies for reactions to a particular

event. Thus, there is a faster adaptation to a stressful situation, which leads to minimizing the cost of internal resources [18].

Within the framework of the behavioral approach, it is considered appropriate to identify a type of techniques that are aimed at developing behavioral skills that prevent the occurrence of professional stress and minimize their negative impact. So, the self-management technique aims to maximize the use of the specialist's capabilities in order to consciously manage the course of life, by planning and controlling events that occur during the day, week, month, year. As a result, the effectiveness of professional activity increases, awareness of the experience of certain events appears, and the ability to overcome stressful situations, both at work and in personal life [16].

Time management technique, which involves mastering special skills that allow you to effectively allocate twenty-four hours a day to achieve personal and professional goals and contributes to improving the effectiveness of your own activities in General [6].

The technique of assertive behavior is associated with the development of communication skills and such a quality as self-confidence. In addition, the technique examines the causes of insecure behavior, the differences between confident, insecure and aggressive types of behavior, and it is aimed at developing skills of assertive behavior. Significant emphasis in technology is placed on mastering the ability to Express confidence both verbally and non-verbally. From the point of view of stress, confident behavior is aimed at satisfying personal needs while maintaining the call signs of interpersonal relationships. In the opposite case, when a specialist behaves uncertainly or shows aggression, unsatisfied needs can become stressors [10].

An interesting aspect of this research is the use of a rational-emotive approach. Thus, according to E. p. Kalmykov, this approach is the most effective for people who are capable of introspection, reflection, and analysis of their thoughts. One of the main provisions of the rational-emotive approach is knowledge about yourself and the world, which affect behavior, and behavior and its consequences affect the idea of yourself and the world. Thinking and emotions are so closely related that they usually accompany each other and tend to take the form of self-development. Thus, people's internal self-movements can generate and change their emotions and personal characteristics. Based on this, the rational-emotional approach identifies three main psychological aspects of the individual's functioning: thoughts, feelings, and behavior. These components are almost impossible to separate and consider separately, since they are closely interrelated. Therefore, the rational-emotive approach is based on the unity of cognitive, emotional and behavioral components [7].

According to the theoretical foundations of the rational-emotive approach, disorders in the emotional sphere are the result of violations in the cognitive sphere. The emergence of psychological problems is associated with the functioning of a system of irrational attitudes. Based on the above, the main goal of the rational-emotive approach is to establish and eliminate a system of pathogenic interpretations that lead to a violation of emotional and behavioral responses. Accordingly, the main tasks of this approach include: correcting the means of thinking, getting rid of irrational ideas; teaching new positive thinking, forming and developing a new philosophy.



The rational-emotional direction is not a purely intellectual approach. It focuses on the interaction of feelings, behavior, and the cognitive process, so this approach contains cognitive, emotive, and behavioral techniques. The main method of rational-emotive approach is to discuss irrational attitudes. The discussion contains a denial and comprehensive examination of unsubstantiated hypotheses about oneself, others, and the world in General, and differs in the nature of modality: cognitive, emotional, and behavioral discussion. The rational-emotive approach is characterized by a large Arsenal of psychotechnics, including those borrowed from other directions. The main cognitive technique of debating is the technique of scientific questioning (using the mind, logic, and facts to defend one's beliefs). A desirable cognitive result of discussing certain irrational beliefs and their derivatives is to create an optimal set of preferred beliefs or effective new philosophies associated with each belief [24].

**Conclusions and suggestions.** Thus, based on the above, today there is a relatively wide variety of forms and methods of preventive work, which, in turn, determines the lack of a single universal approach in this area.

- 1) among the most popular should be identified and used non-systematic complexes of preventive measures, mainly based on the teachings of humanistic psychology.
- 2) Taking into account the characteristics of the object of this research, it is necessary to use a rational-emotional approach, which is most effective for people who have the ability to analyze, reflect and analyze their thoughts.
- 3) when working with future General practitioners, you should always consider rational and emotional means.

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UDK: 370.153+613

## HUMAN HEALTH AND PSYCHE

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**Аннотация:** Биз доимий ҳаракатдаги ва ўсиб боришда илгарилаб бораётган жамиятда яшамокдамиз. Айни кунларда бутун дунё бўйлаб COVID-19 умумжаҳон пандемиясининг кечиши касалликка қарши барча чора-тадбирларни қўллаш билан биргаликда жамиятимиздаги инсонларнинг рухий ҳолати муҳим ҳисобланади. Мақолада шахсининг рухий саломатлиги, карантин пайтида унинг рухиятида кечаётган хиссий – эмоционал, иродавий ҳолатлари ўрганилган. Пандемиянинг шахс ҳулқ-атвори, когнитив ва эмоционал соҳаларига таъсири тадқиқ этилган.

**Таянч иборалар:** саломатлик, рухий саломатлик, муносабат, омил, кўркув, хотиржамлик, ишонч, далда, гигиена, тиббий саломатлик, иммунитет.

**Аннотация:** Мы живем в обществе, которое постоянно движется и прогрессирует. В настоящее время возникновение всемирной пандемии COVID-19 является важным фактором психического состояния людей в нашем обществе наряду с применением всех мер борьбы с этим заболеванием. В статье рассматривается психическое здоровье человека, эмоциональные и волевые состояния во время карантина. Эмпирически исследовано влияние пандемии на поведение личности, когнитивную и эмоциональную сферы человека.

**Ключевые слова:** здоровье, психическое здоровье, отношение, фактор, страх, спокойствие, уверенность, поощрение, гигиена, ментальное здоровье, иммунитет.

**Abstract:** We live in a society that is constantly moving and progressing. Currently, the emergence of the global COVID-19 pandemic is an important factor in the mental state of people in our society, along with the application of all measures to combat this disease. The article deals with a person's mental health, emotional and volitional states during quarantine. The impact of the pandemic on individual behavior, cognitive and emotional spheres has been empirically studied.

**Keywords:** health, attitude, factor, fear, calm, confidence, encouragement, hygiene, mental health, immunity.

**Introduction:** Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. Mental health problems range from the worries we all experience as part of everyday life to serious

long-term conditions. There are so many factors effect on human mental health. Changes in people's lives, especially in the current pandemic environment, are affecting their mental health. The coronavirus disease 2019 (COVID-19) pandemic may be stressful for people. Fear and anxiety about a new disease and what could happen can be overwhelming and cause strong emotions in people. Public health actions, such as social distancing, can make people feel isolated and lonely and can increase stress and anxiety. However, these actions are necessary to reduce the spread of COVID-19. In many countries, various decisions and laws have been enacted to protect the mental and physical health of the population during the pandemic. As well as in our state decree of the President of the Republic of Uzbekistan "On approval of the Concept of development of mental health services of the population of the Republic of Uzbekistan in 2019-2025" adopted on February 13, 2019. The main issues mentioned in the decree are the tasks of protection of public health, enrichment of knowledge on healthy lifestyles, application of preventive and practical measures. This concept envisages the gradual implementation of work on the formation of a healthy lifestyle among the population, the upbringing of a healthy generation in society. We tried to analyze what kind of changes happened people's daily life in terms of their emotional behavior spheres.

**Literature Review:** Health is ensured primarily through understanding and managing the psyche. A spiritually healthy person seeks to stabilize himself physically, mentally, emotionally (emotionally), spiritually, by trying to understand himself (in sense of "I"). People who were self-centered, self-centered, were able to control life, and they had the power to help people as well. Hence, spiritual and mental health is an integral part of each person's (individual) health, which is interrelated.

Everyone needs to feel mentally refreshed and healthy, along with having a healthy lifestyle, while experiencing unexpected illnesses and various extreme situations in today world. This is evidenced by the problem of the coronavirus pandemic, which is of concern to the whole world today. Life itself shows that the citizens of any country, who have a well-formed medical and mental culture, will be able to rationally respond to such unexpected mass problems and contribute to overcoming them. But, pandemic period triggered some problem in mental health of people, which is a new condition for present era's people. "Quarantine is the separation and restriction of movement of people who have potentially been exposed to a contagious disease to ascertain if they become unwell, so reducing the risk of them infecting others" [11; 24]. "Quarantine is often an unpleasant experience for those who undergo it. Separation from loved ones, the loss of freedom, uncertainty over disease status, and boredom can create dramatic effects" [2; 547]. "Suicide has been reported substantial anger generated, and lawsuits brought following the imposition of quarantine in previous outbreaks" [8]. "The potential benefits of mandatory mass quarantine need to be weighed carefully against the possible psychological costs" [10]. "Successful use of quarantine as a public health measure requires us to reduce, as far as possible, the negative effects associated with it" [11].

**Research methodology:** We aimed to conduct research on this issue. In our study, we sought to study and analyze respondents' perceptions of events occurring in extreme situations, among other factors that affect a person's mental health. We conducted a survey to find out what measures and restrictions are being taken against the pandemic in our country, as well as around the world, and how different measures can affect the situation of people in different ways. The questionnaire surveyed 432 respondents of different, social status, different ages and different genders through the following questions: "How did you feel during quarantine?", "What did you consider a precaution?", "How did they support each other?", "What did you learn from quarantine?"

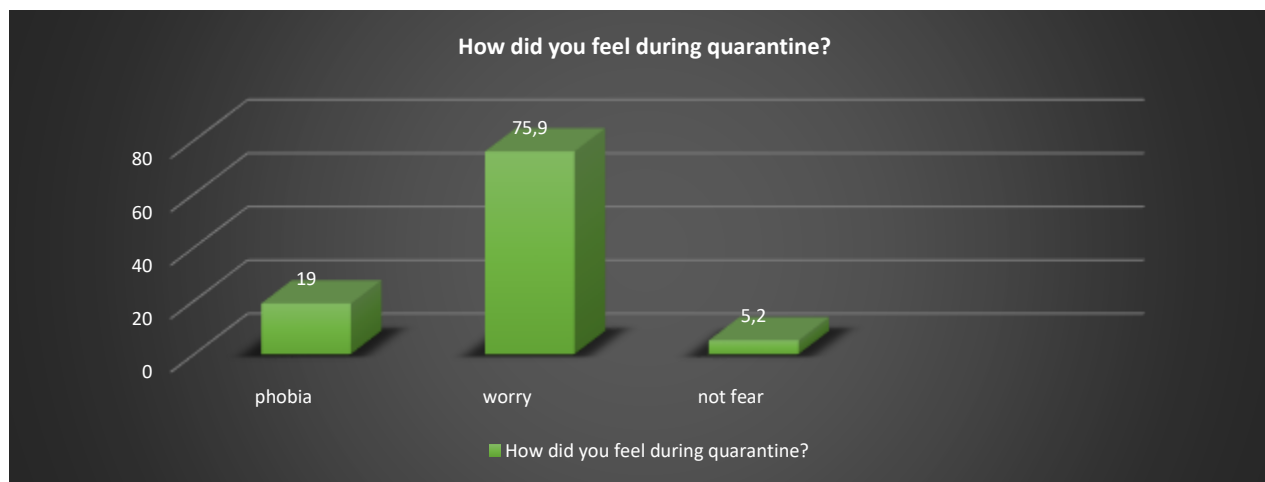


Figure 1

**Analysis and results:** The results were as follows. To the question "How did you feel during quarantine?" 79.5% of the respondents answered "worry" (figure 1). As the majority of them seemed to be concerned that the spread of a coronavirus infection could endanger their own lives and the lives of loved ones. 19% of respondents said it was "fear". In the context of the pandemic, many people confirmed that they had begun to suffer from a new type of phobia - covidophobia, while 5.2% said they felt "calm". In people with such an optimistic mindset, we can see that the measures taken are taken as a protective shell and provide peace, thinking and mental balance.

Figure 2

When asked what they considered self-protection during quarantine, 71.6% of respondents identified hygiene as a precautionary measure, 24.1% of respondents said staying at home, and 3.4% of respondents described human health as a precautionary measure (figure 2), 9% of respondents identified food accumulation as a precautionary measure. The need for food storage in the study reported a 0.9% result that was not significant. Adherence to hygiene and attention to constant cleanliness has resulted in the highest results in the field of human behavior. They cited compliance with personal hygiene rules as a precautionary measure by 71.6%. Hygienic actions included talking with a medical mask when talking to individuals, keeping a mutual distance, washing their hands with soap when entering a house or holding something, changing masks at certain times, and using antiseptics.

In quarantine conditions, 24.1% of respondents chose to stay at home. In individuals, the idea of staying home as a way to protect against the virus has become

clear. In addition, people have developed a sense of concern for their own health. 3.4% of respondents cited concerns about their medical health.

In this case, respondents were referring not only to protection against the virus, but also to public health and prevention of the spread of the virus.

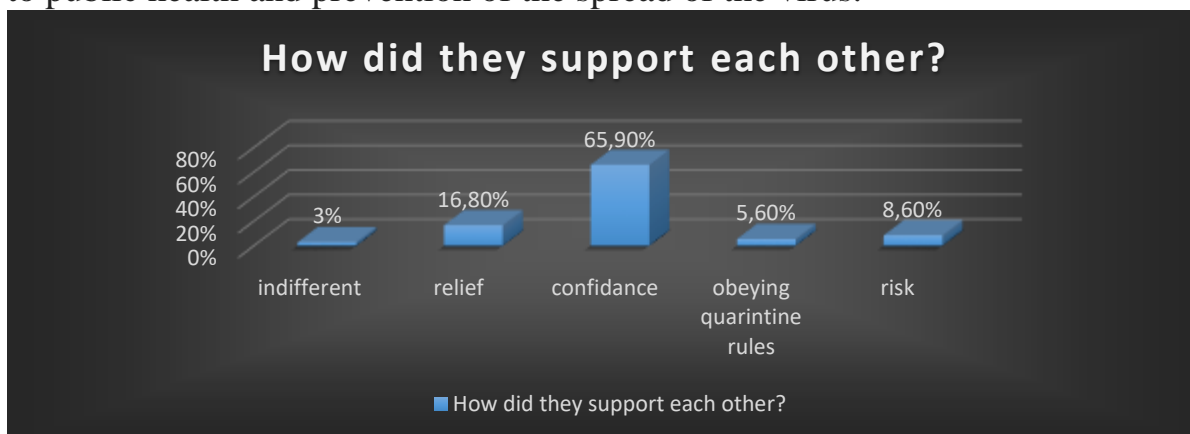


Figure 3

How did they support each other during quarantine? 3.0% of respondents chose the answer "indifferent" (figure 3). People who choose this answer are considered to have no purpose in life, no place in society, and to be indifferent. In the survey, 16.8% of people chose the answer "relief". In fact, these respondents are people who care not only for themselves, but also for others, who are always sympathetic to the grief of their loved ones. Such lines characterize the Uzbek people. In the survey, 5.6% of respondents stated "strict adherence to quarantine rules. Respondents who choose this answer are among those who strictly follow the rules, who are responsible and, most importantly, respect themselves and those around them.

In addition, 8.6% of people chose the risk response. Most importantly, such people are determined, forward-looking, optimistic, sincere people who can stand their ground. 65.9% of respondents marked a "confidence" answer. It is clear from the analysis that during the quarantine period, people strive to live with hope for the good days, faith, patience and the future. Looking to the future with confidence is the true face of our people. Therefore, people living without pessimism about the future will allow us to overcome diseases faster in a pandemic.

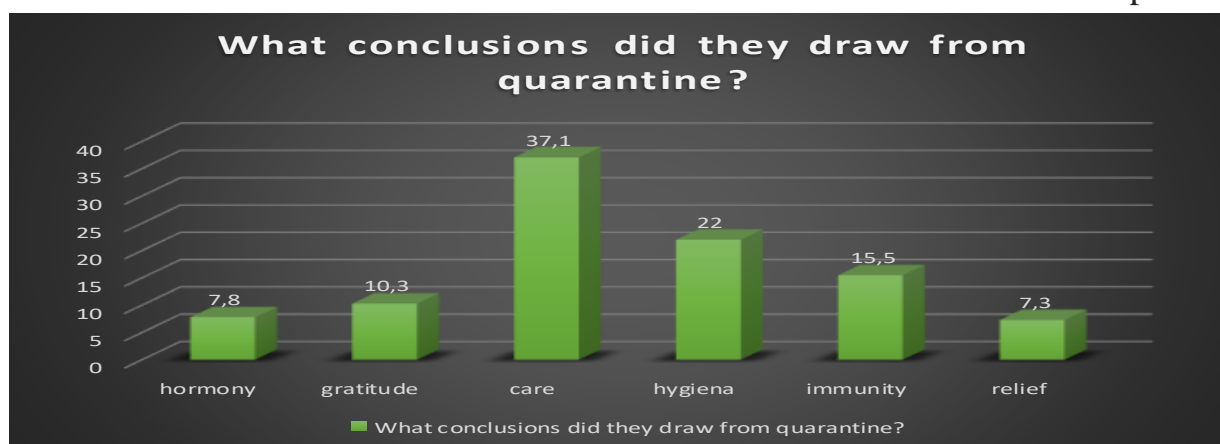


Figure 4

Under quarantine, 7.8% of the population showed signs of cohesion (figure 4). The increase in morbidity due to the virus, unemployment during the quarantine period and



the resulting worsening of lifestyles and deaths, as well as the sight of people suffering from the virus on television and social networks, led to emotional rapprochement. As a result, people became closer and more harmonious, realizing that everyone must work together to overcome the disease. It has also become one of the customs of our people to use words of encouragement in order to emotionally care for others, care for and support each other. These feelings led to an increase in cooperativeness and solidarity among people. Due to the pandemic, people have a greater sense of care for their loved ones (parents, children, relatives) and society, and the highest result in the survey was 37.1%.

From this, we can conclude that it means that people realize that they are an important, necessary person for their relatives and society.

The need to develop immunity has boosted by 15.5%. Hence, it is clear that the need to raise immunity among our people has marked a significant result. It becomes evident that the population of our country is paying more attention to their health. People have realized that acquiring their immunity and make maximum use of all natural remedies helps them to stay healthy.

Adherence to hygiene and attention to constant cleanliness has resulted in high results in the field of human behavior. Accordingly, the manifestation of these actions in quarantine conditions was 22.0%. Hygienic actions included communications wearing a medical mask, keeping a mutual distance, washing their hands with soap when entering a house or holding something, changing masks at certain times, and using antiseptics.

At the same time, there is a growing sense of gratitude today for those who are away from illness, recovering from illness, receiving social assistance, and being under state protection. Therefore, the concept of gratitude caused a significant change in the human mind, and this feeling was manifested in the human mind. In extreme times, 10.3% of respondents prefer to breathe for a moment and feel grateful for what they have, for a healthy body, the conditions at home and the presence of healthy children and family.

Emotionally, the motivational situation was 7.3% in the survey. This means that people are overwhelmed by their own feelings and emotions of supporting and encouraging other people in order to overcome their worries and uplift others and increase their desire to live. This shows that our people are strong in faith and strong-willed.

The results of the analysis show that in the quarantine period, people are striving for a better future, religious beliefs, patience and the future. Confidence in the future is one of the age-old values and image of our people. Therefore, people living without pessimism about the future will allow us to overcome diseases faster in a pandemic. The results in the table show that respondents were determined to care because it was clear during the quarantine period that the care shown by others in their helplessness to themselves and others was the most necessary of human qualities. The care shown to a person by those around him and his loved ones gives him hope to live and create.

**Conclusion:** In conclusion, the survey found that at a time when the problem of today's pandemic is widespread, people are experiencing an increase in anxiety, fear

and panic. Restrictions on movement and measures taken against the pandemic have been found to have different effects on the condition of people. It has been studied that many are concerned that the spread of a coronavirus infection could endanger their own lives and the lives of their loved ones. It was noted that there is a strong need to protect people from these adverse events, the introduction of the help of psychologists, the recommendations of psychologists in the prevention of mental disorders.

From these conclusions, we recommend the following recommendations:

- Keep quarantine time as a trophy to regulate your life. (For example reading a book, checking your children's lessons, doing important things like helping your family members)
- Most importantly, you need to be confident that tomorrow will be a bright day and that life will be on the trail again.-A high mood helps you to strengthen your immune system, while a low mood weakens your immune system and makes you unable to fight viruses. Engage in activities that serve to provide emotional uplift.
- Remember that your good mood is the strength of your immunity!

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**UDC: 378.14.026**

## **FOREIGN EXPERIENCE IN MATHEMATICAL MODELLING OF HIGHER EDUCATION QUALITY**

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**Annotatsiya** – Ushbu maqolada o'quv jarayonidagi matematik modellashtirishning qisqacha sharhi berilgan. Pedagogik sohada matematik modellashtirish va ta'lim jarayonida qo'llash usullarining xarakteristikasi keltirilgan. Shuningdek, pedagogika sohasidagi qator xorijiy olimlarning matematik modellashtirish bo'yicha ilmiy ishlari tahlil qilinadi.

**Kalit so'zlar:** matematik bilimlar, matematik model, matematik modellashtirish.

**Аннотация.** В данной статье представлен краткий обзор математического моделирования в образовательном процессе. Представлена характеристика методов математического моделирования в педагогической сфере и применения в образовательном процессе. Также анализируется научная работа по математическому моделированию ряда зарубежных ученых в области педагогики.

**Ключевые слова:** математические знания, математическая модель, математическое моделирование.

**Abstract.** This article provides a brief overview of mathematical modeling in the educational process. The characteristic of methods of mathematical modeling in the pedagogical sphere and application in the educational process is presented. It also

analyzes the scientific work on mathematical modeling of a number of foreign scientists in the field of pedagogy.

**Key words:** mathematical knowledge, mathematical model, mathematical modeling.

**Introduction:** The purpose of education, developed in modern pedagogy, is primarily connected with the person, where meaning and content are connected with intuition, culture, spirituality, creativity, ecology and other relations. This, in turn, marked the place of a new paradigm in pedagogy - humanism. Graduates of higher education should not only be experts in their field, but also have personal qualities such as: creative approach to each job, ability to make important decisions, constant desire to study, communication, and ability to collaborate. In recent years, the reorganization of the economic, social and political spheres in human activity has had a significant impact on the education system. This, in turn, requires a certain increase in the requirements for the training of qualified specialists in the formation of personnel. It requires future professionals to be able to use the powers of their profession, to identify and evaluate the problems that arise in the profession and to find solutions to them independently [1].

Most researchers (G. L. Il'in, e. Seytkhalilov, Sh. Kurbanov understand the quality of education as its improvement, the change of quality in the educational environment, such as the improvement of knowledge, skills and values of students [2.]), the main approaches to assessing the quality of education are defined as follows:

- A systematic approach to determining the quality of education is needed;
- The assessment of the quality of education is related to the so-called "internal" and "external" aspects of quality determination, i.e. includes both utilitarian measurement and changes related to intelligence, knowledge and creative potential;
- The assessment of the quality of education should include expert, effective and general approaches to social order;
- It is impossible to assess the quality of professionals without expert assessment;
- To assess the quality of education, it is necessary to include certain indicators of the quality of education.

**Literature review:** Problems of the quality of higher education were first formulated in the works of European experts. In England, in the 1990s, M. Fraser, Alan Ashworth and Roger Harvey, Ronald Barnet, Alma Kraft, Urban Dahlov, John Harris, Michael Shattok, Andre Staropoli, Ronald Veld, Diana Green, Leo K.J. Gedegebuure, Pitre A.M. Maasen and Don F. Westerxayden, X.R. Kellz, Maurice Kogan and etc.

Problems of assessing the quality of higher education in the United States S.Bell, B. Analyzed in the works of Hagerty, D.Stark, L.Harvey, D.Green, I.L.Ratcliffe, H.R.Kellz and others.

The quality of higher education in Russia has been studied since the late 1990s. The problems of higher education in Russia are reflected in the works of S. Abramova, G.A. Bordovsky, E.E. Bukhteeva, L.I. Varenova, A.A. Vetrova, V.I.Vovna, E.Y.Girba, L.A.Golub, G. L. Gromiko, S.P.Dokina, S.S.Donetskaya, S.P. Erkovich, N.F.Efremova, D.F.Zakirova, Y.A.Zakharov, I.A.Zimnaya, B.I.Iskakov, V.G.Kazanovich, S.M.Kalabin, N.P.Kalashnikov, Z.I.Kapelyuk, O.M.Karpenko, V.G.Kinelev, A.A.Kirinyuk, N.V.Kovaleva, B.K.Kolomiets, S.V.Korshunov,



V.J.Kuklin, A. A.Kushel, B.X.Land, A.G.Levinson, B.G.Litvak, A.N.Mayorov, T.V.Makarova, V.V.Melnik, V.Meshalkin, V.A.Moskinov, R.V.Muzychenko, O.G.Nefedova, O.N.Onishchenko, B.P.Plyshevskiy, N.I.Popov, A.Prokofev, B.A.Savelev, N.A.Selezneva, O.A. Silaev, L.M.Struminskaya, A.I.Subetto, E.V.Sumarokova, Y.G.Tatur, D.Tatyanchenko, I.I.Trubina, K.S.Farino, I.B.Fedorov, E. V.Filyuk, A.A.Frenkel, E.Xrykov, M.B. Chelyshkova, A.I.Chuchalin, V.D.Shadrikov, E.N.Shuvalov, E.M.Yurtanova and others.

These researchers have identified different approaches in determining the quality of higher education and proposed different criteria for its evaluation. Specialists of the National Accreditation Agency E.N. Gevorkyan, G.N. Motova, V.G. Navodnov, M.V. Petropavlovsky, V.J. Kuklin, A.S. Maslennikov, B. A.Savelev, D.I.Petrov, A.P.Paskal and other scientists not only developed a system of indicators of quality of education and a comprehensive assessment mechanism for universities, but also used statistical and mathematical models, methods and methodologies in this procedure[1]. Along with the problem of measurability of the quality of education, the problem of equivalence (i.e., comparability, conformity to the requirements of society and related professional knowledge of pedagogical staff) remains the problem of finding a way to improve the quality of higher education.

**Analysis:** The humanistic description of pedagogical theories cannot fully describe the educational process without mathematical theories. The application of mathematical methods in the elements of the educational process increases the demand for pedagogical concepts and the necessary determination for the science. Therefore, the integration of mathematics and the humanities and pedagogical methods and technologies is a necessary system.

Mathematical modeling has a special place among the methods of mathematics in scientific work, because it is this method that can quantify any change in the structure of the system. In addition, mathematical models analyze the effectiveness of the education system and provide the forecasting and design necessary for its development. The modeling method is essentially based on any scientific research method. The connection of philosophical and general scientific problems with modeling G.Vayl, V.A.Venikov, B.A.Glinsky, B.S.Gryaznov, L.Yu.Korolev, K.E.Morozov, E.P.Nikitin, A. It is reflected in the works of such scientists as I. Uemov, V.A. Stoff. On the relevance of the application of mathematical methods in pedagogical sciences Y.K.Babansky, B.Bitinas, Dj.Glass, M.I.Grabar, V.I.Mixeev. It is reflected in the scientific works of foreign scientists such as Zagvyazinsky, L.B. Itelson, V.V. Kraevsky, K.A. Krasnyanskaya, V.I. Mikheev, A.Y. Nain, V.S.Cherepanov[2].

Today, there are several mathematical devices (semantic network, algebra method and head) in the modeling of pedagogical objects. However, despite the relevance of mathematical modeling in the teaching process, there are a number of difficulties in its application in the humanities. Mathematical modeling allows to show the problems that arise and their solutions, to reveal how the event in one field affects the development of other areas, that is, to reveal the interdisciplinary relationships of the studied disciplines [3].

According to V.A. Sadovnichy, the existence of the "human factor" in the humanities raises a number of fundamental problems in the creation of a real



mathematical model in this area in order to participate in the understanding of social processes as an individual and as a whole social society.

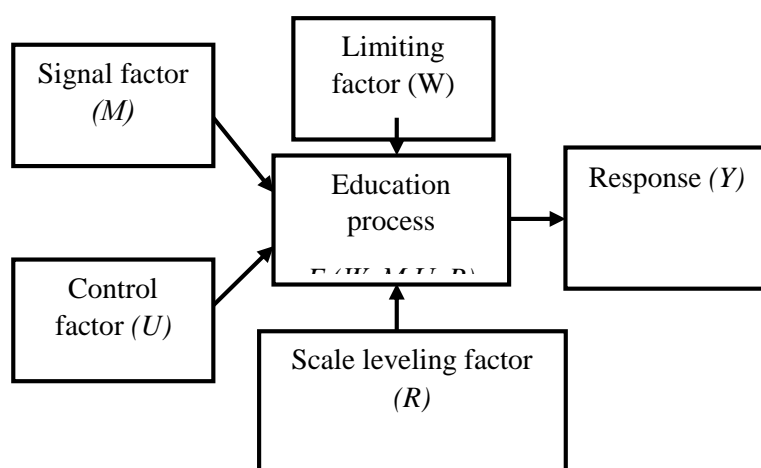
The first is the lack of a certain fundamental law that can clearly show its performance in a universally established manner based on the source under study; secondly, the shallow “measurement” of social indicators, which requires a non-shallow intellectual accuracy that brings it closer to reality, even if it is clear what measurements need to be taken; thirdly, the diversity of scale, i.e. the presence of different districts and non-systemic social objects in ethnoses and large ethnoses, ranging from small social groups; fourthly, the ever-increasing complexity of social objects, the fact that the knowledge that determines their reflexive nature will sooner or later become an integral part of the object [4].

E.V.Berejnaya, B.Bitinas, Ya.D.Lebedev, K.B.Malyshev, V.V. Nikandrovs the conducted research on the application of mathematical modeling in economics, psychology, and other sciences. The authors used a combination of theoretical and empirical methods to achieve the goal and check the current situation.[5].

The modern stage of development involves the consideration of higher education institutions as a whole system of socio-economic objects and the training of specialists in new conditions in the model of this system. Higher education institution as a socio-economic object is a complex dynamics of the developing system of social activity.

However, for the effective management of the educational process it is impossible to implement without the transition from subjective description of pedagogical situations and processes to mathematical modeling based on rigorous and objective assessment. ; by describing the optimal model of student assessment and quality management in educational institutions V.P. Suxinina and M.V. Gorshenin (2005); V.N.Vasilev (1997) and others on mathematical modeling of the optimal management system of training of specialists [6].

**Discussion:** V.P. Sukhinin and M.V. Gorshenin developed a model for the management of the educational process, which is described as follows:



In this case, the signal factor (M) is the factor set by the applicant. The control factor (U) is the design parameter for which the manufacturer is responsible for the content. Each parameter can have several contents (levels). The goal of the design is to ensure the best performance level in the final stage. The scale-leveling factor (R) is a related control factor that seeks to bring the response to a set level. The limiting factor (W) is an uncontrollable factor, the degree of which affects the response response to

external conditions. The response (Y) is the efficiency of achieving the intended goal under the influence of factors [7].

O.A. Granichina (2006) proposes a method of assessing the functional quality of graduate training. For example, graduates of "good" and "excellent" grades:  $w^1$  - on the defense of the thesis;  $w^2$  - for passing state exams in the specialty;  $w^3$  - were able to follow the results of the state certification test. If we define  $w^4$  as the total number of students in the specialty, then the share of graduates who are rated "good" and "excellent" is  $b_k = \frac{w^k}{w^4}$ . Mathematical modeling of the functional quality of graduate training, if we know the number of individual branches in the higher education institution with N, the value from zero to  $w^k \beta$  is represented by equality.

$$X = \frac{N}{\beta} \sum_{k=1}^4 \frac{w^k}{\sum_j b_{kj}}$$

If  $X > 1$ , it means that the quality of specialists trained in the N sectors of the educational institution is moderately high. Mathematical modeling is a modeling with ideal scientific symbols, in which an object is described in mathematical language using one or another mathematical method. Today, this is one of the most effective and widely used methods of scientific research. This is explained by the fact that it is possible to successfully analyze the "experimental world" with "mathematical world" structures. The first structure is ideal-abstract, and the second structure is a generalized and logically more perfect representation [8].

According to O.M. Kiseleva's (2007) research, the following methods of mathematical modeling are used in pedagogy:

- The method of probabilities - in multifaceted pedagogical processes that randomly characterize pedagogical situations, the nature and connection of which are clear;
- Graphov's method - in the elements of the structural educational process (in which both the order and the external structure of the elements of the educational process can be modeled)
- Algebra methods - in pedagogical processes that require the formation of large amounts of information;
- Linear programming method - in cases where it is possible to unilaterally estimate the amount of desired results of the selected task;
- The method of game theory - in pedagogical processes in which the selected action gives different results with a clear probability on different random situations [9].

The use of specific methods of mathematical modeling in the learning process involves the following general algorithmic steps.

1. Creating a model of the elements of the educational process;
2. Experiment with the model;
3. Interpretation of the obtained results in didactic language and draw conclusions according to the model feature. According to the conclusion, talk about the nature of the object. The orientation of mathematical models and methods to pedagogy

should be based on humanistic and technological principles, taking into account the nature of the education system.

**Conclusion:** In modern society, the education system has become not only a symbol of capital, but also a symbol of culture. The participants and creators of the human world are the subjects. They use subjectivity in relation to their integrity. The sociological approach to the quality of higher education plays the role of social regulation in this area [10]. Updates to the education system create the need to reconsider its content, methods and improve them. In particular, the field of higher education is no exception. Research conducted by foreign scientists shows that mathematical methods and modeling are the main conditions for improving the quality of education.

Allows to perform diagnostic, forecasting, correction, management, control and other similar functions in pedagogical activity. The introduction of mathematical methods for educational practice requires the use of methods that have a clear basis and effectiveness, with a scientific approach. Currently, the assessment of the quality of higher education needs additional statistical indicators and methods of identification: it should be evaluated in terms of labor market needs and employers' requirements.

The study of the theory and methodology of mathematical modeling as a whole allows us to remove the following main contradictions that arise from the traditionally acquired methodological and mathematical knowledge and their application in professional activities. The application of mathematical modeling in education allows to study the identity of such a task in a consistent sequence, which is revealed in the works of foreign scientists. In this case, the object of research is the educational process of the higher education institution, and the subject is the educational process, which is considered as an object of information. As a result, they are ready to use it in their professional, scientific and creative activities. Only such specialists can find a positive solution to the problems facing the times.

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**UDC: 37;377(077)**

## **FORMS AND METHODS OF ORGANIZING THE LESSON IN THE FORMATION OF PRACTICAL SKILLS**

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**Abstract.** In order to ensure the implementation of the decisions and decrees of the President of the Republic of Uzbekistan Sh. Mirziyoyev, the article describes the forms and methods of organizing the educational process in the quality training of graduates in higher education institutions. The requirements for equipping classrooms with technical means are listed. The planning of the stages of the lesson is given in the course of the lesson. Non-traditional models of teaching are highlighted. The advantages of non-traditional teaching methods are listed.

**Key words:** education, production, standard, curriculum, practice, teaching methods, teaching aids.

**Аннотация.** В целях обеспечения выполнения решений и указов Президента Республики Узбекистан Ш.Мирзиёева в статье описаны формы и методы организации учебного процесса по качественной подготовке выпускников высших учебных заведений. Приведены требования к оснащению аудиторий техническими средствами. Планирование этапов урока дается в ходе урока. Выделены нетрадиционные модели обучения. Перечислены преимущества нетрадиционных методов обучения.

**Ключевые слова:** образование, производство, стандарт, учебная программа, практика, методика обучения, учебные пособия.

**Аннотация.** Ушбу мақолада Ўзбекистон Республикаси Президенти Ш.Мирзиёев томонидан қабул қилинган қарор ва фармонларнинг ижросини таъминлаш мақсадида, олий таълими муассасаларида битирувчиларни сифатли тайёрлашда, дарс жараёнида ташкил этиш шакллари ва усуллари ёритиб берилган. Ўқув хоналарини техник воситалари билан жиҳозлашда қўйиладиган талаблар санаб ўтилган. Дарс олиб бориш жараёнида машғулотнинг

босқичларини режалаштириш келтирилган. Ўқитишнинг ноанъанавий моделлари алоҳида ажратиб кўрсатилган. Ноанъанавий ўқитиш методларининг афзалликлари санаб ўтилган.

**Калит сўзлар:** таълим, ишлаб чиқариш, стандарт, ўқув режа, амалиёт, таълим методлари, таълим воситалари.

**Introduction:** The achievement of state independence of the Republic of Uzbekistan and the choice of a specific path of economic and social development have made it an urgent task to reorganize the structure and content of training. Today, one of the important tasks is to modernize production, technical and technological renewal, launch domestic products on international markets, strengthen international cooperation and attract foreign partners to implement innovative projects. All this allows us to raise the quality of our products to a new level.

The Presidential Decree "On additional measures to activate and expand the activities of free economic zones" was issued, focusing on the construction of modern enterprises, the creation of more than a thousand new jobs in these enterprises, providing permanent jobs for graduates of higher education.

The above data and needs monitoring show that the demand for modern, qualified specialists in manufacturing enterprises is growing. In turn, in order to train highly qualified personnel, the department is fully equipped with DTS, qualification requirements, curricula, science programs, working curricula and working science programs of the relevant field of study and master's degree, which take into account the integration of education and production. .

This process is carried out through a high level of teaching and production training in relevant disciplines in educational institutions (laboratory and practical training in specialty disciplines, driving training, training and production practice).

**Literature review:** Scientists from foreign countries and our country have conducted a lot of research on the problems of accelerating the system of higher education and the development of practical skills of students. In particular, the manual of Sh.E. Kurbanov, E. Seytkhalilov and others is one of the fundamental works on the management of quality of education in the implementation of the National Program of Personnel Training in Uzbekistan. all types of education according to the principles of continuity and continuity have been disclosed and studied in detail

Prospects for improving the quality of education and improving the process of training are considered in the work of Q.T. Olimov and others.

**Analysis:** It is a vital fact that in the current education system, a teacher's live communication and interaction with students is important, but it cannot be the only source of information. Therefore, factors that facilitate and increase the effectiveness of educational work are widely used. One such factor is the organization of teaching through technical means.

Technical means of teaching means a system of devices used to ensure the cooperation of the participants of the educational process, to increase its effectiveness.

Technical means of teaching should be used taking into account the integral connection and relationship with the constituent components of the educational process. Otherwise, the effect of the training can be completely eliminated.



The use of teaching aids in the classroom is ancillary, and their selection, timing and location are determined in accordance with the objectives of the overall lesson plan.

The following technical and pedagogical requirements are set for equipping classrooms with technical means of teaching:

- 1) when equipping classrooms with technical means of teaching, it is necessary to take into account their integrated use in the educational process;
- 2) the ability to see and hear well from anywhere in the classroom;
- 3) in the classroom, to meet such standards as noise, lighting, humidity;
- 4) Simple, cheap, safe, long-term uninterrupted operation.

The use of technical means in educational work involves, first of all, adherence to didactic principles.

Seeing (perceiving) a real object or its image is the first and simplest type of knowledge for a person, it serves as a basis for creating clear images and concepts.

The need to follow the principle of demonstration in educational work stems from the nature of human thinking. The nature of human thinking develops in a certain direction from the abstract. When concepts and abstract rules are based on clear observations, their essence content is formed much more easily and quickly. The development of human thinking depends on his age, life experience, etc., and requires that it be taken into account in the educational process, not separated from clear facts and images.

Visual instructions are used in the following cases:

- when the object under study is very large or small;
- inability to see the object of study directly;
- when concepts and conclusions can be expressed graphically;
- when it is necessary to specify the order of operation of complex facilities;
- when indicating the most characteristic condition of the object.

The content and timing of the training material should be taken into account when using the manuals. Excessive use of instructional guides in training does not give good results. In the process of perceiving the material on display, it is necessary to involve more of the sensory organs of the learners. The harmony of the instruction with the teacher's word is of great importance. The explanation given when using the instructional manual assumes that the learners' attention is focused on the basic materials.

When using these tools, it is important to select them according to the specific purpose, specific area and methods. Most importantly, the practice teacher must be able to use the teaching and visual aids and use them appropriately and rationally. Must be able to solve technical problems that arise when using technical tools. For example: to be able to eliminate defects in the work, to make basic adjustments and to bring the machine to the working condition, that is, to be a master of his profession. The internship teacher should have a general understanding of what materials are available for his or her professional field, what innovations are available, as well as what specific areas he or she can innovate in. Teachers prepare visual aids such as slides, videos, video lessons themselves.

A traditional lesson is a model of education that is designed for a specific period of time, the learning process is more teacher-oriented, with stages of introduction, coverage, reinforcement, and completion. While the teaching material is new and more complex, the traditional lesson - in many cases the sudden one - remains a method of the learning process.

It is well known that in a traditional lesson, the teacher is at the center of the learning process. Therefore, a traditional lesson is sometimes referred to as a teacher-centered teaching method.

The traditional lesson transition model uses more methods such as lectures, questions and answers, and practical exercises. For this reason, in these cases, the effectiveness of the traditional lesson is much lower, and students become passive participants in the learning process.

The stages of the lesson can be planned as follows:

1. Introduction. Repetition of the passed material; explain the purpose of the lesson; introduce the topic of the new lesson and the lesson plan.

2. Coverage of a new topic. Divide the new topic into smaller pieces; visual presentation of colorful examples as much as possible; not to deviate from the topic; reinterpret the complex aspects of the material; check students' understanding; providing feedback.

3. Exercises. Step-by-step solution and analysis of an example (or problem) with students:

4. Orientation exercise. Students complete the exercises (or problems) independently, and the teacher monitors them and makes corrections.

5. Exercises performed independently. Students complete the exercise independently without the help of a teacher.

6. Check the level of understanding of students. Determining the level of mastery of the topic through practical exercises.

7. Completion. Summarize the basic concepts and learning objectives of the course topic.

It can be seen that in a practical lesson, all the lesson steps are done step by step and there is no abnormality. This ensures that the student has a low level of enthusiasm for the lesson and uniformity in the course. However, traditional teaching has its own set of positive and negative features. So far, traditional teaching methods have the following advantages:

- have certain skills and are clearly useful in the study of certain concepts, science. This is due to the fact that the principle of science applies in traditional education and that systematic knowledge is formed in the learner;

- The high level of control by the teacher over the teaching process and the learning environment reflects the educational nature of education. Although students are slow to participate, they demonstrate high levels of discipline in the classroom;

- As a result of efficient use of time, all stages of training are completed and the distribution of time is consistent.

Traditional teaching methods today also have a number of shortcomings, which create the need to use non-traditional teaching methods in the learning process. These shortcomings include:

- students remain passive participants, and the presence of the teacher in the center of the lesson and in the main management role leads to such passivity;

- Full teacher control does not create motivation for all students. This is because all the actions performed by students take place on the basis of strict demand. It does not arouse creative initiative in the reader;

- Students cannot communicate directly with the teacher. This is because the fact that each stage of the lesson is based on certain rules and that these stages take place at the discretion of the teacher does not necessitate the manifestation of different forms of communication;

- Because the level of recall is not the same for all students, the level of mastery across the class may remain low. That is, in traditional education, the lack of opportunities to use a variety of methods, memory-enhancing game technologies that engage students in the learning and learning process has these consequences;

- No conditions are created for independent study and independent decision-making. The lack of a force that motivates the student to think creatively does not naturally create the conditions for the development of new ideas.

Non-traditional models of teaching can be conditionally divided into 3.

These models are mainly focused on the individual student, also known as the student-centered educational models.

Modeling is a method of creating a concise and simplified view (model) of events and processes taking place in real life and society in the classroom, in which students are personally involved and educated in return for their activities.

The collaborative learning model is a method in which students learn by working in independent groups.

The research model of learning is a method that allows students to conduct independent research aimed at solving a specific problem.

Advantages of non-traditional (with the learner at the center of the learning process) teaching methods:

- lead to better mastery of the content of training;
- ensuring timely communication;
- creating conditions for the practical application of the concepts;
- offering different types of teaching methods;
- high level of motivation;
- good memory of the passed material;
- Improving communication skills;
- growth of self-esteem;
- positive attitude of students to the content of the subject, the teaching process;
- help to form a student who can think independently;
- not only helps to master the content, but also develops critical and logical thinking;
- development of problem-solving skills;
- it takes a long time to prepare for the training;
- low ability to control students at all times;
- the role of the teacher is low even when studying very complex material;

- The teacher himself is required to have well-developed thinking skills and problem-solving skills.

Both traditional and non-traditional teaching models are used in the lessons. It pays attention to the nature of the topic, the content of the material to be mastered and the content of learning objectives and how to organize the control system.

Studies show that while maintaining the traditional form of teaching, enriching it with a variety of methods that activate the activities of students leads to an increase in the level of mastery of students.

To do this, the lesson process should be organized rationally, the teacher should constantly stimulate the interest of students in the learning process, the teaching material should be divided into small pieces, discussing, debating, brainstorming, working in small groups, research, role-playing techniques. , to provide a variety of interesting examples, to encourage students to perform practical exercises independently, to use a variety of assessment methods, to use educational tools in place and on time.

**Discussion:** Forms of educating students in production are diverse. For example: theoretical knowledge is given to students mainly during the lesson. Practical knowledge is formed in practice. This process is carried out in the laboratory, training workshops, on the site of the manufacturing plant. Pedagogical practice is also one of the most important forms of imparting scientific knowledge to students. No matter how diverse the forms of teaching students, practice plays a leading role among them.

The practical lesson is intended not only to impart in-depth knowledge to the students, but also to impart to them a scientific outlook, the formation of beliefs, labor, practical skills and competencies.

The course form of education helps to master the basics of science in a regular, in-depth, thorough way. The teacher imparts new knowledge by organizing a variety of students' work in the classroom, monitoring how well they are mastering the knowledge, and thus ensuring that students master their knowledge thoroughly.

In the production practice, in addition to the above, students gain practical skills by doing each job, exercise several times with their own hands.

When creating a lesson plan, the teacher chooses one or the other of the above types of lessons depending on the content and objectives of the teaching material. In preparing for each lesson, the teacher unconditionally adheres to the ideological-pedagogical, physiological-hygienic, psychological and methodological requirements for the learning process.

The ideological, political, pedagogical requirements to the educational process, first of all, imply the scientific knowledge of knowledge and the formation of spiritual and moral qualities and strong beliefs in students. This means that every lesson should have an educative character.

Physiological and hygienic requirements for the course include the creation of hygienic conditions specific to the physical and psychological characteristics of students. For example, depending on their height, ability to see and hear, they should be placed correctly on the desk, the room should be adequately lit and ventilated, the necessary equipment should be selected and placed correctly, visual aids should be written in bright colors and visible to students.

Psychological requirements for the lesson include the student's understanding of the purpose of the lesson and its practical significance, the organization of the lesson taking into account the individual characteristics of the age of students, the achievement of appropriate concepts, judgments and conclusions during each lesson.

Methodological requirements include the correct organization of the lesson, the effective use of different teaching methods, the ability to connect each stage of the lesson, the ability to draw students' attention to the material and not to lose sight of it. Each lesson should have a clear purpose and structure. The purpose of the lesson is to answer the question of what and how much knowledge to give to the student and what to educate them on the basis of this knowledge. It leads to proper planning to have a clear goal of the lesson. A lesson based on a plan allows for the sequence of the knowledge system and the formation of an organic connection between them. What do you think needs to be done to increase lesson effectiveness?

By lesson structure we mean its stages and the correct execution of each stage. The structure of the lesson actively influences the ability of students to work. Therefore, it is necessary to think about its pedagogically correct organization. The correct and judicious use of the time allotted for each stage of the lesson will help to increase the effectiveness of the lesson. Changing the type of activity during the lesson ensures that students' attention is stable.

One of the key factors in ensuring student engagement is the development of collaborative technologies, such as "How are small groups organized?" a natural question arises.

First of all, the group form of education implies the abandonment of the "teacher-learner" dialogue and the transition to a tripartite interaction in the form of "teacher-group-learner". The study group is divided into subgroups that are mobile in structure, and each of them masters the study material on its own. Experience shows that as a result, a much stronger connection is established between the teacher and the learners, the individual and at the same time the collective mood of the learning process is enhanced.

The collaborative action of learners is organized, which helps to activate the learning process, to form in them communication.

In the process of completing a task together, learners become motivated to discuss the ideas expressed by their peers. Learners ask each other questions, so they need to know how to formulate questions clearly, the answers - to argue, and in order to understand, they need to listen to each other carefully.

When working in groups, learners ask for help when needed and learn to help others. Children with average abilities or cowards by nature have the opportunity to demonstrate their knowledge and skills. Working in small groups saves them from stressful situations, i.e. they are free from the fear of being embarrassed in front of the whole team when they give the wrong answer. Team members evaluate the response in a friendly way, giving them a sense of self-confidence.

The following should be considered when preparing to work in groups.

First, how do groups work best when structured?

- By symptoms:
- mixed groups formed on voluntary or informal signs;



- structured by level of academic achievement, ie: equalization, support, development groups;
- groups formed on the basis of the degree of psychological compatibility or on the basis of any other characteristics.

- Quantitatively:

- 2 to 5 people to perform small tasks;

- 5 to 7 people - for complex tasks.

- By time:

Small groups work as long as they have time to complete the assigned task.

Of course, if a problem-solving task is set, it will take several training sessions to complete it. This means that groups also operate in multiple classes, report when a task is completed, and cease to exist as groups.

Another point to consider when working with groups is the question of the content of the task. The content of the task should be of a different nature than traditional forms of teaching. For example, it is not appropriate to give the group the task of taking a synopsis of a particular paragraph in the textbook, because each student can do it on their own, independently.

Practice shows that only a non-standard setting of the problem encourages students to get help from each other, to know the opinion of others, and, as a result, to form the general opinion of the group.

**Conclusions:** Today, our laws and regulations consistently analyze the essence and necessity of training comprehensively mature specialists, the issues of educating a harmoniously developed generation in accordance with the requirements of modern science and technology, identify current tasks and measures for their implementation. Therefore, there are many educational tools, methodological guidelines aimed at educating students in the spirit of modern requirements, the application of theoretical knowledge in practice, the formation of skills and abilities. In particular, it is a set of examples of methods, tools, forms of activities, customs and traditions, ideas, life experiences that have been used for centuries in preparing young people for life.

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**UDC: 372.881.111.1**

## **EFFICIENCY OF DIFFERENTIATED INSTRUCTION IN DEVELOPING STUDENTS' PAREMIOLOGICAL COMPETENCE**

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**Annotatsiya:** Ushbu maqola [tabaqalashtirilgan](#) ta'limning talabalar paremiologik kompetensiyasini rivojlantirishdagi samaradorligiga bag'ishlangan. Ushbu tadqiqot bir necha bosqichlarda amalga oshirildi. Dastlab beshta maqol va matallar muhokama materiali sifatida tanlab olindi. Ushbu maqollarni muhokama qilishda sifatli usuldan foydalanildi. Shundan so'ng, maqol va matallarning qiyinlik darajasiga qarab, turli xil usullar, jumladan, munozara, sinonimlar keltirish, Telegram mobil ilovasi orqali Jumboqli maqol viktorinasi, shuningdek Foyer modelidan o'zlashtirilgan bilimlarni foydalanish uchun tavsiya etildi. Xulosa qismida, bir nechta tavsiyalar taklif etildi. Ulardan biri, maqol va matallarning qiyinlik darajasiga ko'ra maqol mashqini bajarishdir.

**Kalit so'zlar:** [Tabaqalashtirilgan ta'lim](#), paremiologik kompetensiya, maqol.

**Аннотация:** Данная статья посвящена эффективности дифференцированного обучения в развитии паремиологической компетентности студентов. Это исследование проводится в несколько этапов. Во-первых, пять пословиц и высказывания отобраны, чтобы использовать в качестве материала обсуждения. Далее использован качественный метод, чтобы обсудить отобранные пословицы. После этого, исходя из уровня сложности пословиц и поговорок, рекомендуется различных методов и техник, включая обсуждение, синонимы, викторину с зашифрованными пословицами с помощью мобильного приложения Telegram, а также применение модели Фойе для закрепления знаний студентов. В заключение предлагается несколько рекомендаций, один из них, делать пословичные упражнения, основанные на уровне сложности пословиц и поговорок.

**Ключевые слова:** дифференцированное обучение, паремиологическая компетентность, пословица.

**Abstract:** This article is devoted to the efficiency of differentiated education in developing students' paremiological competence. This study is carried out in several procedures. First, five proverbs and sayings are selected to use as discussion material.

Next, it is a qualitative method for discussing selected proverbs. After that, based on the difficulty level of proverbs and sayings, various methods and techniques are recommended, including discussion, synonyms, a quiz with scrambled proverbs via the Telegram mobile application, as well as using the Foyer model to consolidate students' awareness. In conclusion, several recommendations are proposed, one of which is to do proverbial activities based on the difficulty level of proverbs and sayings.

**Key words:** Differentiated instruction, paremiological competence, proverb.

**Introduction:** In Uzbek language there is a widely used saying “Ustoz – otangdek ulug’”[8, p.119]. A teacher is definitely as respectful as a parent. Because of this undeniable fact that most pupils and students follow and imitate their teachers by saying: “I will do what my teacher tells or shows me”. The core meaning of this saying is understood by the students who complain from their unhealthy family environment; in spite of this fact, reach their goals by the help of right guidance of their teachers. We consider that secret of such successful teachers is their abilities of approaching teaching matters differently based on students’ learning styles and capabilities.

**Literature review:** Differentiated instruction is an effective teaching approach. As Carol Ann Tomlinson stated that this approach gives teachers an opportunity to adapt content, process, product and learning environment according to every student’s age, interest and skills to reach common goal, that is, acquire knowledge differently.[2]

Christina Erickson is an author who studied the effectiveness of Differentiated instruction (DI) in primary education. As she pointed out that Carol Ann Tomlinson scrutinized mainly benefits of this approach in secondary education.[3, p. 23]

There have been done some scientific works on this theme in Uzbekistan but the article size will not allow us to review all the related literature. Hence we analyzed only empirical researches on DI by B. Batirov, S.Aliev, & S.Azimov, and Jamoliddinova. Batirov et al presented the benefits of DI by applying with two physics student groups.[1] Whereas Jamoliddinova conducted another research on differentiated learning which was based on interview data of 100 English teachers from 10 schools in Namangan city. The results revealed that English teachers’ DI awareness was different due to some factors such as age, experience lack of information and many others.[8]

Although some other investigations on DI have been done in Uzbekistan, none of them focused on developing students’ paremiological competence in Uzbek context. In this article we aim to discuss especially this question.

### **Paremiology and paremiological competence**

Paremiology has been known since ancient (Aristotle) times which studies proverbs and sayings.[9] Paremiological competence, as Peter Ďurčo stated in article Empirical Research and Paremiological Minimum “paremiological competence is the active and the passive knowledge of proverbs by an individual elicited through a paremiological experiment[10, p.190]

Proverb. Although a proverb have been defined for many times by different authors there is a tendency to state a world known proverb scholar Mieder’s definition as in the following:

A proverb is a short, generally known sentence of the folk which contains wisdom, truth, morals, and traditional views in a metaphorical, fixed and memorizable form and which is handed down from generation to generation.[11]

In addition to above mentioned explanation, we would like to cite an uzbek scholar Salomov's definition about proverbs and sayings, who contributed highly to translation theory and practice in Uzbekistan: "if I was asked whether there was "miracle and power in language" I would state that those "language miracles" are proverbs, sayings and idioms. [12, p.3]

**Research Methodology:** We carried out this research in the following steps. First, five proverbs and sayings are selected from <https://proverbial.com/health-proverbs> and Evans V & Dooley J. (2007) Enterprise 1. Next, Student's book to use as a discussion material. After that, the selected proverbs and sayings are studied qualitatively. Four activities are designed based on difficulty level proverbs such as making unclear proverb clear in class discussion, omitting definition, scrambled proverbs, hot topic by applying Foyer vocabulary strategy model. According to results it is suggested some recommendations.

### Analysis and Results: Frayer model

We used the Frayer model[5], one of the effective vocabulary strategy introduced Frayer to explain the proverb, practice it and assess students based on that model.

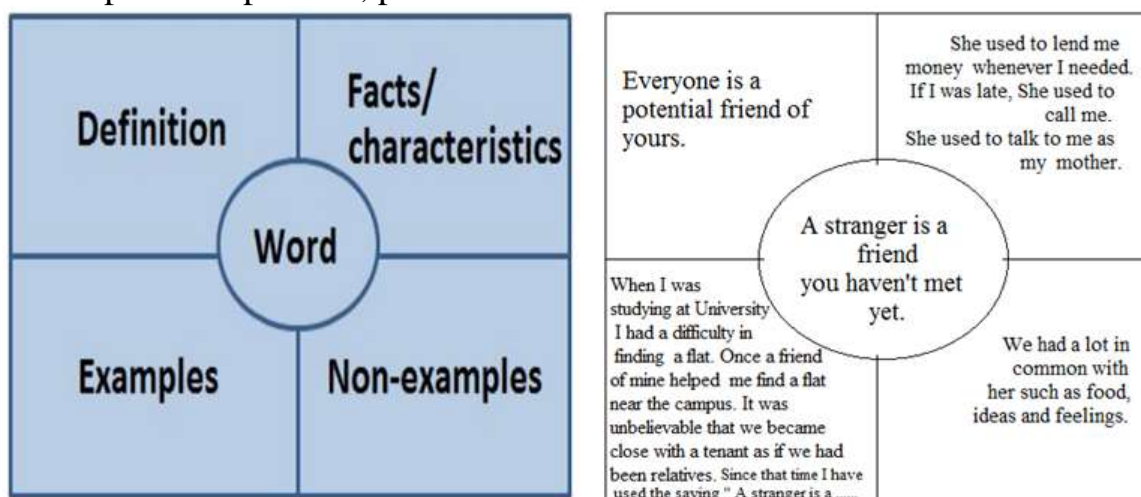


Figure 1. Proverb in Frayer model

### Unclear proverb

Although some proverbs are not idiomatic (the reason for this may be sociolinguistic problem), however some students may not comprehend it correctly. We consider that teacher should provide special activity for this type of proverbs and of course, clear instruction in the class. The proverb in textbook Enterprise 1 by Virginia Evans *A strange is a friend you haven't met yet* [4, p. 11] supports our view. The explanation of this proverb should be accomplished in several steps. First, a teacher conducts paremiological competence test such as (I know, I know, but I don't use I don't know), second, gives a definition and provides related examples, and third, explains Frayer model, fourth, applies the model to the unknown proverb, fifth, asks students to write a definition with their own words and a story based on personal or life experience, last, rediagnises their understanding by collecting handouts.

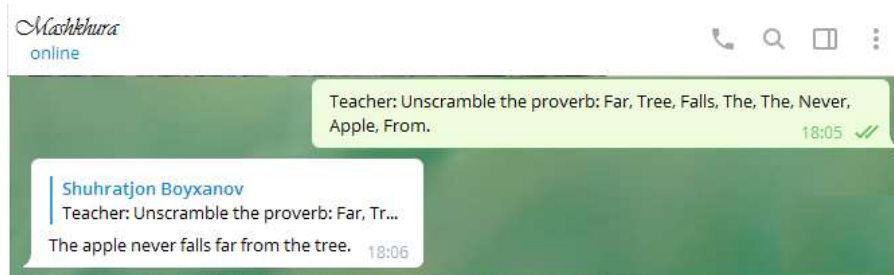


**Synonyms** :Although two proverbs are different, they are not opaque, their meanings are similar, synonyms, so there is no need to waste time to discuss one by one. Instead, a teacher can use time effectively by applying to Foyer model by omitting definition step.

- There is no place like home.
- East or west, home is best. [4:p.22]

### **Scrambled proverb**

The next idea proverb activity that we can differentiate is a proverbial energizer activity. It can be done collaboratively or individually. The task can be prepared in paper or digital version. This depends on each teacher's own preparation or preference. We prefer telegram messaging to test students' paremiological competence considering their interests. This activity also consists of some procedures. A teacher asks the students to close the books. After that he or she scrambles the proverb "the apple never falls far from the tree" and asks students to do it individually (as in Pic.1) and in so doing teacher can organize "who is the winner" competition and knows each student's proverbial awareness by their names. The next step is employing Foyer model in practising the proverb on focus.



**Picture 1. Online unscramble proverb activity**

### **Hot topic:**

We can see topics on Health almost in all textbooks. However all topics, such as COVID-19 has not been included yet. In that situation teachers should be flexible to differentiate the content due to authenticity is the topmost requirement of the current education. The following health proverbs and sayings can be discussed by students, based on their own choice by using Frayer model.

- Health is not valued till sickness comes.
- Health is like money, we never have a true idea of its value until we lose it – Josh Billings[6]

### **Discussion and conclusions**

According to differentiated instruction framework we attempt to make four sample activities. Those activities help students to improve their proverbial awareness. Continuing assessing students' paremiological competence in the form of dialogs and monologues, role plays presentations, projects, portfolios and essays in every four units and final assessment helps to revise and consolidate the input. Foremost, special criteria should be developed for each type of assessment. For instance, a role play is more suitable for the first year students. If some of the students prefer a discussion form of assessment they should be supported by guidance so he or she will be able to produce and increase paremiological competence effectively based on their choice.



In this article we focused on some proverbial activities in the form of clear explanation of the unclear proverb, omitting the definition of the proverb, using energizer activity with help of application Telegram messaging and giving proverbial samples to hot topics, such as COVID-19. We suggest employing Foyer model for all of four types of proverbial activities. Naturally the activities in our article are only samples which may **‘not fit all’** circumstances.

### Recommendations

We recommend that teachers should differentiate the proverbial activities based on the difficulty level of the proverbs and sayings. In addition, current research samples are proposed for formative assessment at higher education establishments and more hypotheses should be suggested for secondary education in the next investigations. Last but not least, we should not expect high paremiological achievement from students unless facilitating them what to learn and how to learn efficiently.

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UDC: 37.026.6

## IMPROVING THE TEACHING OF PHYSICS ON THE PRINCIPLE OF HISTORICITY

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**Abstract** - The following presents shows that in the process of training specialists, teaching physics in higher educational institutions in the field of technology, as a means of motivating students to emotional knowledge, creativity, intellectual abilities, as a tool for creative, innovative formation of specialists. To this end, discoveries made by physicists of the world and Central Asia, the importance of research today in lectures and practical discussions, interesting questions and answers.

**Key words:** ion, cathode, electrolyte, dielectric, diamagnetism, paramagnetism, creative, innovative, historical principle.

**Аннотация** – В статье показано, что в процессе подготовки специалистов преподавание физики в высших учебных заведениях в сфере технологий, как средство мотивации студентов к эмоциональным знаниям, творчеству, интеллектуальным способностям, как инструмент творческого, инновационного формирования специалистов. С этой целью открытия, сделанные физиками мира и Центральной Азии, важность исследований сегодня в лекциях и практических дискуссиях, интересные вопросы и ответы.

**Ключевые слова:** ион, катод, электролит, диэлектрик, диамагнетизм, парамагнетизм, творческий, инновационный, исторический принцип.

**Аннотация** — Мақолада техника йўналишидаги олий таълим муассасаларида физика ўқитишда тарихийлик тамойилидан фойдаланиш орқали мутахассис кадрларни тайёрлаш жараёнида талабаларнинг ҳиссий билишга ундаш, яратувчанлик, интеллектуал қобилиятларини такомиллаштириш,

мутахассис кадрларни креатив, инноватор сифатида шакллантиришда восита сифатида намоён бўлиши кўрсатиб ўтилган. Бунинг учун жаҳон ва Ўрта Осиёлик физик олимлар томонидан қилинган кашфиётлар, илмий-тадқиқот ишларининг бугунги кундаги аҳамияти ҳақида маъруза ва амалий машғулотларда баҳс-мунозара, қизиқарли савол-жавоблар ўтказиш бўйича тавсиялар ишлаб чиқилган.

**Калит сўзлар:** ион, катод, электролит, диэлектрик, диамагнетизм, парамагнетизм, креатив, инноватор, тарихийлик тамойили

**Introduction:** Introducing historical materials in the teaching of physics in technical higher education institutions, the discoveries made as a result of scientific research conducted by our ancestors, on the one hand, shows that mankind has long tried to study natural phenomena, the mysteries of the world. Enriching the lessons with information about experiments and experiments, created theories and contributions to the development of science will increase the creativity of students and make the lessons more interesting. At a time of rapid development, it is important to study the timely discoveries in the formation of our youth as active, creative, creative, intellectual potential and innovators, as well as their importance in science and technology today [1].

**Literature review:** The usage of the principle of history in the teaching of physics in the book "Methodological foundations of school physics" [2] by V.F. Efimenko, "Classics of physics (from ancient times to the early 20th century)" by G. M. Golin and S. R. Filonovich "[ 3], B.I. Spassky's "History of Physics" [4] and M.V. Lomonosov's basic physical views in the 17-18 centuries, V.N. Moshansky's "Formation of students' worldview in the study of physics" [5]. Reflected in his books and in the works of other well-known scholars like him. In the works of these scientists, great emphasis is placed on the use of information about the history of physics in the school curriculum, in most of their works:

- Development of students' interest in knowledge using information from the history of science and technology;
- Issues of formation of scientific outlook of students are considered;
- The basic principles of selection of historical materials are recommended;
- Types of educational materials with historical content are determined;
- Some ways to implement the introduction of this material in the educational process in the study of the basics of physics are described [6].

It is clear from our scientific research that even in the system of higher education in the field of technology, the use of the principle of history in the training of specialists leads students to increase their intellectual abilities, learn to think critically about themselves.

**Analysis:** It is known that in the higher education system the duration of lectures is 80 minutes, in this process it is expedient to change teaching methods every 15-20 minutes to keep students' attention, to move lessons from boring to interesting, conscious learning. there is an opportunity to organize lessons on the basis of interesting and discussion through the use of historical materials in teaching.

In any case, during the theoretical lesson, for example, the time during which the lecture is read should not exceed about 20 minutes. Because the first 20 minutes of training are the most effective, and after 20 minutes the motivation to continue learning quickly begins to decline. [7] Therefore, the organization of group discussions aimed at strengthening the teaching material on the basis of the principle of historicity can increase the level of attention of learners and improve the effectiveness of education.

One way to implement the principle of historicity in the teaching of physics is to use historical materials in these lessons. In this case, the information on the history of physics included in the historical problems should be concise, scientifically related to the subject and take into account the time.

Tasks with a historical content can be used at different stages of teaching: defining the goals and objectives of the lesson, testing students' basic knowledge, explaining new material, identifying, reviewing and questioning students' knowledge, generalizing and systematizing historical and scientific knowledge, and organizing homework and independent work. processes.

**Discussion:** The teacher solves two important tasks while using the principle of historicity in the teaching process. First, it applies scientific and enlightenment knowledge to theory and practice by applying the principle of historicity, and second, it achieves the development of students' thinking through the use of historical facts.

The use of historical materials for educational purposes draws students' attention to facts and events, helping to develop their talents and intellectual abilities. The historical past approaches the minds of students, becomes a reality for them, makes them more attentive to what surrounds them. For example, the following questions about the life of the English physicist and mathematician Isaac Newton (1643-1727) can be asked in the course "Department of Dynamics".

- What did Isaac Newton discover?
- How old was Isaac Newton when he made his first discovery?
- What is Isaac Newton's contribution to science?
- Which of Isaac Newton's 14 most important discoveries do you know? [8]

Asking such questions in the classroom encourages students to think freely at first, turning to the literature to find answers as the content of the questions deepens. When a scientist finds out that he was 27 years old at the time of his first mathematical discovery, a sense of self-amazement and wonder arises. A sense of critical thinking is formed. How old am I? And what do I do? the question arises. This will allow young people to create something new, to study the peaks of science in more depth.

Or a short 5-10 minute talk about the contributions of British physicist and chemist Michael Faraday to science during the Electromagnetism course: the founder of the doctrine of the electromagnetic field, the founder of electromagnetic induction, the laws of electrolysis, the discovery of the rotation of the plane of light polarization in a magnetic field will not be without benefits. It is true that this knowledge has been imparted to some degree in physics and chemistry classes in general secondary schools, but given that students' worldviews in the higher education system have expanded considerably, they are at an age where they can make great discoveries. encourages

you to know that you need to take it deeper. When teaching the department of electromagnetism, it is advisable to ask the following questions during the training.

- What did Michael Faraday (1791-1867) discover?
- What is Michael Faraday famous for?
- Who was the first to invent the electric field?
- Who was the first to create a transformer, an electric motor?
- What concepts in physics and chemistry did Michael Faraday introduce into science? (Ion, cathode, electrolyte, dielectric, diamagnetism, paramagnetism and ...)
- What is the Faraday constant measured by? It will be possible to organize interesting debates on the basis of questions such as [9].

While discussing the "Fundamentals of the Theory of Relativity", it is worthwhile to organize the following discussions on the life and scientific research of Albert Einstein.

What did Einstein discover?

Albert Einstein says that he accidentally discovered the theory of relativity in his works. One day he noticed that a car moving at the same speed and in the same direction as another was left motionless.

What is Einstein famous for?

The great German physicist Albert Einstein (March 14, 1879 - April 18, 1955) was one of the founders of the theory of modern physics, the creator of the theory of special and general relativity, winner of the Nobel Prize in Physics in 1921, whose genius is associated with the power of human thinking.

How did Einstein contribute to science?

He is best known as the author of the theory of relativity. Einstein also made important contributions to the creation of quantum mechanics, statistical physics, and cosmology. Einstein was awarded the Nobel Prize for his work on explaining the "photoelectric effect." [10]

Of the physicists, Isaac Newton won the first Nobel Prize, while the second is Albert Einstein. According to official publications, the award was given for his services to theoretical physics, and in particular for his discovery of the law of the photoelectric effect.

Discussions on the work done by Central Asian scientists in the process of discussing the work of physicists in the classes will further increase the interest of students. In this case, it is expedient to use the facts in the history of physics, the work of physicists and their discoveries and their significance today, any historical information, facts related to any discovery, invention or research. Because issues related to the discovery of historical discoveries, very little information is given in textbooks and manuals designed for higher education. Therefore, the use of such facts in physics lessons makes the lessons interesting and helps students to form a scientific worldview, increase their spirituality, a creative approach to the study of their specialties.

It is known that the countries of the Near and Middle East became the center of scientific research in the 9th-16th centuries. Central Asian scientists: Khorezmi, Ahmad al-Fargani, Farobi, Beruni, Termezi, Ibn Sino, Ulugbek, Ali Kushchi and others



contributed to the development of physics during this period. made a huge contribution. Ahmad al-Farghani's book, *The Movement of Celestial Bodies*, was written in the ninth century, translated into Latin in the 12th century, and into other European languages in the 13th century.

Therefore, Ahmad al-Farghani (b. 797-865, born in the Fergana region), as the founder of the theory of stereographic projection, based his work on the ratios of the motion of space objects in the planes, proved that magnitudes can be measured, and it is advisable to hold 5-10 minute conversations about the fact that this idea has not lost its value in the science of astrophysics today [11].

Discoveries made by Beruni (October 14, 973 - December 9, 1048. He was born in Khorezm region) while teaching mechanics: He proved with his own tools that the Earth rotates around its axis and found that the radius of the Earth is about 6490 km. , types of motion, atomic fission, post-atomic particle interaction forces, methods for determining specific gravity, body inertia, space, atmospheric pressure, hydrostatics of liquids, causes of snow, rain and hail, energy cycle, electrification of bodies, rising sea and ocean waters and lessons on the causes of decline, the corpuscular and wave properties of light, the speed of sound and light, the causes of the rotation and refraction of light, the phenomenon of dispersion, the proximity of the Earth and other planets to the ellipse, the weightlessness of space objects.

Abu Nasr al-Farabi (870-951) was born in Farab district of Kazakhstan. His views on the speed of sound, the nature of sound waves, the frequency of sound, the wavelength of sound, and the musical notes and many works on optics based on them contributed greatly to the development of physics. knowing that it contributes to the formation of humanism, scientific worldview and preparation for purposeful practical activities in the student youth, develops mentally and intellectually [11].

Research conducted by Ibn Sino (August 16, 980-July 18, 1037. Born in the village of Afshona, Bukhara): relativity of motion, inertia, force, connection between mass and acceleration, rotational motion, centripetal force, linear speed, space and atmospheric pressure, convection, nature of heat, types of heat transfer, types of lightning and lightning, thunderstorm phenomenon, sound and light speed, light dispersion, lens, atomic structure and so on. it is expedient to discuss not only in lectures but also in practical lessons that most of his comments on the subject are very relevant to modern concepts.

At the same time, “Where does the scientific knowledge that teachers give to students come from? It is also worth mentioning that “during the historical development of mankind, scientists have identified this knowledge through research and transferred it to science” [12].

The purpose of the course is to improve the quality of training through the use of historical material in physics, to teach the art of applying physical theory and knowledge in practice, to arouse interest in in-depth study of natural phenomena, as well as to train creative, innovative professionals. . Teachers can use this information not only in the teaching process, but also in assignments and homework for independent learning.

In such lessons the following tasks are defined:

- Increase students' interest in the specialty;

- Development of students' scientific outlook;
- Improving active, exercise skills;
- Training of creative, innovative specialists;
- Cultivation of civic consciousness and behavior and high spirituality;
- To develop students' creative thinking, to involve them in creative activities.
- It would be expedient to improve the quality of training of competitive personnel by carrying out a number of activities, such as the formation of methodological skills in the study of physics.

**Conclusion:** Addressing the history of science shows the student how difficult and long the journey of scientists towards truth has been, how resilient they have been, and how ambitious and patient they have been toward their goals. They arouse interest in science, love for the motherland, pride in the achievements of world and Uzbek scientists, increase their morale, try to learn more about their specialties, as well as the desire of students to create something, develop innovative skills.

Thus, the use of the principle of historicity in the teaching of physics in higher education institutions in the field of technology is one of the important means of training specialists.

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UDK: 93-1 / 2 (697.6) / 15/20 /

**FEATURES OF USING THE PARTICLE “-CHI” IN THE UZBEK LANGUAGE AND PROBLEMS OF TRANSLATION INTO ENGLISH**

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**Аннотация.** Мақолада ўзбек тилидаги “-чи” юкламаларнинг қўлланиш хусусиятлари ва инглиз тилига ўгирилиш муаммолари ҳақида сўз юритилган. Уларнинг синтактик ва грамматик хусусиятлари ёритиб берилган. Инглиз тилида “particles”, ўзбек тилида “юкламалар” деб ўрганиладиган бу тил ҳодисалари ёрдамчи сўзлар гуруҳига мансублиги кўрсатилган. Инглиз ва ўзбек тилидаги юкламаларнинг маъновий гуруҳлари орасида муштарак ва фарқли жиҳатлар мавжудлиги аниқланиб, мисоллар асосида далилланган. Юкламаларнинг нутқни ташкил қилувчи сўз ва гапларга қўшимча маъно бериш вазифасини бажариши, таржимада сақланиши ва берилиши ҳам ўзига хослик касб этади.

**Таянч сўзлар:** морфология, юклама, ёрдамчи сўзлар, маъно, тасниф, тил, нутқ.

**Аннотация.** В статье рассматриваются особенности использования частиц «-чи» в узбекском языке и проблемы перевода на английский язык. Выделены их синтаксические и грамматические особенности. Эти языковые явления, которые изучаются как «particles» в английском и «юклама» в узбекском, относятся к группе вспомогательных слов. Сходства и различия между духовными группами английских и узбекских загрузок выявлены и обоснованы на примерах. Тот факт, что частицы выполняют функцию придания дополнительного значения словам и фразам, составляющим речь, также сохраняются и передаются в переводе, также является уникальным.

**Ключевые слова:** морфология, частицы, вспомогательные слова, значение, классификация, язык, речь.

**Abstract** – The article discusses the features of the use of “-chi” particles in the Uzbek language and the problems of translation into English. Their syntactic and grammatical features are highlighted. These linguistic phenomena, which are studied as “частицы” in Russian and “yuklama” in Uzbek, belong to the group of auxiliary words. Similarities and differences between the spiritual groups of English and Uzbek downloads are identified and justified by examples. The fact that particles perform the function of giving additional meaning to words and phrases that make up speech, and are also stored and transmitted in translation, is also unique.

**Key words:** morphology, particles, auxiliary words, meaning, classification, language, speech.

**Introduction:** In the Uzbek language, the -chi particle is one of the interrogative particles, which is added to words by a hyphen and serves to give the meaning of the interrogative to the sentence in which it is present. However, it does not always mean pure interrogation, but in addition command, desire, request, suggestion, please, excitement, surprise, amazement, urge, warning, threat, emphasis, reinforcement, denial, limitation, guess, has different meanings, such as suspicion, firm belief, and judgment. For example, in this sentence with -chi particle, "*Biz ketyapmiz, siz-chi?*" (We're leaving, what about you?) the meaning of "Aren't you leaving?" can be read. Hence, the above statement can also be constructed using the -mi question load, which is an alternative to the -chi question load [1].

The only difference is, "We're leaving, what about you?" if the sentence forms a compound sentence in terms of structure, "Aren't you leaving?" the sentence has a simple structure. In this case, you - the main part of the syntactic function of the possessive, aren't leaving - the main part of the syntactic function of the cut.

"We're leaving, what about you?" In the sentence "We are leaving" - a part of the predicate, which formed a simple compound sentence with two main parts. The second part of the sentence above (what about you?) Is a simple sentence with a head piece. The second main part of it, the cut (aren't leaving) part, has been omitted in order to avoid stylistic ambiguity by avoiding word repetition[2].

There is also the fact that in both of the above sentences, the meaning of "let's go" is hidden. This condition is grammatically called a presupposition. Such a presupposition phenomenon is an extremely complex phenomenon that occurs in one way or another in any sentence.

**Literature review:** The interrogative particle -chi is also used in some cases to express feelings and excitement: *Bunchalar yoqimli mushuk bo'lmasa-chi?* (What if you don't have such a cute cat?)[3].

From the content of this sentence, which is dominated by the meaning of amazement rather than questioning, one can read not the depressing meaning of "if a cute cat is not found", but rather the meaning of endless amazement when a cute cat is found.

The meanings of surprise and astonishment can also be grasped through the -chi interrogative particle.

For example: *Puli to'langan bo'lsa-da, bermasligi-chi?* (What if he pays but doesn't give?)[4].

**Analysis:** Sometimes the -chi interrogative particle represents the meaning of winter. It turns out that in such a case the -chi particle is often accompanied by conditional verbs. [5] For example: *Kimdir chaqiryapti, musiqani pasaytirsangchi?!* (Someone is calling, what if you turn down the music?!)

However, when the -chi interrogative particle is used in the infinitive sense, it may not always be accompanied by subjunctive mood verbs. For example: *Eshik taqillayapti, yugurib borib och-chi.* (There is a knock on the door, run and open it.)

It is also possible to witness that the words in the presence of the interrogative particle -chi indicate the meaning of the wish. For example: *Oyijon, non emas, yog'likkina patir yopsam-chi?* (Mummy, can I bake greasy bread, not bread?)[6].



From the content of this statement, it is clear that the bride's desire to eat greasy bread is more important than bread.

There are also cases where the meaning of the request is conveyed through interrogative particle *-chi*. For example: *Bolam, xolang bilan bir telefonlashtirib qo'ysang-chi?* (My child, what if you make a phone call with your aunt?)[7].

If interrogative particle *-chi* comes with a verb with subjunctive mood suffix, the meaning of request, please, if it is added to the verb without this suffix, the suffix represents the meaning of the command.

For example: *Aytsangiz-chi, nega jimsiz?* (Tell me, why are you silent?) (asking to speak in the sense of wanting to know). *Ayt-chi, nega o'z birodaringga pichoq suqding?* Tell me, why did you stab your brother? (forcing, coercing, commanding to speak)[8].

The verbs used to express the meanings of command; threat, wish, and request are in the form of an imperative or imperative-wish mood before receiving the *-chi* interrogative particle. The particle comes after them):

Qani kaftingni och-chi, nimani o'marding?

Open your palm, what did you steal? (Command).

Akangga aytib ko'r-chi, tilingni uzib olaman.

Tell your brother, I'll cut your tongue. (Threaten).

Sal suril-chi, men ham ko'ray

Come on in, take a look! (Wish and please)

Tanlagan qizingni avval men bir ko'ray-chi, sovchilikka boorish qochmas.

Let me see your chosen girl first, it is inevitable to go on a date. (Desire).

*-chi* interrogative particle can add the meaning of emphasis to a sentence, such as stress and reinforcement particles: *Odam-chi, onasi oldidagi qarzini uza olmaydi.* (A man cannot pay his debt to his mother.)([9].

In such words, the meaning of utterance is also understood in addition to the meaning of emphasis: *Onang-chi, seni dunyoga keltirgan tabarruk zot bo'ladi. Men o'qiyman deb-chi, mardikorlik ham qilganman.* Mother, you will be the blessed one who brought you into the world. As if I was studying, I also worked.

Sometimes the *-chi* interrogative particle is used to express the meaning of a warning, a confirmation: *Rahbaring to'y qilayotganda bormay ko'r-chi?* Why don't your boss go to the wedding? ("You have to go", "Of course you go") [10].

Along with the confirmation of interrogative particle, there are also statements expressing the meaning of trying to convince and persuade: *Men-chi u odam bilan o'tgan yil Moskvada tanishganman.* I met this man in Moscow last year.

In rare cases, however, the *-chi* interrogative particle can serve to express negative: *U-chi, avvalo, odamgarchilik ko'chasidan bir o'tib ko'rsin.* Let he/she first cross the street of humanity. (this means, it has no humanity in it)[11].

**Discussion:** If the *-chi* interrogative particle is repeated in the presence of cohesive parts or some simple sentences in a compound sentence, such as the negative particle *na ... na*, it reinforces the meaning of the negative: *Yomg'ir yog'di-chi, qor yog'di-chi, baribir paxtani teramiz.* Whether it is raining or snowing, we will pick cotton anyway. This means that neither rain nor snow will interfere with the cotton harvest.



In the following sentence, it is understood that the word that received the interrogative particle -chi is used in a restrictive sense and provides clarity: *Sharifni-chi, bundan keyin davramizga aytmanglar*. Do not tell Sharif to our circle after this.

It is clear that presuppositional work is effective in distinguishing communicative types of sentences.[2] In particular, the idea that the sentence in which the -chi is involved is mainly interrogative because it forms interrogative sentences has always been controversial. While some believe that the verdict is "not expressed verdict" others say that the verdict is secret, that it is private, or that "the real verdict is understood from the answer to the question." [3]

The -chi interrogative particle is also considered as an adjunct that forms the interrogative type of the sentence with the -mi, -a, -ya particles, which represent the interrogative content as well. In this sense, it is as if it is expressed as an adjunct that makes a sentence, not a word. In particular, the linguist O. Bozorov said that the -mi, -a, -ya particles are the ones that form a sentence. This, in our view, stems from the different features and semantic grammatical interpretation of these particles, as well as from the fact that the interrogative particles are a communicative type of the special sentence.

Our observations show that the sentence formed by -chi and other interrogative particles (-mi, -a, -ya) does not express a verdict. It is true that the verdict is expressed by the answer to the question. For example:

Question: "What if he doesn't draw your picture?" (guess, suspicion)

Answer: He draws my picture. (firm conviction and judgment).

Sometimes, with the help of the interrogative particle -chi, the implicit expression of the sentence is also noticed. For example, "What if the cow we got is barren?" According to the presupposition, "The cow's duality is still unknown, the belly is not beating," it is understood that the verdict is secret.

When English texts are translated into Uzbek or Uzbek texts are translated into English, it is common to choose alternatives to particles, to skip the original particle in the translation, or to add a particle that does not exist in the original to the translated text. In particular, this can be seen in the excerpts from the book "Unfortunate Kerry", translated in 2007 by the Uzbek translator of the American English writer Theodar Dreyzer E. Nosirov [4].

For example, the following English passage: "Suppose she should never hear anything more of him? This fine arrangement of chambers would not last long!" [5] translated into Uzbek as follows: "Butunlay dom-daraksiz ketsa-chi? Unda manavi shinam xonalarni tark etishga to'g'ri keladi-ku!" [2. 250].

It is known that in the Uzbek language the -chi particle is one of the interrogative particles and participates in the formation of the interrogative sentence. As a result, it is often observed that this feature is also reflected in the translation process. This can also be understood from the above translation.

The word "put", which has been used as an adjective below, is included in the translation, although it does not exist in the original. As a result, the question-and-answer particle -chi added to it also appeared in the text of the translation when it did not actually exist. In fact: "Its many and growing commercial opportunities gave it

widespread fame” [1, 12]. In translation: “Qo’ying-chi, bu shaharga kelishga yuraklari dov bergan yoshgina qizlarga ham baxt kulib boqardi. [2, 20].

In fact, there are many such cases: "Well". [1, 152]. "E, qo’ysang-chi!" [2, 202]. Apparently, the only word in this sentence is "Well" is given by the expression “E, qo’ysang-chi!.

Here the particle -chi is used to express emotion, denial, not question.

In Uzbek, the particle -chi is also used in the content and tone of the command, so the translation shows their use in conjunction with verbs: "Start your machine," he said. [1, 30]. "Mashinani yurgizib yuborsangiz-chi?" Said the master. [2, 42].

In this sentence, too, the particle -chi, which is added to the verb, does not actually exist. However, in the translation it is used to express the pure command peculiar to the English verb “start” observed. In this case, the -chi particle served to express the meaning of a pure command, not a question.

In Uzbek, the particle -chi is added to the verb in the imperative mood when it is given in the content and tone of the command. With this in mind, translators often use prefixed verbs when translating a command verb in English. For example: “Wake up” [1, 141] “. "Ko’zingni ochsang-chi, axir!" [2, 187]. As mentioned, in order to further enhance the command tone in this passage, two particles in Uzbek language were used at once. One of them is the question-and-answer particle -chi, and the other is the reinforcement-emphasis particle. Both of them served to reinforce and emphasize the idea.

**Conclusion:** First of all, particles, as one of the linguistic tools leading to presupposition, can refer to presupposition by complicating the semantic structure of the sentence at the syntactic level. Secondly, since the particle does not express a clear meaning, its meaning is grammatical, and what it means is determined from the text, depending on the attitude of the participants in the speech process. Hence, its preservation and transmission in translation is also unique.

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UDC 811.111`25`373.612.2

**ABDULLA QADIRI'S SKILL IN USING METAPHORS AND THEIR  
TRANSLATION ISSUES****Masharipova Yulduz Otaxanovna****Master student****Urgench State University****Urgench, Uzbekistan****E-mail: [masharipova\\_yulduz@list.ru](mailto:masharipova_yulduz@list.ru)**

**Abstract:** This article demonstrates translation of metaphors from Uzbek into English with the examples from the book "O'tkan kunlar" by Abdulla Qadiri. As we know there are two translation versions of the book nowadays. They are a famous french translator Carol Ermakova and an american translator Mark Eduard Reese. The results of the translating of the metaphors are given with appropriate examples from the both books that show translation versions of the metaphors.

**Key words:** primary meaning, derivative meaning, the degree of expressiveness, genuine metaphor, trite metaphor, sustained or prolonged metaphor

**Annotatsiya:** Mazkur maqolada mashhur o'zbek adibi Abdulla Qodiriyning "O'tkan kunlar" romanida qo'llanilgan metaforalarning ingliz tiliga tarjimasi masalasi bayon etilgan. Ma'lumki, bugungi kunda chet el yozuvchilari tarjimonlari tomonidan sevimli asarimizning tarjimasi kitobxonlar uchun chiroyli kitob shaklida taqdim etilgan. ulardan biri mashhur fransuz tarjimoni Carol Ermakova bo'lsa, ikkinchisi amerikaning mashhur yozuvchisi mark Eduard Reesedir. Mazkur maqolada Abdulla Qodiriyning asarda metaforalardan unumli foydalanganligining guvohi bo'lganimiz holda ikkala yozuvchi, tarjimonlarning o'zbek tilidagi istioralarni ingliz tiliga qay yo'sinda o'giranliklarini o'rganib, muhokama qilamiz.

**Kalit so'zlar:** asosiy lug'aviy (lug'aviy-mantiqiy) ma'no, ko'chma (ko'chma-mantiqiy) ma'no, ta'sirchanlik darajasi, nutqdagi istioralar, eskirgan (tildagi, yo'qolib borayotgan) istioralar, yangilangan istioralar

**Аннотация:** В данной статье рассматривается перевод на английский язык метафор, использованных в романе «Минувшие дни» известного узбекского писателя Абдуллы Кадири. Известно, что на сегодняшний день существует два варианта перевода книги зарубежными переводчиками, один выполнен знаменитой французской переводчицей Кэрол Ермаковой, другой – известным американским писателем Марком Эдуардом Ризом. В этой статье мы рассмотрим и обсудим, как писатели и переводчики переводили узбекские метафоры на английский, а также увидим, как Абдулла Кадири эффективно использует метафоры в пьесе.

**Ключевые слова:** основное лексическое (лексико-логическое) значение, переносный (переносимый-логический) смысл, уровень выразительности, метафоры в речи, устаревшие метафоры, обновленные метафоры

**Introduction:** The novel O'tkan Kunlar ("Bygone Days"), by the Uzbek writer Abdulla Qodiriy, is a true cult work of early Uzbek realism. Qodiriy had a tragic fate:

he was purged and shot at the age of 44. Just ten years after his death, his novel was translated into Russian, though significant portions of the text were cut.

Carol Ermakova graduated with first-class honors in German and Russian language and literature from St. Andrews University and holds an MA in translation from Bath University. She first visited Russia in 1991, returning several times throughout the '90s. More recently, Ermakova spent two years in Moscow teaching English and translating. Carol currently lives in the North Pennines, UK, and works as a freelance translator, with several published translations to her name.

Mark Reese began his twenty three year career in Central Asia as a U.S. Peace Corps volunteer in the second group to serve in Uzbekistan from 1994-1996. He has engaged in eight years of Central Asian based regional field work in a full spectrum of activities ranging from program management as country director for the Department of State's Uzbekistan Partnership Program in Comparative Religious Studies, interpreter and consultant for the Department of Defense, as well as in-country academic research and scholarly translation. Mark has worked as a site manager for the United States Special Operations Command managing translation and cultural advisement contracts. Upon leaving USSOCOM he held positions as Deputy Director for the Center for Middle East and Islamic Studies and Director for the Center for Regional Studies at the United States Naval Academy.

Now I would like to express my deep gratitude to Mark Edward Reese, who owns a great, sincere heart, no matter of the distance he gave me a hand to work on my research and sent me e-version of the book. As you know during the coronavirus pandemic period, which cause a crisis around the whole world, it was difficult to find an English translation of the "ByGone Days".

**Literature review:** The interaction or interplay between the primary dictionary meaning (the meaning which is registered in the language code as an easily recognized sign for an abstract notion designating a certain phenomenon or object) and a meaning which is imposed on the word by a micro-context may be maintained along different lines. One line is when the author identifies two objects which have nothing in common, but in which he subjectively sees a function, or a property, or a feature, or a quality that may make the reader perceive these two objects as identical.

As the etymology of the word reveals, the term "metaphor" means transference of some quality from one object to another. From the times of ancient Greek and Roman rhetoric, the term has been known to denote the transference of meaning from one word to another. It is still widely used to designate the process in which a word acquires a derivative meaning. [1]

Thus by transference of meaning the words *grasp*, *get* and *see* come to have the derivative meaning of *understand*. When these words are used with that meaning we can only register the derivative meaning existing in the semantic structures of the words. Though the derivative meaning is metaphorical in origin, there is no stylistic effect because the primary meaning is no longer felt.

A metaphor becomes a stylistic device when two different phenomena (things, events, ideas, actions) are simultaneously brought to mind by the imposition of some or all of the inherent properties of one object on the other which by nature is deprived of these properties. Such an imposition generally results when the creator of the



metaphor finds in the two corresponding objects certain features which to his eye have something in common.

**Research methodology:** The lexical environment-context plays an important role in the expression of the metaphorical meaning of the word. Because a word that expresses a metaphorical meaning loses its metaphorical meaning outside the context and remains in the lexical sense. Abdulla Qadiri makes extensive use of such opportunities, which can demonstrate the semantic and stylistic diversity of the Uzbek language. [2]

Metaphors, like all stylistic devices, can be classified according to their degree of unexpectedness. Thus metaphors which are absolutely unexpected, i.e. are quite unpredictable, are called genuine metaphors. Genuine metaphors are also called speech metaphors. Genuine metaphors can easily become trite if they are frequently repeated. [3]

*Examples of genuine metaphors:* the lips were tight little traps; the whole space was a bowl of heat; this virus carried a gun; the dark swallowed him; Mrs. Small's eyes boiled with excitement; the words seemed to dance ...

Those which are commonly used in speech and therefore are sometimes even fixed in dictionaries as expressive means of language are trite (language) metaphors, or dead metaphors. Their predictability therefore is apparent. Genuine metaphors are regarded as belonging to language-in-action, i. e. speech metaphors; trite metaphors belong to the language-as-a system, i.e. language proper, and are usually fixed in dictionaries as units of the language.

Here are some examples of metaphors that are considered trite. They are time-worn and well rubbed into the language: *'the salt of life', 'a ray of hope', 'floods of tears', 'a storm of indignation', 'a flight of fancy', 'a flight of imagination', 'the ladder of fame', 'to burn with passion (anger)', 'a gleam of mirth', 'a shadow of a smile'* and the like. The following metaphors enriched English phraseology: *foot of a bed, leg of a chair, head of a nail, to be in the same boat, blind window, to fish for compliments*. [1]

Very often trite metaphors are given new force (intensity) and their primary dead meaning is created a new. It is achieved by introducing new additional images. Such metaphors are called sustained or prolonged. The initial metaphor may be genuine and may also be developed through a number of contributory images so that the whole of the utterance becomes one *sustained metaphor*. For example: "Our family rivulet joined other streams and the stream was a river pouring into St. Thomas Church" (J.Steinbeck). [5]

**Analysis and Results:** Metaphors are a form of figurative language, which refers to words or expressions that mean something different from their literal definition.

Metaphors show up in literature, poetry, music, and writing, but also in speech. If you hear someone say "metaphorically speaking," it probably means that you shouldn't take what they said as the truth, but as more of an idea. Often, you can use a metaphor to make your subject more relatable to the reader or to make a complex thought easier to understand.



In the novel "O'tkan kunlar", we come across the best examples of some metaphors and compare them with the translation versions of the famous foreign writers . Examples:

- **Abdulla Qodiriy:** *"Qizlar majlisi - gullar, lolalar, to'tilar, qumrilar majlisi!"* [6]

**Carol Ermakova:** *"Oh, what maidens' banquet is this?! Blossoms abound, turtle doves coo! Today they are throwing the pre-nuptial feast at Kumush's uncle's home – a banquet of blossom and maidens!"* [7]

**Mark Reese:** *"A bridal shower is a congregation as redolent as a bed of flowers; such slender tulips, such vibrant parrots, and such beautiful turtledoves! A garden redolent of delicious flowers abounded in the house of Kumush's uncle."* [8]

Where the lexemes of *flowers*, *tulips*, *parrots* are used figuratively, gaining new meaning in the creative pen. Their meanings of *plant* and *bird* do not occupy a central place in the writer's attention, but on the basis of the semantic content of these words, "beautiful", "attractive", "cheerful", "happy girls" meanings were taken into account.

- **Abdulla Qodiriy:** Otabek maktubni tugatib, tushunmay o'tkan jumllalarini qayta ko'zdan kechirar ekan, Azizbek voqi'asi ustiga kelganda ixtiyorsiz *"tulki"* deb yubordi. [6, 18]

**Carol Ermakova:** Having read the letter , Atabek ran his eyes over some unclear passages once more, but, coming to the report on Azizbek, he cried out involuntarily: *"The sly fox!"* [7, 40]

**Mark Reese:** When he finished the letter, Otabek read it again, clarifying some points. Reaching the description of the events involving Azizbek, he burst out, with uncontrolled hatred, *"You fox!"* [8, 56]

The original, primary meaning of the word is animal, and the derivative meaning is a man who is very *sly* as a fox.

- **Abdulla Qodiriy:** O'ying o'n beshlari bo'lsa-da, havoning bulutlig'i bilan oy ko'rinmas, chin ma'nosi bilan *qorong'i kuzning qorong'i bir tuni edi*. [6, 120]

**Carol Ermakova:** Although the moon was already full, *its pale orb was hidden behind thick clouds. Night fell, a true ebony, autumn night*. [7, 206]

**Mark Reese:** Although it was already mid-month, *the overcast night sky hid the unspoken truth of the moon. Night fell, a true dark autumn night*. [8, 249]

In this sentence the word *"hide"* (yashirmoq) is used in relation to the moon to form a metaphorical meaning. As we know the word *"orb"* means an object that has a perfectly round shape like a ball, especially the sun or moon and *"pale"* means *"light and not bright in colour"* and used to explain person's face who has skin that is almost white. Carol Ermakova used *"pale orb"* in expressing the roundness and whiteness of the moon while Mark Reese preferred to translate the utterance as *"unspoken truth of the moon"*.

In the translation of the following sentence: *"Night fell, a true ebony, autumn night"* by Carol Ermakova, the simple words are being used to paint a colorful picture of the dark night. Now, we know it is nighttime, but it's been written in a manner that the word *"ebony"* uses to allude to how quickly night arrived with the kind of darkness. The dictionary meaning of the word *"ebony"* is *"dark black in colour/ a tree with hard dark wood"*. And Mark Reese translates this sentence as follows: *"Night fell, a true*

*dark autumn night.*" As you know the word "*true*" means "real/actual/based on facts or things that really happen, and not made up" and the sentence "a true autumn night" has the qualities that you would expect that type of season to have. [9]

- **Abdulla Qodiriy:** Masjid minorasidan ruhoniyyat yog'dirib munglik azon tovshi eshitildi-da, *uyqu quchog'ida yotqan tabiat* uyg'onib javob bergan kabi jong'irab ketdi. [6, 121]

**Carol Ermakova:** The night withdrew. The plaintive call to morning prayer rang out from the mosque minaret, showering everything around with a life-giving wave of spiritual purity; *nature stirred, began to awake, echoing the cries.* [7, 206]

**Mark Reese:** The night retreated. A sad call to morning prayer spread from the tower of the mosque, covering the surrounding area in a pall, filling the air with the life-giving force of spiritual purity, and *the natural world echoed the sentiment.* [8, 250]

In these sentences "*nature*" gains all the qualities of the action verbs and it created nature metaphors.

- **Abdulla Qodiriy:** Har holda Toshkand ustig'a yana *qonliq bulutlar* chiqdi. [6, 18]

**Carol Ermakova:** Be that as it may, *crimson clouds* have once more gathered over Tashkent. [7, 40]

**Mark Reese:** However, *bloody clouds* have appeared over Tashkent. [8, 55]

The primary meaning of "*blood*" means "the red liquid that flows around inside your body", while the derivative meaning used as a way of referring to *violence* and *death*. Mark used the word "blood" to indicate the metaphor while Carol Ermakova translated it using the adjective "crimson" which "dark purple-red in colour" in primary meaning.

- **Abdulla Qodiriy:** "*Muhabbat juda oz yigitlarga muyassar bo'ladig'an yurak javharidir*" [6, 13]

**Carol Ermakova:** "Love is the greatest happiness that may alight upon the human heart, and it is granted to but a few." [7, 30]

**Mark Reese:** "True love is a gem of the heart that very few men receive in their lifetime;" [8, 46]

Here is the word "*Love*" expressed the whole utterance with its metaphoric meaning.

- **Abdulla Qodiriy:** Ammo shunisi ham borki, shu keying vaqtlarda Azizbek *Qo'qonning yorlig' va farmonlarini iltifotsiz qoldira boshladi.* [6, 7]

**Carol Ermakova:** Our complaints rest on naught but pleas – 'May he show obedience...' It is possible, of course, that *Kokand will merely turn a blind eye to our complaints.* [7, 20]

**Mark Reese:** One point I must bring to light: Recently Azizbek has begun to *ignore Qoqan's orders and decrees.* [8, 34]

Here Carol Ermakova used a phrase "*turn a blind eye*" expressing the meaning of "*ignore*" that Mark used in his translation. Now primary meaning of this phrase is "*to pretend you do not notice something, because you should do something about it but you do not want to*". And a word "*blind*" means "*unable to see*" in its primary

meaning. But in the translation we see its derivative meaning that denote the sense of “ignore.”

**Conclusion:** The constant use of a metaphor gradually leads to the breaking up of the primary meaning. The metaphoric use of the word begins to affect the dictionary meaning, adding to it fresh connotations or shades of meaning. But this influence, however strong it may be, will never reach the degree where the dictionary meaning entirely disappears. If it did, we should have no stylistic device. It is a law of stylistics that in a stylistic device the stability of the dictionary meaning is always retained, no matter how great the influence of the contextual meaning may be.

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**UDK: 82-1 / 2 (575.1) / 19/20 /**

## THE GENESIS OF POETRIC DRAMA AND THE NATURE OF THE GENRE

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**Abstract:** The formation and development of the genre of poetic drama in Uzbek literature has its own foundations. First, as a result of the European writing tradition that emerged in the early twentieth century, literature has been enriched by new genres. That is, the first works of the epic-dramatic type saw the face of the world. The first examples of the historical novel, story, story, drama, comedy and tragedy were created.

Poetic drama is also important as a work of this period. The article describes the origin factors and the essence of the genre.

**Key words:** poetic drama, lyric drama, genesis, ancient Greek literature, world literature of the Renaissance, drama, poetic form, romanticism.

**Аннотация:** Становление и развитие жанра поэтической драмы в узбекской литературе имеет свои основы. Во-первых, в результате европейской письменной традиции, возникшей в начале XX века, литература обогатилась за счет новых жанров. То есть первые произведения эпико-драматического типа увидели лицо мира. Созданы первые образцы исторического романа, рассказа, рассказа, драмы, комедии и трагедии. Поэтическая драма также важна как произведение этого периода. В статье описаны факторы происхождения и сущность жанра.

**Ключевые слова:** стихотворная драма, лирическая драма, генезис, древнегреческая литература, мировая литература эпохи Возрождения, драматургия, поэтическая форма, романтизм.

**Аннотация:** Ўзбек адабиётида шеърӣ драма жанрининг шаклланиб, такомил топиши ўз асосларига эга. Аввало, XX аср бошларида юзага келган европача ёзиш анъанаси натижасида адабиёт янги жанрлар ҳисобига бойиди. Яъни эпик ва драматик турдаги дастлабки асарлар дунё юзини кўрди. Тарихий роман, қисса, ҳикоя, драма, комедия ва трагедиянинг илк намуналари яратилди. Шеърӣ драма ҳам шу даврнинг маҳсули сифатида аҳамиятли. Мақолада жанрининг юзага келиш омиллари ва табиатига хос хусусиятлар ёритилган.

**Калит сўзлар:** шеърӣ драма, лирик драма, генезис, қадимги юнон адабиёти, Уйғониш даври жаҳон адабиёти, драматургия, шеърӣ шакл, романтизм.

**Introduction:** When Cholpon wrote “Bir xil, bir xil, bir xil. Ko’ngil endi boshqa narsa – yangilik istaydir (“Same, same, same. The heart now wants something else – innovation)” [1.206p], the beginning of the last century meant a renewal of the genre in Uzbek literature. He based his work on this criterion: he created in the genre of historical novels, short stories, narrative, along with aruz, he created poems of high art in finger and free weight.

Or the great Abdullah Qadiri, "Since we have entered a new era, we will follow the news of this new era in every way, and in the same epic, novel and storytelling, our people will be inspired by the "Tahir Zuhra ", "Chor Darvesh ". "We feel obliged to introduce Farhod-Shirin" and "Bahrom-gor", he said. Consequently, the Jadid writers of that period tried to reconcile Uzbek literature with world literature in this regard. Samples of poetic drama were created in the new Uzbek literature in the early twentieth century. It is associated with the name Abdurauf Fitrat, the first experience of “Satan’s rebellion against God”.

It can be said that poetic drama has also become an artistic reality as a product of this hot literary process. In fact, the features of this genre are reflected in the Uzbek classical literature, ancient literature and Renaissance world literature.

**Literature review:** It is well known that dramatic genres were formed and developed in **ancient Greek literature**. The poetic tragedies created in ancient



literature became the basis for the creation of today's poetic drama. In the centuries BC, Greek society rose to a higher socio-political level. During this period, many works were created in the dramatic genre of literature.

Literary critic Sh. Normatova writes about it: "After the epic, one of the most cherished genres was tragedy, ancient tragedy was written only in a poetic way, based on Greek mythology. The drama genre originated in the ancient period of Greek literature. The ancient drama was performed in the open air, the seats were set in a semicircle, the choir stood in the middle, on the stage in front of the stage, and explained the events with his song "[2. 5p]. Apparently, dramatic works in ancient literature were almost written in poetry.

**Analysis:** Probably, this is why the literary critic D. Kuronov said: "Poetic speech is older than the poetic forms of artistic speech, more precisely, in its time it was the only form of artistic speech. In the early stages of the history of national literature, literary works were written in a poetic way... The reason is that the peculiar organization of poetic speech differs sharply from ordinary speech, and therefore emphasizes that the information itself is related to art. After all, poetic speech is a special phenomenon inherent in the art of speech"[3.5p].

The following comments of O. Vlasova also confirm that the genesis of poetic drama goes back to the ancient and Renaissance world literature: past dramas. Therefore, poetic dramas are subject to two main phenomena - the lyrical phenomenon on the outside and the dramatic work on the inside "[4. 4p].

Indeed, if we look at ancient Greek, that is, ancient literature, it is clear that works of the dramatic type were written almost in poetic form. Eschyl's tragedies are among the masterpieces of world literature. His trilogy "Oristea" covers the Trojan War and its aftermath. "The Chained Prometheus" is imbued with a spirit of free thinking. Through the poetic form, the playwright was able to show philosophical observations, the mysterious layers of the human spiritual world in lyrical harmony. The tragedies of Sophocles, based on legends about Oedipus, such as "Oedipus the King", "Oedipus in the Colonnade" and "Antigone" also demonstrate the artistic power of the poetic form. Apparently, poetic dramatic works formed the basis of ancient literature at a time when works of the epic type had not yet been written. Through the poetic form, Greek writers were able to express a wide range of possible events that could be given in the whole novel.

**2. World literature.** The tradition of writing large-volume works of poetry in ancient literature continued in 16th-century English literature as well. In this regard, the works of W. Shakespeare, F. Schiller are noteworthy. In particular, William Shakespeare's dramatic works are written almost in poetic form. The artistic appeal of "Hamlet" and "Othello" is associated with poetic speech. In addition, this poetic form corresponds to the existing laws of weights in world literature. It is known that after Shakespeare, poetic dramas were created in German literature, more precisely, in the works of Friedrich Schiller. His works "Macbeth", "Deceit and Love" are classic examples of dramatic works written in poetry.

In Russian literature, poetic drama played an important role in the works of such classics as A.S. Pushkin, Y. Lermontov. The feature of tradition in Greek dramas was manifested in a peculiar artistic form in the work of the playwright.



Based on this, it can be said that in the works of this genre, based on the lyro-epic image, the problems of life of each epoch became the main theme, reflecting the landscapes of history and period. In terms of a sense of time in the drama, the events portrayed appear before our eyes as events that are happening right now. With this feature, dramatic works differ from other types of works.

**Discussion:** In the twentieth century, this literary tradition was successfully continued by such poets as A.Blok, S.Esenin, M.Tsvetaeva. In Russian literature, the terms "poetic drama" and "lyrical drama" are used as synonyms for "poetic drama", indicating that dramatic works are written in a poetic way. According to O. Jurcheva, the perfect versions of "lyrical dramas" in the XX century were created by A. Blok, N. Gumilyov, M. Tsvetaeva. These works were considered "poetic theater" or "poets' theater" works at that time[10].

A. Arbuzov and A. Volodin were named the "new wave" playwrights of the 1980s in literary criticism [5. 222p]. Apparently, the scientist connects the penetration of the genre into science and its stabilization as a term with the Russian literature of the early twentieth century, and considers such naming of the term as their writing in poetic form. He points out another aspect: the introduction of the term "lyrical drama" in Russian literature is associated with the name of A. Blok [6.222p]. This is scientific evidence that the term began to be used for scientific consumption.

According to T. Vlasova, over a period of time, this genre severed its connection with the theater, became the most complex genre of literature and began to be called "thriller for reading only." The first, in the words of A. Blok, argues that lyricism predominates in genre specimens that "helps to describe more deeply the anguish of the heart without action at all". Second, when he says that "a new genre depicting plot and action in poetic form," the scholar argues that poetic drama is the product of literary evolution between the nineteenth and twentieth centuries, proving that the writing of poems on the genre (excluding remarks) is a sign of genre. Due to these features, in our opinion, the scientist calls poetic drama "the most complex genre of literature." [9]

T. Vlasova emphasized the following aspects of the nature of the genre of poetic drama: 1. In the works of this genre, spiritual problems are posed, not everyday themes. 3. In it the lyrical "I" is the author himself. 3. It is possible to express lyrical experience, rebellious feelings through artistic fabric [7.10p].

Academician Izzat Sultan writes: "The term" lyrical drama "indicates that the work emphasizes the emotional moments in the relationship of the protagonists" [8.263p]. Hence, it focuses on the nature of lyrical drama as an emotional response to a reality inherent in the nature of the genre.

**Conclusion:** Based on the above ideas and views, the genesis of poetic drama in world literature, the sources of origin can be summarized as follows:

**Firstly**, poetic drama originated in the heart of ancient literature. The tragedies of Aeschylus, Sophocles' works based on legends about Oedipus, "Oedipus the King", "Oedipus in the Colonnade" and "Antigone" demonstrate the artistic power of the poetic form.

**Secondly**, through the poetic form, Greek writers were able to express a wide range of possible events that could be given in the whole novel.

**Thirdly**, the tradition of writing large-scale works of poetry in ancient literature continued in Renaissance English literature as well. The artistic appeal of William Shakespeare's dramatic genres was manifested in connection with poetic speech.

**Fourthly**, after W. Shakespeare, Friedrich Schiller, a well-known figure in German literature, wrote "Macbeth" and "Deceit and Love" in poetry. This also shows the evolution of the genre.

**Fifthly**, in Russian literature, poetic drama has a great place in the works of such classics as A.S. Pushkin, Y. Lermontov. In the twentieth century, this literary tradition was successfully continued by such poets as A.Blok, S.Esenin, M.Tsvetaeva.

**Sixthly**, the terms "poetic drama" and "lyrical drama" have emerged in Russian literature as synonyms for "poetic drama", indicating the emergence of a new genre.

**Seventhly**, the specific features of poetic drama as a product of the literary changes of the XIX-XX centuries: the writing of genre samples in poetry (except for the remark); the predominance of lyricism, the basis on which spiritual problems are placed; that the lyrical "I" is the author himself; the ability to express lyrical experience, rebellious emotions through artistic texture; such as the predominance of emotional response to reality.

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UDK: 93-1 / 2 (697.6) / 15/20 /

**INTERPRETATION OF THE CLOSENESS OF THE RAINBOW IN FRENCH AND UZBEK LITERATURE****Khamidova Muborak Hafizovna****PhD student of****Bukhara State University****E-mail: [muborakhafizovna.@gmail.com](mailto:muborakhafizovna@gmail.com)**

**Аннотация.** Мақолада табиий ҳодисаларнинг тури бўлган камалак номини ифодаловчи яқинликлар хусусида француз ва ўзбек тилларида қўлланиши билан боғлиқ айрим лингвопоэтик хусусиятлари кўрсатиб ўтилган. Камалак талқинидаги яқинликлар хусусидаги тил ва бадиий нутқдаги ўрни, келиб чиқиш асослари ва қўлланиш хусусиятларини аниқлаш борасида баъзи фикрлар баён этилган. Камалак табиий ҳодисасининг халқ оғзаки ижоди ва шеърятдаги вазифалари мисоллар ёрдамида таҳлил қилинган.

**Таянч сўзлар:** камалак, шеър, фольклор, тил, нутқ, лингвопоэтика.

**Аннотация.** В статье обсуждаются некоторые лингвопоэтические особенности, связанные с его использованием во французском и узбекском языках в связи с близостью радуги, которая является видом природного явления. Некоторые соображения были сделаны при определении места языка и художественного дискурса, основы его происхождения и особенностей его использования в связи с сходством в интерпретации радуги. На примерах проанализированы функции природного явления радуги в фольклоре и поэзии.

**Ключевые слова:** радуга, поэзия, фольклор, язык, речь, лингвопоэтика.

**Abstract.** The article discusses some linguopoetic features associated with its use in French and Uzbek languages due to the proximity of the rainbow, which is a type of natural phenomenon. Some considerations were made in determining the place of language and artistic discourse, the basis of its origin and the features of its use due to the similarity in the interpretation of the rainbow. Using examples, the functions of the natural phenomenon of the rainbow in folklore and poetry are analyzed.

**Key words:** rainbow, poetry, folklore, language, speech, linguopoetics.

**Introduction:** The rainbow has long attracted the attention of people as one of nature's most beautiful phenomena. Typically, a rainbow-shaped rainbow of red, yellow (orange), carrot, green, blue (sky-blue), ink, and purple appears on the opposite side of the sun shining in the sky after a torrential downpour in the spring appears as a miracle. It was this miraculous nature that led people to deify him, to treat him on the basis of different religious views. People have always been curious to know how a rainbow happens.

**Literature review:** The ancient Greek philosopher Aristotle (Arastu) was one of the first to try to explain the cause of the rainbow. Later, a number of well-known artists wrote wise sayings about him. For example, Jules Renard likens life to a rainbow: "Life is like a rainbow: you need rain and sun to see its colors." (in original: "La vie est comme un arc-en-ciel: il faut de la pluie et du soleil pour en voir les couleurs").[1]

According to Goethe, "If the rainbow lasts a quarter of an hour, we will no longer look at it." So the rainbow is an arc of seven different colors that appears in the sky after a heavy rain. In fact, scientists have determined that its occurrence is caused by the refraction, reflection, and diffraction of sunlight in the sky by raindrops in the atmosphere. But at a time when people did not yet fully understand this reason, they regarded the rainbow as a ring connecting the earth and the sky, giving this natural phenomenon the appearance of a divine phenomenon. However, people were aware of the involvement of rain and sun in the formation of the rainbow. This can be proved by some riddles created about him:

It will rain,  
The window of the sun. [1]  
(Yomg'ir bo'lar shonasi,  
Oftob bo'lar oynasi)

Apparently, in this riddle, the comb of the rainbow is rain, while the sun (sun) is its mirror.

**Analysis:** In Uzbek mythology, the rainbow is expressed in the cult of twins in the form of a pair of arrows and bows, Hasan-Husan. Therefore, in many Turkic languages, including the Uzbek language, the myth of "Hasan-Husan's bow" is used in the sense of a rainbow. [2]

The origin of the mython "Hasan-Husan's bow" is explained in the following plot of the legend. It is said that when the Prophet's daughters, Aunt Fatima and Ali ibn Abu Talib's wife, gave birth to their children, Hasan-Husan, a rainbow appeared in the sky and its radiance fell on the babies.

When a rainbow appears in the sky, people say, "Hasan-Husan's bow has come out." [3] Another reason for this is that sometimes a double rainbow is also observed.

The rainbow comes out not when it is raining slowly, but mainly when it is raining heavily. Interestingly, when the rainbow comes out, the sun shines in the sky. They will be located in opposite positions. For this reason, some people consider the rainbow to be a sign of evil, of someone's death. Because there was a belief among the ancients that the souls of the dead would pass to the afterlife through a rainbow. [4]

Among Uzbeks, it is customary for girls to cut the ends of their hair as they bow their heads over the threshold and let their hair fall over their heads. It is believed to affect hair growth. The fact that the same belief is widespread among the people can be seen in the poem by Sadriddin Salim Bukhari dedicated to Hamal. In it, the lyrical protagonist's sister runs around the field in the pouring rain during the month of pregnancy, saying, "Make my hair long, porter. Let me kiss the ground when I walk," he recalled. Years later, when her sister became a mother, she said to her daughter, "My daughter, let your hair be long, my dear, let the earth kiss you when you walk!" he remembers.

In the poem, the poet quotes the following dialogue of his nephew and sister:

"How long will you be pregnant?"  
Who is Hamal? Do you have legs or arms? "  
"Hamal is a spring. Earth's hair is grass,  
The leaves of the tree melt, my daughter.  
Every time it rains,

It makes the hair your hand touches longer... ”

The poet, meanwhile, describes the rainbow itself as a "hair of sky." In another poem, he says, "A rainbow is adorned with the colors of the buds," and in another, he expresses his feelings of hope and confidence as "a rainbow in my eyes."

In S.S. Bukhari's poem "Xayriyat" (Charity) there are the following lines about the rainbow[5]:

The rainbow shone in seven different colors

It will turn everyone to itself

Charity!

You can't hold a flower's neck,

You can't swallow nightingale tunes!

On your own, you ignorant, scatter colors

You can't go beyond the color of the rainbow!

This shows the poet's thoughts on the uniqueness of the colors of the rainbow. On this basis, the poet is mocking those who present themselves in various false positives. In art, poets and writers use the image of the rainbow in different ways. For example, Denis Diderot points out that whoever wants to write about women must first dip his pen into the rainbow and shake off the dust from the butterfly wings on the line. In original: "Quand on veut écrire sur les femmes, il faut tremper sa plume dans l'arc-en-ciel et secouer sur sa ligne la poussière des ailes du papillon" (Denis Diderot)[6].

As it is said, women like brightness and radiance like a rainbow, exaltation. That is why it is useful to dip a pencil into a rainbow to write on them.

**Discussion:** Silvio Orlando: "When I was a kid, I was very poor, I even saw a rainbow in black and white." (In original: "Lorsque j'étais petit, j'étais tellement pauvre que même l'arc-en-ciel je le voyais en noir et blanc"), while John Vance Cheney said, "In original: "L'ame n'aurait pas d'arc-en-ciel, si les yeux n'avaient pas de larmes"). In French, the rainbow is called "Arc-en ciel". A poem of the same name contains the following lines[7]:

Quand le soleil pleut

Et que la pluie luit,

Le soleil met le feu

A son parapluie.

Il sort d'une étoile

Des pinceaux de poils,

Et de la blancheur

Sa boîte à couleurs.

Puis il effiloche

Un paon fabuleux

Sur le chapeau-cloche

D'une ombrelle bleue.[5]

Translation:

It seems

When the sun rains



Let it rain.  
The sun is shining  
In its umbrella.

It comes out of the star  
Winter brushes,  
And whiteness  
Its a color box.

Then it was embarrassed  
Strange peacock  
In the bell hat  
From the blue umbrella.

The first stanza of the poem explains in an artistic style that the sun rises when it rains and its rays shine in different shades of rain, the second stanza explains that it actually originated from white rays, and the third stanza shows that the peacock was embarrassed by its own colors.

It is noteworthy that the comparison of the rainbow to the peacock is also observed in the poems of Uzbek artists:

Its dreams are a rainbow in the sky,  
A peacock with no wings.

In these verses composed by Sadridin Salim Bukhari, the peacock, who saw the color of the rainbow, expressed its embarrassment and longing[8].

Anne-Marie Oudard's poem "LES SEPT COULEURS DE L'ARC-EN-CIEL", "Rainbow's Euro Colors", states that each color of the rainbow has a different effect on the human body and its senses[10].

In original:                      Je remplirai vos coeurs,  
je remplirai vos vies  
de mille couleurs.  
Je tendrai dans le ciel  
Les sept couleurs de l'arc-en ciel,  
Le rouge pour l'amour,  
L'orangé pour les fleurs,  
Le jaune pour le coeur,  
Le vert pour l'espoir,  
Le bleu indigo pour la mer,  
Le violet du printemps.  
Je remplirai vos coeurs,  
je remplirai vos vies,  
de mille couleurs.  
Je tendrai dans le ciel  
Les sept couleurs de l'arc-en ciel,  
Le rouge pour l'amour,  
L'orangé pour les fleurs,  
Le jaune pour le coeur,

Le vert pour l'espoir,  
Le bleu indigo pour la mer,  
Le violet du printemps.  
Je remplirai vos coeurs,  
Je remplirai vos vies,  
De belles couleurs!

Translation:

I will fill your hearts,  
I will fill your life  
thousand colors.  
I stretch in the sky  
The seven colors of the rainbow,  
Red for love,  
Orange for flowers,  
Yellow for the heart,  
Green for hope,  
Blue Indians for the Sea,  
Spring purple color.  
I will fill your hearts,  
I will fill your life,  
thousand colors.  
I stretch in the sky  
The seven colors of the rainbow,  
Red for love,  
Orange for flowers,  
Yellow for the heart,  
Green for hope,  
Blue Indians for the Sea,  
Spring purple color.  
I will fill your hearts,  
I will fill your life,  
Beautiful colors!

The French poet Eluard Paul (Paul Éluard; real name Eugene Emile Paul Grendel) expressed his optimistic views in a poem entitled "Inner Experiences", which reflected patriotic sentiments, based on the definition of "rainbow colored light." This poem was translated from French into Uzbek by Muradkhan Niyazkhani. [6]

Another French poet, Arthur Rimbaud (Jean Nicolas Arthur Rimbaud), known as one of the brightest representatives of the movement of symbolism in world literature, wrote poems in harmony with the feelings of people in the throes of turbulent life and mental contradictions. In one verse of the poem he refers to the image of a rainbow[9]:

I saw the landscape in antiquity, in bloom  
(O'lkalar ko'rdim antiqa, gul-u chechagiga)  
The eyes are dazzling, the face is human eyes like a tiger.  
(Ko'zlar qamashar, yuzi inson ko'zlari yo'lbars.)

Huge rainbows stretching to infinity  
(Cheksizlikka cho'zilgan ulkan kamalaklari)  
Compared to a reins to which a herd of cattle is tied! [7]  
(Qoramol suruvi bog'langan tizginga qiyos.)

Translated from French into Uzbek by Gulbahor Sattorova, these verses are used to express the colorful aspects of life that are difficult to understand directly.

Maurice Carême, who was awarded the title of "King of Poets" in Paris in 1972, in her poem "Joy" draws attention to the joy with which people welcome the appearance of the rainbow:

The cycle of joy,  
(Quvonch o'tar ko'chadan)  
All through the window.  
(hamma boqar darchadan)  
The sky is full of joy,  
(quvonch tutib falakni)  
It raised the rainbow. [8]  
(ko'tardi kamalakni).

These verses were translated into Uzbek by Nurullah Astana through Russian.

**Conclusion:** In short, the rainbow, a uniquely beautiful phenomenon of nature, is interpreted in French and Uzbek literature in a variety of meanings, such as itself. It is often necessary to point out that there are peculiar affinities in their interpretation.

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UDC: 158.9(565.2)

## ON EXTRALINGUISTIC TIGHTENING OF UZBEK-ENGLISH TEXTS

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**Abstract** – The set of meta-information in the article allows the user to determine its capabilities, the choice of this information should be familiar with the purpose of the study, the requirements of linguists and the ability to add some additional characters to the text, external intellectual tag, first of all secondly, the need to study the specificity of language, the existence of two factors that affect the language: external, that is, non-linguistic, and internal.

**Key words:** parallel corpus, metadata set, external intellectual tag, nonlinear factor, internal factor.

**Аннотация** - Набор метайнформации в статье позволяет пользователю определить ее возможности, выбор этой информации должен быть знаком с целью исследования, требованиями лингвистов и возможностью добавления некоторых дополнительных символов в текст, внешний интеллектуальный тег, в первую очередь во-вторых, необходимость изучения специфики языка, наличие двух факторов, влияющих на язык: внешнего, то есть неязыкового, и внутреннего.

**Ключевые слова:** параллельный корпус, набор метайнформации, внешний интеллектуальный тег, нелинейный фактор, внутренний фактор.

**Аннотация** – Маколада метаахборот мажмуи фойдаланувчига унинг имкониятларини аниқлаб бериши, бу маълумотларни танлашда корпус тузувчиси тадқиқот мақсади, тилшунослар талаби ҳамда матнга у ёки бу қўшимча белгини қўшиш имконияти билан таниш бўлмоғи лозимлиги, ташқи интеллектуал тег, биринчидан, тилнинг ўзаро алоқаси, мавжудлигини аниқлаш; иккинчидан, тилнинг ўзига хос хусусиятини ўрганиш учун кераклиги, тилга таъсир қиладиган иккита: ташқи, яъни нолисоний ҳамда ички омил мавжуд эканлиги ҳақида маълумотлар келтирилган.

**Калит сўзлар:** параллел корпус, метаахборот мажмуи, ташқи интеллектуал тег, нолисоний омил, ички омил.

**I.Introduction:** The layout is divided by experts into two types: linguistic and extralinguistic [1. <http://rykov-cl.narod.ru/c.html>]. Researcher Sh.Hamroeva, based on the opinion of V.P.Zakharov, S.Y.Bogdanova, distinguishes the following types of extralinguistic markings[2]. Hamroeva Sh. - Pp. 72-73.]:

1. A tag (chapter, paragraph, section, etc.) that reflects the specificity of the text format.

2. Text, a tag representing information belonging to its author. Because information about the author can include not only the name, but also information such as age, gender, year of residence. Information about the text, in addition to the title of the text (work), includes the language, year of writing and publication. The availability of such information allows you to perform a detailed search in the database.

**II. Literature review:** Extralinguistic tag or meta-information (Russian: метаданные) - a bibliographic, typological, thematic, sociological description containing external-intellectual information; is a type of tag that combines a formal-structural tag (text, section, chapter, paragraph, sentence), as well as a technical-technological tag (coding, date of processing of the electronic version of the source). The metadata set allows the user to identify its capabilities. In choosing this information, the corpus compiler should be familiar with the purpose of the study, the requirements of linguists, and the possibility of adding this or that additional character to the text.

External intellectual tag, first, to determine the existence of the interaction of language; second, it is necessary to study the specific nature of the language. There are two factors that affect language: external, i.e., nonlinear, and internal. Dj. Sinclair distinguishes three groups of external factors[3. Zakharov V.P., Bogdanova S.Y. - P.36.]:

1. The factor of relevance to the creation of the text by the author.
2. A factor related to the external features of the text.
3. The factor influencing the audience, which leads to the creation of the text.

**III. Analysis:** There are two groups of internal factors - the subject area of the text, the stylistic feature (style, genre). For example, the National Corpus of the Russian Language has the following set of metadata: The first block:

1. Author of the text: name, gender, date of birth (approximate age).
2. Text name.
3. Time and place of registration (can be a specific city or state).
4. Text size: story size at least 5,000 words as a norm for works of art; story size from 5,000 to 15,000 words; the novel has a habit of being more than 15,000 words.

The second block: the meta-description is designed to distinguish 3 main types of text in the corpus - fiction, non-fiction, dramatic works. In particular, the National Corpus of the Russian language provides the following information for a work of art:

- 1) text genre: autobiographical prose, detective, children's literature, historical, criminal literature, adventure, fiction, humor, satire;
- 2) text type: autobiographical prose, anecdote, detective, essay, literary letter, short story, parable, play, story, novel, fairy tale, thriller, epic, essay, etc.;
- 3) text chronotope: approximate time, place of the described event.

In the works of N.V.Buntman, A.A.Zaliznyak, I.M.Zatsman M.G.Kruzhkov E.Y.Loshchilova, D.V.Sichinava there are several important views on the principles of building a corpus parallel to the Russian language[4. Buntman N.V., Zaliznyak A.A., Zatsman I.M., Kruzhkov M.G., Loshilova E.Y., Sichinava D.V. - Pp. 98-110.].

The deployment of parallel corpus to the Russian National Corpus began in 2005; it is now possible to work with 8 bilingual corpus within this corpus. Russian language material, including subcorporations that preserve its translation into English, French, German, Spanish, Italian, Polish, Belarusian, Ukrainian, Bulgarian.



The works of N.V. Buntman, A.A. Zaliznyak, I.M. Zatsman, M.G. Kruzhkov, E.Y. Loshchilova, D.V. Schinava [5. Loiseau S., Sitchinava D. V., Zalizniak A. A., Zatsman I.M. Pp. 100–109.] to develop this case, a special Parallel Corpus technology was created: equipped with the necessary software tools to create the case; created a database of Russian-French verbs (MB); formed Russian-French corpus. The existing database is designed to search for the French equivalent of a Russian verb. The parallel corpus suggests that there are many instances in which the verb in the original language undergoes a grammatical transformation in translation.

The importance of the database in the construction of a parallel corpus and the principles of its construction are closely related to the extralinguistic layout. It is well known that the importance of PC is determined by the study of contrasting grammar. The basic unit of the Russian-French MB is *the lexical-grammatical form or the basic form of LGSh and LGSh*.

The designed MB serves to solve several problems. In particular, the creation of mono-, poly- i hyperequivalence (1); setting up a bilingual lexical, grammatical and lexico-grammatical mono-, polyequivalence search (2); determining the frequency of each type of mono or polyequivalence (3) can be counted [6. Buntman N.V., Zaliznyak A.A., Zatsman I.M., Kruzhkov M.G., Loshilova E.Yu., Sichinava D.V. Pp. 98-110].

Creating and editing monoequivalence in the MB performs the task of filtering the original and the translated fragment on the basis of the book title, translator, LGSh view. The linguist-user can use this function to form monoequivalence in parallel texts. An extralinguistic markup requires just such a set of data.

N.V. Buntman and other researchers have also expressed their views on bilingual search on PC. On the polyequivalence search page, the user can see a set of polyequivalents: this search is also performed through the main query language. In this window, the user has the opportunity to perform a query on the following characters [10]:

- 1) the name of the work in Russian and its translation;
- 2) Russian and French equivalent of the basic form of LGSh;
- 3) original and translated lexeme;
- 4) the searched text in the form of a sequence of characters. The search symbol can be given separately / in combination.

**IV. Discussion:** In the previous part of the work, considering the principles of text selection for the Uzbek-English parallel corpus, we came to the conclusion that the principle of selection of Uzbek works with perfect translation is correct in choosing the text as the material of the PC corpus. When writing extralinguistic commentary on such texts, it is expedient to write the following comments on the original texts in Uzbek and translated texts in English [9].

1. Chapter, paragraph, section, etc. of the Uzbek text format parts are separated, marked, and the same chapter, paragraph, parts of the English translation text are marked and the parts of the text are equated for both languages: the number of parts in the translated text must be the same as the number of parts in the original text. If a paragraph is omitted in the translation, such passages shall be indicated. We pay special attention to the equality of parts of the work (paragraphs) in the process of text selection

for the Uzbek-English parallel corpus. Because it is better for the PC user to observe and study all the parts in parallel in the bilingual text.

2. The next comment on the extralinguistic mark of the text should be the text, a tag representing the information belonging to its author. In the Uzbek part of the Uzbek-English parallel corpus, the information about the author of the work consists of his name, age, sex, year of residence, etc., while in the English part, the same information is given in English. At the same time, information about the translator of the work is attached on the basis of the same parameters.

3. Uzbek and English - in both parts the information about the text consists of comments such as the name of the text (work), language (Uzbek / English), year of writing and publication.

The availability of such information allows a detailed search to be performed simultaneously in both parts of the case. If such a comment is only in the original text and no extralinguistic commentary is given to the translated text, the search will not yield the same result. The user reads text data in only one language. Since the most important feature of the parallel corpus is the ability to observe all the features of the text in both languages, extralinguistic data should be attached in the same way, the texts should be marked on the same principle.

It would be expedient to form a set of extralinguistic markings of the Uzbek-English parallel corpus as follows.

**For the original text:**

1. About the author of the text: name, surname, nickname, gender, date of birth.
2. Text name.
3. Subscription time.
4. Place of registration (state and city are clearly indicated).
5. Text size: how many words the text consists of.

**For the translated text:**

1. About the author of the text: name, surname, nickname, gender, date of birth.
2. Text name.
3. Subscription time.
4. Place of registration (state and city are clearly indicated).
3. Text size: how many words the text consists of.
6. About the text translator: name, surname, nickname, gender, date of birth.
7. Translation time.
8. Place of translation (state and city are clearly indicated).
9. The size of the text in the translation: indicates how many words the translated text consists of.

As can be seen, the number of extralinguistic tags of the translated text is large.

There is also a text genre in both parts of the corpus (autobiographical prose, detective, children's literature, etc.); the text type, the text chronotope (the approximate time, place of the event being described) is displayed.

Extralinguistic resection is closely related to the representativeness of the corpus callosum.

According to G.N. Gochev, the database of the corpus should consist of texts of a humanitarian nature (fiction, journalism, history, philosophy, religion, literature,

linguistics, art, etc.). Analyzing the composition of the Russian-Bulgarian parallel corpus, the scientist gives the following statistics[7. Gochev G.N. - Pp. 38-48.]:

	Source	Percentage of text	Title amount
1	<b>Fiction</b>	<b>85,31</b>	<b>30</b>
1.1.	Novel	69,50	13
1.2.	Short story	11,13	5
1.3.	Story	3,00	11
1.4.	Thriller	1,68	1
2	<b>Journalism</b>	<b>14,69</b>	<b>11</b>
2.1.	memoir	13,75	2
2.2.	Document	0,94	9

The scholar suggests the introduction of literature of different periods and shows the proportions of the period in the Russian-Bulgarian corpus as follows[8]:

	Period	Percentage of text	Title amount
1	Works of the XIX century	<b>16,98</b>	<b>12</b>
2	Works of the XX century (before 1917)	-	-
3	Soviet literature (1917-1991)	63,49	25
4	Post-Soviet literature	19,53	4

**V.Conclusion:** As can be seen from the above tables, ensuring genre diversity and chronological diversity of the source in a parallel corpus is also an important factor. Based on the experiments, it can be concluded that attention should be paid to the representativeness of the parallel corpus. When choosing a text for the Uzbek-English parallel corpus, it is advisable to cover not only texts of one genre, subject and direction, but also texts of different periods, themes, genres, to ensure the representativeness of the corpus.

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UDK: 92-1 / 2 (585.1) / 19/20 /

## STAGES OF THE DEVELOPMENT PROCESS OF THE LEXICO- CONCEPTUAL FIELD OF ETHICS

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**Abstract** – In ensuring the cultural and spiritual independence of our country, education on the basis of oriental manners, ethics, national values, customs and traditions is of great importance. The market economy brings to our republic foreign investments, new technologies, modern management methods, as well as their culture, way of life, worldview. As a society develops, so does its moral system. In this sense, a person "becomes socialized if he is morally protected according to the needs of society."

**Key words:** ethics, ethics, etiquette, behavior, ethics, society, personality, ideal, social, biological ideology, goodness, evil, envy, environmental ethics.

**Аннотация** – В обеспечении культурной и духовной независимости нашей страны большое значение имеет образование на основе восточных нравов, этики, национальных ценностей, обычаев и традиций. Рыночная экономика приносит в нашу республику иностранные инвестиции, новые технологии, современные методы управления, а также их культуру, образ жизни и мировоззрение. По мере развития общества развивается его моральная система. В этом смысле человек

«социализируется, если он морально защищен в соответствии с потребностями общества».

**Ключевые слова:** этика, этика, этикет, поведение, этика, общество, личность, идеал, социальная, биологическая идеология, добро, зло, зависть, экологическая этика.

**Annotatsiya** – Davlatimiz madaniy –ma’naviy mustaqilligini ta’minlashda sharqona odob, axloq, milliy qadriyatlar, urf – odat va an’analarimiz asosida tarbiyalash nihoyatda katta ahamiyat kasb etadi. Bozor iqtisodiyoti jumhuriyatimizga xorijiy mamlakatlarning sarmoyasi, yangi texnologiyasi, zamonaviy boshqaruv usullari bilan bir qatorda ularning madaniyati, turmush tarzi, dunyoqarashi kabilarni ham olib kelmoqda. Jamiyat rivojlanib borgan sari uning axloqiy tizimi ham o’zgarishlarga ehtiyoj sezib boradi. Shu manoda shaxs «jamiyat ehtiyojlariga ko’ra axloqiy jihatdan saqlanib borsa, u ijtimoiylashadi».

**Kalit so’zlar:** axloqshunoslik, etika, odob, xulq, axloq, jamiyat, shaxs, ideal, ishtimoiy, biologik mafkura, ezgulik, yovuzlik, xasad, ekologik axloqshunoslik.

**I.Introduction:** It is no secret that at the current stage of development, there are attempts by some forces to disrupt the spiritual and moral environment of our society. There is a huge task to provide the consciousness, psyche and mood of the people, especially the youth, with the idea of national independence, to raise the moral level of the youth and to theoretically substantiate the education of the modern man. These tasks can only be accomplished on the basis of new approaches to ethics. One of the new approaches is to pay more attention to the national idea and the ideology of independence in ethics. "Speaking of the national idea and the ideology of independence," said the first President I.A.Karimov, "we have a very comprehensive, complex, multifaceted, clear and perfectly expressive in the history of mankind, a complete example of which has not yet been created. I think we have to imagine. These notions serve to gain a deeper understanding of the meaning of such lofty ideals as the prosperity of the Motherland, the peace of the country, and the well-being of the people. "[1] Ideology, like morality, was an inner force that stood side by side with morality and encouraged man to spiritual flights. This means that the role of ethics in the socio-economic and spiritual life of a society is invaluable.

**II.Literature review:** Today, ethics plays an important role in solving global problems. One of these problems is the creation of a moral environment - the "etosphere". At the end of the 19th and the beginning of the 20th centuries, as a result of scientific and technological progress, the scientific and technological revolution of which it was the highest stage, the noosphere (the shell of the mind) - the technical environment - was created within the biosphere. Today, technology has become a living environment for people. Today, man has begun to influence the entire planet on which he lives. Man first appeared as a giant geological force. Human thinking has become a major cause of change in the biosphere. The great Russian scientist, academician V.N.Vernadsky was the inventor of the noosphere. It is not uncommon for these discoveries to have both positive and negative consequences. The discovery of atomic, hydrogen, neutron bombs, and the creation of nuclei are such negative phenomena.



**III. Analysis:** By the Middle Ages, Christianity had subjugated the socio-political and cultural life of the peoples of Europe to the church, and church control had been established in all areas. The role of the scholars who lived in the Muslim East in solving the problems posed by the classical ethics of the ancient world was enormous. Pharoah focuses on virtue, life and death. He strongly condemns the woman's indulgence in ornaments. Ethics was developed in the teachings of the medieval thinker Abu Bakr al-Razi (865-925). His moral views were reflected in his books such as "Taste", "Philosophical Lifestyle", "Spiritual Medicine", and "Signs of Happiness and Prosperity"[1]. He analyzed the relationship between goodness and badness in man. Ar-Razi's moral views are, in scientific language, based on hedonism (the priority of pleasure) and eudemonism (the priority of happiness). Pleasure is getting rid of suffering. He explains man as a social being.

Ibn Sina (980-1037) was a student of Farabi, whose moral views were published in the Treatise on Moral Science, the Treatise on Duty, the Treatise on the Purification of the Self, and the Book on Justice. , Such as "Events in Residences." He says that ethics is an integral part of philosophy, it is formed from the practical and theoretical part. His works provide a philosophical understanding of chastity, generosity, courage, justice, contentment, determination, loyalty, modesty, and humility. It describes the evils of theft, deception, corruption, hatred, jealousy, enmity, slander, reluctance, arrogance, and ignorance. In "The Treatise of Love", Ibn Sina explains the problem of the perfect man. According to him, love for the Creator leads a person to perfection. He says that love for Allah is realized not only in secularism, but also in the life of a real human being. The Kurdish (Spanish) thinker Ibn Rushid (1126-1199) was a great scholar who made a great contribution to the development of ethics. He says that good and evil exist in their own right. He also pays close attention to the issue of free will. In his view, in an ideal state, he suggested that citizens use two different methods to assimilate and develop qualities. The first is the method of persuasion, the second is the method of coercion[2]. The first is to educate the general public. To do this, use scientific and philosophical discourse. The compulsory method is done by fighting external enemies. This equates the method with jihad. In his view, jihad is not a constant religious war waged against infidels.

He says peace is always needed, and wars need to be allowed from time to time. Understanding jihad only from the point of view of the requirements of the Shari'ah emphasizes that it has caused many disasters to Muslims. The attitude of Rabia al-Adawiya (713-801), one of the first Sufis, to God is noteworthy. He calls this relationship "Love" and believes in a Creator. Love of Allah is not a means to Paradise, that is, Paradise is not a goal, the goal is Allah and His love. This is where the idea of sharia and sect goes. While the Shari'ah is the first, external-legal stage that expresses the essence of Islam, the Tariqah is its internal moral and high-level manifestation. The role of Hujjat ul-Islam Imam Ghazzali (1058-1111) in mystical ethics is unique[3]. His moral views are reflected in his four-volume book, Ikhyon Ulum-ad Din. In it, risk (reliance on God in everything) is interpreted as a belief in the oneness of God, and is analyzed in relation to issues such as love, freedom of will, destiny, and intention. He calls love the product of knowing. At the heart of love is love for God, that is, man's relationship to himself and to the environment is realized through love, all of which are

indirect manifestations of love for God. His views on dual free will are interpreted as an inevitable event of fate. In this case, knowledge comes first, and will is subject to knowledge. Imam al-Ghazali addresses the issue of intention, describing it as a quality of knowledge and action[4]. Knowledge precedes intention, it is the root and condition of intention. Every chosen action is realized through three things - knowledge, will and ability. Because man does not act without knowing it - whether he wants to or not - so he has to make a choice. One of the great representatives of mystical ethics is our great compatriot Sheikh Aziziddin Nasafy. (Half of the 13th century lived in the early 14th century). Our Nasaf ancestor, who described moral problems in his works such as *Zubdat ul-Haqayiq* (The Cream of Truths) and *The Perfect Man*, follows in the footsteps of Aristotle and thinks about the perfect man. According to him, a perfect man, first of all, has a high morality: his task on earth is to decide honesty and truthfulness, to get rid of bad customs, to introduce good rules that lead to goodness, to call people to God[5]. And to reach that level, one has to be self-aware. He says that a person who does not understand himself will die without realizing it. In order to understand oneself, one needs good words, good deeds, good behavior, and enlightened deeds. Perfection belongs to the great name of man, and man attains it step by step, but these levels do not require absolute religiosity, but must be pure in worldly life as well.

**IV. Discussion:** Medieval European philosophy and ethics focused on Christianity and the church. Ethics is concerned with the rational generalization of Christianity. The Church's claim is that God is the creator of the universe, the essence that gives it life. Man is a sinner, he can be saved from sins only with the help of God. (Jesus - man's union with God can only be achieved through him). The greatest representative of medieval European ethics was Aurelius Augustine - the divine Augustine (354-430 North Africa)[6], a Christian theologian, philosopher, and an influential representative of patriarchy. He defended patriarchy in his works *Tazarru* and *Kindness and Freedom of Will*. His ethics focuses on religion, especially Christianity. Adhering to the principle, "Without religious faith there is no knowledge, there is no truth," he promotes the belief that God is the source of all beauty and the highest beauty[7]. The will of God is goodness, grace, the only supreme blessing. Everything, because it is from God, is good, whatever it is, everything is good: existence is an orderly stage of values.

The most important difference in being is the difference between God and the universe, the Creator, and the creation, the only difference being the basis of morality. It is necessary to distinguish two different attitudes, to strive for taste and benefit, pleasure is the object of use of all that is left of God alone. God created man, Adam, free and without sin. It determines the direction of free will. It is a sin to disobey God. Italian ethicist Niccolo Machiavelli (1469-1527)[8]. His *Ruler* (1513) elaborates on his concepts of generosity, thrift, compassion and cruelty, love and hate. Analyzes the brutal activities and policies of their rulers[9]. He says the ruler should bring fear to his citizens, not more love. In Chapter XVIII of the *Ruler*, Machivelli states: "It is necessary to know that there are two ways to fight the enemy: one is the way of the law, and the other is the use of force. The first is human and the second is predatory. But because the former does not work, you often have to resort to the latter[10]. The implication is that both the ruler and the man must embody the nature of the beast. "

Among the beasts, the ruler must act in two ways: one is the lion, the other is the fox. The ruler of a new state must be demanding and strict, in order to create a new nation-state, he must analyze the ruler's morals and show what he should pay attention to. Such positive views showed the need for a emerging bourgeois state in Italy. Machiavelli explains concepts such as freedom, free Italy, free society, freedom of the individual, freedom of action from a scientific point of view in philosophical ethics. He showed what the moral qualities of a head of state should be.

**V.Conclusion:** A person's moral life is closely connected with his moral upbringing. After all, moral education is one of the continuous processes that ensure the development of a person as a person. In it, the individual realizes moral values, stabilizes moral qualities, learns to live according to moral principles and norms. Moral education has sought answers to two important questions throughout human history: one is how to live, and the other is what to do and what not to do. The process of seeking answers to these questions is a practical form of moral education. It should also be noted that the materialist view that morality can only come into being through moral education has been prevalent for many years. It is true that moral education is very important. But morality is a divine blessing bestowed on man as the most important of his human attributes. We cultivate this spiritual blessing through moral education.

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**UDC: 82.0-82-21,**

### **ISSUES OF PARALLELISM BETWEEN THE CREATIVE PERSONALITY AND THE LITERARY HERO**

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**Аннотация:** Мақолада адабиётшуносликнинг долзарб муаммоларидан бўлган ижодкор шахс ва адабий қаҳрамон муносабатлари масалалари талқин қилинган. Ижодкор шахс бадиий ҳақиқатни айнан қаҳрамон орқали очиб беради, чунки адабий қаҳрамон бадиий асар марказида туради. Мақолада ижодкор шахс билан қаҳрамон параллелизми назарий жиҳатдан ўрганилган. Шунингдек ижодкор шахс билан қаҳрамон масаласининг инглиз ва ўзбек асарларидаги муштараклик ва фарқли жиҳатлари очиб берилган.

**Калит сўзлар :** ижодкор шахс, адабий қаҳрамон, биографик метод, муаллиф шахсияти, бадиий ҳақиқат, автобиографик роман, индивидуаллик.

**Аннотация:** В статье рассматриваются вопросы взаимоотношений творческой личности и литературного героя, что является одной из актуальных проблем литературной критики. Творческая личность раскрывает художественную правду именно через главного героя, потому что литературный главный герой находится в центре произведения искусства. В статье теоретически исследуется параллелизм главного героя и творческой личности. Выявлены сходства и различия между творческой личностью и героем английских и узбекских произведений.

**Ключевые слова:** творческая личность, литературный герой, биографический метод, авторская личность, художественная реальность, автобиографический роман, индивидуальность.

**Abstract:** The article examines the relationship between a creative personality and a literary hero, which is one of the topical problems of literary criticism. The creative person reveals the artistic truth precisely through the protagonist, because the literary protagonist is at the center of the art work. The article theoretically explores the parallelism of the protagonist and the creative personality. The similarities and differences between the creative personality and the hero of English and Uzbek works are revealed.

**Key words:** creative personality, literary hero, biographical method, author's personality, artistic reality, autobiographical novel, individuality.

**Introduction:** Personal worldview plays an important role in creating an art work that expresses the realities of life. Self-interpretation of life is characteristic of every creative person. He competently perceives and describes the events taking place around him, the internal problems of life, the psyche of people. The deeper the author's gaze, the brighter the events unfold before the eyes of the reader.

A writer is not a robot or a computer that performs various propaganda and complex actions based on a pre-designed program. He is an independent creative person in the literary process. Regular observation of life, constant research on the path of creation, movement forward - all this is the result of hard work, worldview, analysis and mental activity of a creative person.

The creative way, chosen by the writer himself is a natural and necessary way of artistic comprehension, which will serve as a model for everyone who will not violate the general laws of the aesthetic development of the world. The "personality" of the writer, his expression is not only a peculiar view of life, its aesthetic development, but



also a definite attitude towards it. These are also ideas, artistic concepts that make up an integral part of literary works.

The writer seeks to explore the functions of artistic anthropology (aspects of the human aspect in a literary work) in posing the problem of a creative personality. There is the term “personality” in the sciences of philosophy and psychology and this term refers to qualities that are unique to a person. Accordingly, the definition of “individual” is interpreted as “personality” inherent in a particular person, differing in the characteristics of others. Therefore, the concepts of “individuality” and “personality” although different words, seem to be very synonymous.

**Literature Review:** The study of the creative personality of the writer as the most important historical and literary problem is reflected in the literary and critical works of V.G. Belinsky, as well as in the works of A.A. Grigoriev, D. Pisarev, A. Dobrolyubov, A. Druzhinin, N. He was widely interpreted in the works of a number of other Russian scientists, such as Chernyshevsky. Although the concept of “the creative personality of a writer” was not very common in the scientific work of literary critics in the early nineteenth and mid-twentieth centuries, any aspect that reflected the uniqueness of the personality of the writer has always been the focus of literary scholars. This aspect includes the artistic worldview and its features, the interdependence of artistic and psychological motives, the presence of key features that reflect the artistic superiority of the writer's creative activity.[10]

In Uzbek literary criticism many researchs were carried out on such issues as the creative personality, creative psychology, the creative laboratory, the author's "I" and the relationship of the literary hero. This issue has been comprehensively studied in scientific works and other works of such literary scholars as M. Kushjanov,[7] N. Karimov[3], S. Mirvaliev[8], A. Rasulov[9], D. Kuronov[6], Kh. Boltaboev [1], B. Karimov [5].

**Research Methodology:** Compliance with certain rules in the creation of art works lasted until the XVII-XVIII centuries. Since the days of Romanticism, the structure of the work has been changed by some French literary critics. In particular, the French writer Victor Hugo in his views emphasizes the need to study a work of art in connection with the personality of the artist.

It leads to the appearance of the biographical method. The study of the biographical method in the works is associated with the French critic Charles Augustin Sainte-Beuve (1804-1869) [11]. His biographical method, interpreting literature as a sequential evolutionary process, laid the foundation for the development and improvement of literary criticism in European countries. The author uses a biographical method to create the main character of the work. As the biographical method is a way of studying the work of a writer as an expression of his life experience. Therefore, it is natural that the writer's inner world, character, psyche, mood, habits, lifestyle, and so on are reflected in his works.

This method is covered in many works of Uzbek literary critics. In particular, the famous literary critic Bakhodir Karimov, in his collection of literary and scientific articles “Introduction to Psychology”, describes the biographical method as follows: “The biographical method is based on a couple of writers and works of art.



He pays serious attention to the artist's personal life, environment, mental and psychological state, personal interests, the inspiring factors that prompted him to write the work, the artist's laboratories and a number of similar historical and individual problems.[4] During the expression of identity in the work of the original artist, his life convictions, socio-philosophical views are manifested in the artistic hero. Therefore, in the study of a creative person, an important role is played, first of all, by such factors as his nationality, family, parents, social status, hereditary characteristics and family attitudes, beliefs. But the author's mental experience is not always commensurate with the events taking place around him. He also said, "A great writer can have a great biography." Sometimes it's the other way around. Gogol, A. Biographies of Ostrovsky, Chekhov and many other famous writers are distinguished by an abundance of descriptions of external events. In works of art, the reality of life cannot be felt without an individual view of the artist's world.

Everything is illuminated by the peculiarities of his thinking, his creative style. The clearer the view of the writer, the deeper he delves into the essence of things, the more attractive his artistic generalizations, his creative discoveries. The brighter the artist's creative personality, the higher his contribution to art. The role of biographical factors in the study of a creative personality is important. The founder of the biographical method Sainte-Beuve said: "Any kind of work is a speaking person, and this person cannot be understood in isolation from the work" or "... any creativity must be studied with the personality of the author in mind"[11]. Naturally, the artist's sufferings and experiences are reflected in his works. de Gourmont, I.F. Annensky, Yu.I. Eichenwald studied the biographical method and created scientific works on it.

**Analysis and Results:** The environment in which the artist lives, the guiding principles of the period, the sources from which he feeds, the formation of literary and aesthetic views are the main criteria for the manifestation of the "I" in creativity. In the concept of creative artistic aesthetics, we can observe that the harmony of the creative "I" and the human "I" is reflected in many works of art. At the same time, biographical factors are clearly visible in the interpretation of the heroes of a work of art. If there is a spiritual, socio-biographical, spiritual and educational connection between the personality of the writer and the heroes of the novel, then it is obvious that the creative person has brought the events of his personal life into the plot of the work.

The works of another famous American writer Jack London were initially rejected by the editors, and only after several attempts were they published. Life turned upside down, and the editors themselves asked the writer to publish their work in their magazines. That is why Jack London was considered the most valuable writer of American literature. These events are reflected in the author's autobiographical novel "Martin Eden". A true writer with a clear creative personality strives (and therefore has the "right") to accurately include the traces of his personal life in the work of art he creates. His life and personality are dedicated to artistic creativity and popularity[12].

Many works of the English writer Charles Dickens, devoted to the problem of children, are based on the fact that his childhood passed in difficult conditions, and he recalls those times with sad memories. According to the Russian and Bulgarian literary critic P.M. Bitsilli, in a true study of a work of art "there can be only one way to reduce it in accordance with the artist's inner experience" [2]. Sometimes, if the reader does

not know the life of the author, he will not understand, hear, see or feel some of the characters in his works, and it will be difficult for the reader to recognize what the author means, the world he wants to reflect in the work.

There appeared the world famous works “Jane Eyre” and “Agnes Gray” by sisters of British realist criticism writers Bronte, who spent their childhood in a boarding school and then served as governor. There are so many examples of this that the depiction of events that took place in the eyes of the author gives the work a bright tone. It is obvious that the author takes a theme, idea plot from nature in his work, defines characters, selects materials from life based on his worldview, remakes, formalizes them.

From the history of Uzbek literature “Childhood” by Oybek, “Tales from the Past” by Abdulla Kakhhor, “Naughty boy” by Gafur Gulam, “Lost and Found” by “Sarob” Said Akhmad and other works from prison life, “World Affairs” by Utkir Khoshimov In addition to harmonization the main characters, the participation of the author is also present, at the same time we see a vivid expression of the image of the period.

**Conclusion:** In the world literature, the study of the state of creative biography in relation to creativity is widely developed. Factors such as nationality, family, parents, social status, hereditary characteristics and family attitudes, beliefs play an important role in the study of a creative personality.

1. The artist approaches the image based on his temperament, clientele, character, nationality, aesthetic taste.

2. It is clear that the more diverse and integral a creative person is, the more complex images it creates.

In addition, the attitude of the entire independent person to life, society, the way of perception, rebellion against the politics of the time is different, and the main character is dominated by aspects that have left the character of the author.

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UDC: 81.39

## LINGUCULTUROLOGICAL RESEARCH DIRECTIONS AND INTERPRETATION OF LANGUAGE AND CULTURE IN MODERN LINGUISTICS

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**Annotatsiya.** Mazkur maqolada til va madaniyatning oʻzaro bogʻliqligi va taʼsiri natijasida yuzaga kelgan ilmiy bilimning kompleks majmuasi - lingvokulturologik yoʻnalishning rivojlanishi va til va madaniyatning hozirgi zamon tilshunosligidagi talqini haqida soʻz borgan. Shu bilan birga lingvokulturologik yoʻnalish rivojlanishining sabablari, lingvokulturologiyaga yoʻnaltirilgan tilshunoslik nuqtai nazaridan borliqning til belgilari shaklidagi madaniy jihatdan muhim xossa ekanligi va tabiatini tushuntirishga bir qator muvaffaqiyatli urinishlar qilgan tilshunos olimlarning fikrlari, “madaniyat” tushunchasi xususida batafsil toʻxtalgan mulohazalar tadqiq qilingan.

**Аннотация.** Эта статья посвящена развитию комплекса научных знаний, возникающих в результате взаимозависимости и влияния языка и культуры, - развитию лингвокультурологии и интерпретации языка и культуры в современной лингвистике. В то же время развитию лингвокультурологии. Взгляды лингвистов, которые предприняли ряд успешных попыток объяснить природу и существование культурно важной особенности в форме лингвистических символов с точки зрения лингвистики, которая фокусируется на лингвокультурологии, были подробно изучены.

**Abstract.** This article deals with the development of the complex of scientific knowledge resulting from the interdependence and influence of language and culture - the direction of linguoculturology and the interpretation of language and culture in modern linguistics. At the same time, the development of linguoculturology The views of linguists who have made a number of successful attempts to explain the nature and existence of a culturally important feature in the form of linguistic symbols from the point of view of linguistics, which focuses on linguoculturology, have been studied in detail.

**Kalit soʻzlar:** til, madaniyat, tilshunoslik, dunyo manzarasi, axborot, semantika, muloqot, lingvokulturologiya, tafakkur.

**Ключевые слова:** язык, культура, лингвистика, мировоззрение, информация, семантика, общение, лингвокультурология, мышление.

**Key words:** language, culture, linguistics, worldview, information, semantics, communication, linguoculturology, thinking.

**Introduction:** Linguoculturology is a complex set of scientific knowledge that has emerged as a result of the interdependence and influence of language and culture - is currently undergoing development. [4,p.350.] This is explained by a number of reasons.

1. The rapid globalization of world problems, the need to anticipate situations that may lead to intercultural misunderstandings, the cultural values underlying communicative activities, taking into account the common and specific aspects of the behavior and dialogue of different peoples in solving various problems. the need to identify and understand their exact nature.

2. Assimilation by linguists of the results studied by the representatives of the objective integrative tendency of the development of social sciences, the direction of the intersection of sciences (psychology, sociology, ethnography, culturology, political science, etc.).

3. The practical side of linguistic knowledge, tools aimed at understanding the experience of the community, encoded in all the rich meanings of words, phraseological units, mass texts, official etiquette situations, and so on.

**Literature review:** According to V.I.Karasik, the emergence of linguistics in linguoculturology is explained by the inevitable problem of what language is an integral part of. [4] As a multifaceted natural product, language is the most common phenomenon of existence. Language is an important means of communication, it is an component of communicative activity: an important component of the creation of the world, the analysis of information as a means of influencing the way of providing information and managing interpersonal relationships, directing people to this or that action, the recording of social relations, language as an important custodian of the community experience is a key component of culture.

Linguoculturology is essentially related to knowledge of culture and or knowledge of language, but according to V.I.Karasik, it is correct to consider this field of knowledge, which is interrelated in relation to language and culture, as a complex of two categories of sciences. It is not valid. [4,p.350]

From the point of view of linguistics, focused on linguoculturology, a number of successful attempts have been made to explain the culturally important nature and nature of existence in the form of linguistic signs. In this sense, V.I. Karasik pays special attention to the study of linguistics, in which he primarily refers to the famous work of E.M.Vereshagin and V.G. Kostomarov ("Язык и культура" М., 1973). When studying language as an organic part of human existence in the social and natural environment, linguists rely on the thesis that the linguistic-cultural interpretation of language is the study of that language by comparing it with the mother tongue or another foreign language. Therefore, as a unit of research, the lacunae, that is, the "minus-facts" of reality that have no meaning, belong objectively only to a particular ethnocultural community (names of clothing, appliances, food, customs, etc.). it turns out that they are comparable to another language in the lexical system of one language, and, of course, require an adequate understanding of additional information about a particular folk culture.

The development of linguoculturology, according to V.T. Klovov, is based on the desire to understand the phenomenon of culture as a specific form of human and social existence. At the same time, the author emphasizes the need to think scientifically about the facts that have hitherto acquired a philosophical character. The scientific approach is reflected in the understanding of culture as a semiotic system, which, on



the one hand, contains a certain amount of information useful to society, on the other hand - as a means of finding information and meeting society's needs for it.

The directions of linguocultural research in the context of the relationship between the described language and culture are as follows.

The author connects **the first** direction with the study of socially useful information, which is recorded in the language as a semiotic code. It is reflected in research on linguistic semantics and aims to identify linguistic methods developed by man to understand the world. This course studies the meanings of lexical symbols, grammatical categories, lexical and grammatical structures. Linguoculturologically, it is becoming more and more interesting to study the signifiable meanings of the elements of conceptual structures that classify the objects of the world in relation to the ideas that have emerged in a particular culture, as well as the grammatical essence of the most general categories of concepts understood in different cultures. .

**The second** direction is related to the nomination of language, that is, the ability of language to record a person's knowledge of the world using language symbols. These symbols are used specifically to denote objects and concepts developed by society related to those objects. This area is related, in particular, to the study of world knowledge and the use of new methods of other linguistic features (proof of linguistic signs, derivation, word structure, word acquisition, etc.). These are questions of the internal form of the word. Linguoculturologically, the study of associations and analogies underlying the formation of language signs in metaphorical and other ways is noteworthy.

**The third** area is the study of how cultural information is collected and transmitted using language, that is, semiotic code. Here it is important to determine how the main linguistic paradigms, i.e., lexical-semantic (in the field of lexical forms) and functional-semantic (in the field of grammatical categories) structures, are constructed.

**The fourth** direction is closely related to the structure and functioning of the speech system. Additional information about the objects of reality of language speakers in the field of linguoculturology. great attention is paid to background knowledge consisting of information. This information indicates a certain level of cultural potential of the speakers. Recently, such lexical units associated with certain cultural characteristics have become more important. It is also interesting to study the words that are becoming a cultural symbol in speech. In other words, it is about the study of language symbols, reinforced by another semiotic system - a system of cultural symbols created by culture as an auxiliary means of collecting, recording and conveying socially useful information.

**The fifth** direction is related to the study of the features of recording socially useful information in the speech system. According to V.T.Klovov, for modern linguoculturology, the problems of speech genres are to record the laws of construction of speech works and to fill it with certain material based on the theme and conditions of expression. Here the issues of speech behavior of the participants of the dialogue, the recording by the participants of the dialogue of the part of the cultural information related to their behavior, knowledge and rules of intensity play an important role. In other words, in this area, linguoculturology studies the creation of text, the behavior of text creators and consumers.



**The sixth** direction is related to the delivery of cultural information in society. Lingvoculturology is especially interested in the traditional methods of conveying cultural information. The etiquette of oral and written traditions conveys a huge amount of cultural information related to the construction of society and the rules of social life. Here, the speech standards of conversation (introduction, support and termination of conversation), address, encouragement, prohibition, ephemerality and other forms are separate forms of transmission of cultural information. Modern linguoculturology pays special attention to the peculiarities of modern communication: film and television, press, advertising, computer technology, graffiti.

**The seventh** direction concerns the volume of cultural information embodied in the language as an idiom. This implies that culturally separate social structures become ethnos. Within them, a unique national landscape of the world is formed, the language of this nation gathers information about this landscape, that is, reflects and strengthens information, abstract concepts, etc., reinforced by the historical experience of the people. This experience stems from the specific living conditions of this society, its way of life, work, worldview, social relations. This organizational ability of language is largely reflected in the specific ethno-national semantics. In this case, lingvoculturology is of great interest in the content of the so-called ethno-edema, that is, the characters that are emotionally rich and have the characteristics of emotional customs. Among them are the forms of speech etiquette, special national color appeals, names of colors, and so on.

**The eighth** direction is related to the recording of cultural information in ethnic languages. This implies that such information is reinforced not in the language as a whole, but in the minor languages within it. So, we are talking about the structure of the ethnic language, which reflects the cultural structure of the nation. It is noted that each individual social group seeks to distinguish and oppose itself to other groups in this society. Linguoculturological research in this area includes professional jargon, dialects and national variants of language, the formation and functioning of dialects, as well as the creation of a national language, its international-conversational and literary form.

**The ninth** direction concerns the issues of storage and transmission of cultural information through idioms. This is especially true of the validity of the idiom. According to the author, in a given society, the simultaneous storage and transmission of cultural information through several languages and several languages is of particular importance. This implies that society exists within a communicative environment consisting of a system of different social groups and idioms. The general interconnectedness of these idioms creates a unique linguocultural situation in which cultural information is ultimately stored and transmitted.

**Research methodology:** This study is a qualitative research which is based on the synthetic and analytic analysis. There are some methods of investigation used in this article such as linguistic description, sociolinguistic analysis, classification theory.

The methodology presented by V.T.Klovov is based on a semiotic approach to understanding the essence of language and culture. The relationship between language and culture is a very complex issue that requires some detailed consideration.

**Analysis and results:** This study analyzes different perspectives on the interpretation of language and culture in modern linguistics. When talking about the relationship between language and culture, it is necessary to dwell on the concept of "culture". There are many attempts to interpret this concept. The interpretation of language and culture in modern linguistics is different.

For example, G.V. Yelizarova includes the concept of "culture" in the list of axiomatic concepts that seem intuitively transparent. However, it is very difficult to define such a complex concept. There are also definitions of culture that seek to cover all aspects of this concept without dwelling on one aspect, such as "Culture is how we live here" [13,p.451]. The initial approach to the definition of culture is based on the idea that culture is a homogeneous state inherent in all societies. Differences in society are interpreted not as differences in their essence and content, but as differences in the level of cultural development. Progress from savagery to civilization has served as a measure. It is believed that the more features of a society under its control, the more culturally developed it is. We find in the works of E. Taylor the clearest expression of such an approach to the understanding of culture. Its most common definition of culture describes culture as a holistic phenomenon that includes knowledge, beliefs, art, ethics, laws, customs, and any other traits and habits that a person acquires as a member of society. . But it is difficult to agree with such a view: civilization and culture are very different concepts. It is not possible to evaluate one situation by another, because both of these concepts apply to cases with different meanings.

At the end of the XIX century, with the beginning of F. Boas' anthropological research, the term "culture" began to be applied to different societies. Such a modification of attitudes toward culture is very important in terms of how important language becomes. From then on, language and culture are considered inextricably linked.

A. Vezhbitskaya gives a particularly effective definition of culture proposed by Clifford Gerts. It says that culture is a historically formed model of the essences embodied in symbols. It is a system of inherited perceptions through which people communicate with each other, and their knowledge of life and the rules of life are recorded and developed on the basis of these perceptions. [2,p.380]

E. Sepir described culture as something that is the basis for the functioning and thinking of this society. [10,p.400]

The content and structure of culture are interpreted differently depending on the components involved, the objectives of the study, and the schools to which researchers in different fields of science and culture belong.

The social approach to the definition of culture is based on the fact that this situation is viewed in a completely different way from the biological and physiological aspects of nature, not limited to the individual, but specific to a group of people with whom he communicates.

The cognitive approach to the definition of culture is that culture can be considered in terms of intellectual realities, structures, and processes as it is mastered by the individual. Such an approach to the concept of culture pays special attention to culture as a process of knowledge and cognition and is called cognitive (V. Gudenaf).

The semiotic approach is based on the understanding of culture, first of all, as a system of signs that can be used as a means of communication of world perception (K. Levi-Strauss). However, none of these definitions can be considered complete, as they reveal only one aspect of the multifaceted aspects of culture, which are limited to an "approach" to culture and do not consider it as a whole. M.K.Mamardashvili and A.M.Pyatigorsky note that "culture is a phenomenon that introduces the automation of objectively oriented thinking." All cultural researchers recognize the special role of language in this complex situation structure, regardless of which specific scientific school it belongs to. E. Sepir writes: "There is no doubt that language plays an important role in the accumulation of culture and its historical heritage. [10] This applies equally to the highest levels of culture and its simplest forms. In the simplest society, a large part of the cultural fund is preserved in the form of a more or less precisely defined language. The use of the term "simplest culture" may be questionable. In our opinion, there are different cultures, but there are no "simplest" or "developed" cultures. According to Z.K.Tarlanov, "language is not a simple form and a simple means of communication, it is a completely independent world, and although its laws and rules are inherently expressed through language, the social psychology of language owners and their It is inextricably linked with the type and composition of the culture it creates. Ethnoculture does not exist without an ethnic language, or even if it exists, it is unreliable, because the ethnos manifests itself in a complete and wide-ranging, unique way only through its own language. On the other hand, a language detached from the experience of ethnic culture, ethnic worldview and cognitive activity loses its deep essence and thus becomes one of the ordinary means of communication.

We have found it necessary to emphasize the following by summarizing the views, views and opinions expressed above.

1. While acknowledging the inevitable connection between language and culture in the broadest sense, the causal nature of such communication is denied.

2. This relationship is classified as a cause-and-effect relationship, but offers different, often conflicting solutions:

- a) culture, its type, and even even lifestyle is determined by language, its grammar and semantic structure (E.Sepir, B.Worf);

- b) language cannot determine the type of culture, language and culture cannot be compared (E.Sepir);

- c) language is a "guide" to a limited degree of knowledge of reality (O.S.Ahmanova);

- g) language itself is determined by the type of culture and depends on it (K. Fossler, V.Schmidt, N.Y.Marr);

- d) language, like culture, is determined by the ethnic "worldview", the spirit of the people and its national character.

Interpreting the relationship between language and culture is extremely complex. Language, thinking, culture - these are events that are always in motion, in change. It is necessary to stop them in order to study them, but it will no longer be the same "language", "thinking", "culture", or rather, they will not be: they o It remains motionless, separated from each other.

It is impossible to determine which thing is primary, but it is true that there is no ethnos without language, and the death of language still destroys both ethnos and culture.

The collapse of any culture always takes place in the same way - the isolation of the elements of culture, that is, when symbolism leaves life as a result of changes in living conditions, language as a separate element of culture also dies.

Thus, language, thought, and culture are so closely intertwined that in practice they form a whole of three components, none of which can function (and therefore function) without the other two. Together, they interact with the world around them, reflect it and shape it at the same time. In doing so, they create phenomena called worldviews.

In current research, the two terms "worldview" and "world model", which are used interchangeably, are used in parallel. However, in our opinion, there is a significant difference in their meaning. The word "model" seems to be a logically organized, planned thing, and the concept of "landscape" has a slightly different feature, which reflects the elements of creativity. That is why we will use the term "worldview" more hereafter.

According to G.V.Kolshansky, "worldview" [6,p.200] is a basic concept that reflects the peculiarities of man and his life, his relationship with the environment, as well as the conditions of his life in this world. "The worldview is the main global image of the world, which is the basis of human perception of the world, which reflects the essential features of the world in the minds of linguists and is the result of all human spiritual activity." The author emphasizes that this is always a subjective image of objective reality, because the worldview is not a mirror image of events in reality, but only an interpretation. The "worldview" is characterized by change, so it is dynamic and focused on the process of cognition. It arises in the process of human interaction with the universe, in which the experience and forms of communication are characterized by great diversity.

O.N. Yermolayeva writes about the need to clearly stratify the two foundations of the study of the linguistic landscape of the world:

- 1) a linguistic reflection of the worldview, which operates outside of us, independent of us at all, with special relations and connections between its subjects;
- 2) the acquisition from the language of a worldview that operates independently of us, outside of us, where there are special relationships and connections between the subjects.

According to the author, "in the first case, the researcher goes from the homogeneity of the objective world for all languages to the diversity of worldviews, in the second case - from the diversity of worldviews in language (s) to the homogeneity of the objective world. In the first case there is a linguistic reality, in the second case there is a non-linguistic objectivity. It is noteworthy that to date, researchers have made a number of conclusions on the first and second aspects of this problem. It is noted that the following set of factors is involved in the formation of language unity:

- 1) extralinguistic - factors related to the objective nature of reality reflected in thought and language;
- 2) conceptual - factors related to the laws of reflection of the objective world in the human mind;



3) factors related to the specific laws of language, especially in the human language.

Summing up the above-mentioned ideas, A.A. Vetrov writes that the linguistic tomb of the world can be imagined in two models: 1) the language model, 2) the conceptual model. The content, narrative style, and methods of these models are not uniform.

G.V.Kolshansky cites the following aspects of the "worldview" problem: [6]

In the non-objective (non-materialized) state of the human worldview, such a landscape is a "field" of localization;

1. The "worldview" is created by man in the following cases:

- a) as a result of objectification, objectification of world images, which are the basis of life activity, which in its essence is the re-emergence of the world image
- b) b) as a result of the development of new images in the reflection process;

2. The worldview is not a mirror image of reality, but its interpretation in a certain way, because "any view of the world created by seeing the world through certain prisms always inevitably includes signs of human subjectivity, originality. takes. The worldview is the basis of human perception of the world and embodies its basic features, which is due to the anthropocentric nature of language.

According to M. Heidegger, the concept of "worldview" consists of the following: when we hear the word "landscape", we first think about the reflection of something. [12,p.448] Then the worldview is good. or the reflection of the whole being in general. But the worldview has a slightly broader meaning. In this we mean the world itself, and its whole existence in general, in a way that determines and is a condition for us. In this case, the scene is not what is drawn, but what is heard through speech: we imagine the scene of something to ourselves ... Imagining the scene of something for itself: the being itself to itself in whatever state it is , to put it in such a state and always imagine it as such. But so far there is no definitive definition of the nature of such a landscape. The phrase "We have imagined a scene of something" means not only that we have imagined a being as a whole, but also that all the elements of that being, which are peculiar to it and constitute it as a system, are manifested in our imagination. The phrase "imagination of the landscape" sounds competence, integrity, purposefulness ... The essentially perceived worldview does not mean a worldview in this way, but a perceived world in the sense of such a view ... What about the worldview a primordial solution to the whole being in place is derived. They seek and find the existence of a being from this image of the being. "[12,p.448]

G.V.According to Kolshansky, the concept of "world" in the term "worldview" itself needs to be clarified. [6,p.200] According to the consumption of the word "world", the world is understood in two ways: first, it is a certain broadness in general. it is a world that is perceived as a thing, where man is embraced along with other people and unites him with other people. In this case, the "world in general" is not opposed to any other world. Here we are talking about the opposition to the human subject, which is connected with the world through a special relationship. Subjective perception inevitably affects the worldview formed in the mind of the speaker, which becomes the object of communication in his opinion about the world.



On the other hand, there are also worlds called alternative worlds. Such a world may consist of a certain sphere of being, which differs from other comparable spheres of being and is characterized only by its own laws.

This world is usually perceived against the background of the worlds opposed to it. For example, the world of fantasy is opposed to the world of reality, one social world is opposed to the world of another society. Speaking about the difference between the "world in general" and the "alternative world", L.B. Lebedeva recalls the difference between A. Vezhbitskaya's study of the world and a world, which is defined by the simple concept of "being a part": the world is a world that is not part of something, that is, another world, and a world is part of the world.

Thus, the world, which is called the "world in general," and which is felt to be something common to all, cannot be the subject of a definite statement. Nor is it intended to give anyone else an idea of the world: "the world is in many respects discussed in relation to the subjective consciousness that opposes it."

O.N. Yermolayeva cites several "landscapes" of the "worlds":

- Linguistic view of the world is a product of consciousness, thinking, reality and the result of the interaction of language as a means of expressing ideas about the world;
- The conceptual view of the world is a broader concept, as its creation involves different types of thinking, including non-verbal observation.

The nominative view of the world, which is an integral part of the linguistic view of the world, reflects the unique methods and means of nomination that are unique to this national variant of language.

According to O.N. Yermolayeva, linguistic view of the world is a socially important model of characters, expressed through various means of language, arranged on a systematic basis, which provides information about the world around them. According to many scientists, the conceptual world view is its basis. It is emphasized that the conceptual world view is a more complex phenomenon than linguistic view of the world, because not everything that a person perceives and learns takes on a verbal form. Linguistic view of the world units are two-way, two-plan because they combine essence with the "bodies" of characters.

S.T. Ter-Minasova distinguishes three forms of human perception of the world around them: the real world view, the cultural (or conceptual) view of the world, the linguistic view of the world. [11]

The real picture of the world is the objective state outside of man, the world around him.

The cultural landscape of the world is the reflection of this real landscape through the prism of concepts obtained with the help of human senses and formed on the basis of his perceptions through the public and individual consciousness.

The linguistic landscape of the world reflects reality through the cultural landscape of the world. Language is part of culture, but culture is also only part of language. So, if we understand the linguistic landscape of the world, the cultural landscape, the image of the world embodied in the human mind, that is, the worldview created as a result of human physical experience and spiritual activity, it is not completely covered by the cultural landscape. Thus, the cultural and linguistic landscapes of the world are closely intertwined, constantly interacting, and emerge into the real world.

According to S.T.Ter-Minasova, the national landscape of the world is primary compared to its linguistic landscape. The national landscape is fuller, richer and deeper than the landscape of the corresponding language. However, it is language that realizes, verbalizes, preserves and transmits the national and cultural landscape of the world from generation to generation. Language cannot record everything that exists in the national image of the world, but it can describe everything. In our opinion, it is not appropriate to talk about the primacy of culture in relation to language or, conversely, the primacy of language in relation to culture. In fact, these are two interconnected "worldviews" to which causal relationships cannot be applied. [11]

Words expressing the same concept in different languages can differ in semantic capacity, covering different parts of reality. Pieces of mosaic that provide a worldview can vary in different languages depending on the amount of conceptual material obtained in the human brain as a result of the perception of the surrounding world.

According to S.T.Ter-Minasova, the methods and forms of perception, as well as the formation of concepts, in turn, depend on the socio-cultural and natural features of the life of this speech community. Differences in thinking through language are manifested in the perception of the excess or lack of forms of expression of the same concept. [11]

Y.D.Apresyan describes the current state of the issue of the "simple" landscape of the world in language, noting that such research goes in two main directions. [1,p.102]

1. On the one hand, some aspects of the "stereotypes" of linguistic and general cultural consciousness, specific to this ethnos, are studied. The author calls them specific linguocultural isoglosses and a series of isoglosses. These are the typical aspects of the heart, grief, destiny, past, will and so on. On the other hand, the author notes, these are specific connotations of nonspecific aspects (for example, symbols represented by colors in different cultures).

2. At the same time, "although there is a search for and reconstruction of a pre-scientific holistic view of the world that is specific to language." That is, "the dialect in general" is being studied. According to the author, in this case, taking into account the national identity, "the main focus is on the linguistic landscape of the world."

Summarizing the main rules of the last direction, the author states:

1. Every natural language reflects a certain way of perceiving and organizing (conceptualizing) the world. The essence expressed in it is embodied in a single system of views, a kind of public philosophy, which is defined as a mandatory rule for speakers of this language ...

2. The method of conceptualization of reality (world view) inherent in the language is partly universal, partly national in nature, and speakers of different languages can see the world in a slightly different way, through the prism of their own language.

3. On the other hand, it is "simple" because it differs from the scientific worldview in many important details. At the same time, simple ideas are not just simple. In most cases, they are as complex and interesting as the scientific imagination. For example, these are simple notions about the inner world of man ... "

G.V. Kolshansky notes that the search for a systematic basis in the content organization of language has led linguists to semantic analysis of language. Such an approach to language implies a systematic approach to the meaning of words. [6,p.200]

We are talking about the style of the semantic field. A semantic field is a group of words and phrases that are grouped around a concept (sometimes an idea). Such elements of the text assume that "semantic primitives" apply words and idioms. According to I. Trier, the "semantic field" is a fixed part of the dictionary, which covers a certain "conceptual" area of the language. "It is unique, governed by its own internal laws, and carries out a 'worldview' that is different from its various languages and similar events in the history of the same language."

**Conclusion:** As a result of our investigation, the following inferences and suggestions can be drawn.

Even when different languages are siblings, differences in how the world is perceived and conceptualized through language can be significant. In other words, worldviews in different languages may have their own characteristics.

In the linguistic landscape of the world, the ethnic mentality is relevant in the "basic" cultural concepts verbalized in symbolic images that reflect the mental perception of the speakers of the language about the world around them.

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**UDC: 811.111(07).****SEMANTIC AND STYLISTIC ANALYSIS OF PHRASEOLOGICAL UNITS  
WITH COMPONENTS “MONEY” IN ENGLISH**

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**Аннотация:** Ушбу мақола таркибида "пул" мазмунини ифодаловчи инглиз фразеологик бирликларининг семантик ва стилистик таҳлиliga бағишланган. Маълумки, фразеологик бирликлар ҳар қандай лингвистик луғатнинг энг рангли ва ифодали қисмидир. Ва шу боис ушбу мақолада фразеологик бирликларни одамлар кундалик ҳаётида алоҳида аҳамиятга эга бўлганлиги ва жамиятда индивидуалликни ўрнатганлиги учун биз инглиз тилини таҳлил қилиш орқали "пул" компонентли фразеологик бирликларни тадқиқ этдик. Лексик таърифларни, нутқда бирликларнинг қўлланилишини ва баъзи ҳолатларда этимологик жиҳатларни таҳлил қилиш орқали биз семаларнинг иерархиясини ва уларнинг мазмун тузилишини ишлаб чиқиб семантик ва стилистик тамойилларга асосланган тасниф туздик. Бу эса фразеологик бирликлар луғатини тузишнинг узоқ жараёнининг ажралмас қисмидир.

**Калит сўзлар:** фразеологик бирликлар, таркибий қисм, таҳлил, инглиз тили, нутқ, этимология, таснифлаш, луғат, жараён, ифодали қисм;

**Аннотация:** Данная статья посвящена семантическому и стилистическому анализу фразеологизмов с компонентом, обозначающим «деньги» в английском языке. Как известно, фразеологизмы представляют собой самую красочную и выразительную часть любого лингвистического словаря. И в этой статье мы исследовали фразеологизмы с компонентом, обозначающим «деньги», посредством анализа английского языка, чтобы выделить сущности, которые играют особую роль в повседневной жизни людей, и установить индивидуальность в обществе. Путем анализа лексических определений, реализации единиц в речи и, в некоторых случаях, этимологических аспектов, нам удалось разработать иерархию сем в структуре их значения и составить классификацию, основанную на семантическом и стилистическом принципе. Это неотъемлемая часть длительного процесса составления словаря фразеологизмов.

**Ключевые слова:** фразеологические единицы, компонент, анализ, английский язык, речь, этимология, классификация, словарь, процесс, выразительная часть;

**Abstract:** This article is dedicated to the semantic and stylistic analysis of phraseological units with component denoting “money” in English languages. As we know phraseological units represent the most colorful and expressive part of any language vocabulary. And in this article we investigated phraseological units with



component denoting “money” through analysis of English language in order to highlight entities that play a role in people's daily life, and to establish the maintain individuality in society. By analyzing lexical definitions, realization of the units in speech, and, in some cases, etymological aspects, we have managed to develop a hierarchy of semes in the structure of their meaning and make up a classification based on a semantic and stylistic principle. This is an essential part in the long process of compiling a dictionary of phraseological units.

**Key words:** Phraseological units, component, analysis, English language, speech, etymology, classification, dictionary, process, expressive part;

**I. Introduction:** Phraseological units absorb values of the ages in which it lives. The problem of understanding the meaning of a phraseological unit is linked with a possibility of increasing our knowledge about the world diachronically. It tends to play a central role in a wide range of linguistic disciplines such as lexicography, contrastive linguistics, psycholinguistics, foreign language learning and teaching, and natural language processing. Phraseological units represent the most colorful and expressive part of any language vocabulary. Nowadays much attention is paid to defining a clear borderline between free word combinations and phraseological units, to classifying phraseological units on the basis of their semantic and stylistic characteristics, to corpus-based analysis of phraseology, and computational approach to lexicographical description of phraseologisms.

Scholars have provided various definitions of these units and various criteria to classify them. Tracing back the origin of many English idioms and other phraseological units of their etymological source is very important as it helps to understand the meaning of the inner form phraseologism and consequently its actual meaning. There are many phraseological units and proverbs that contain monetary system. The same as other phraseological units, they came from people's everyday life, prose and poetry, myths, fables, slang, novels and other sources. Quite a few set expressions with component denoting money are familiar to people of different nationalities, and in order to show the tradition, culture or personality of the nationality. It's natural that a learner wants to know how to say those colorful expressions in different languages. Moreover, when we speak about the role of phraseological units with components denoting “money” in the English language, we must not take into consideration only the number of them but their semantic, stylistic character, their word building ability, frequency value, collectability (valency) and the productivity of their word-building patterns.

**II. Literature Review:** The importance of phraseological studies is permanently discussed as it demonstrates the interrelation between the language and the society. A phraseological value is a category which is interpreted in different ways depending on understanding of the nature of a phraseological unit, its components and volume of phraseology. A definition of a phraseological meaning originates from the essence of the phraseological unit. According to A.V. Kunin, the phraseological unit is a fixed combination of words which fully or partially change their meanings. It means that a character, which is above the word level, stability and changed meanings of words in



the combination are criteria of phraseological units together with other linguistic units, which define their special status in the language structure [1, 2005].

Phraseologists have not yet reached a common opinion on a mechanism and regularities of changing a semantic and stylistic essence of words-components of phraseological units. A formal semantic structure of the phraseological unit, i.e. the study of its plane of content and plane of expression, represents a special issue. In other words, the question is how elements of semantics phraseological units are classified by their lexical components, i.e. a degree of a so-called semantic combination and semantic dividedness of the phraseological unit. N. N. Amosova for the first time put into question the theory of equivalence of phraseological units to words [2, 2013]. In recent years this theory finds less and less support.

Stating a semantic integrity of phraseological locutions based on an idiomatic character, A.I.Smirnitsky wrote that they have “a structure of a free, proper grammatical combination of words”, it means that components of phraseological units are deemed as words; a good reason for this fact was a compliance of phraseological unit components with words included in free word combinations, at least in terms of their appearance [3, 1956].

A.D. Raikhshtein defines three main types of a semantic value of separate components in phraseological units having a well-rounded image: negative, indirect and direct [4, 1980].

Yu.A. Gvozdev believes that it is words that serve as components of fixed phrases and notes on this issue that “components keep a definite value, without which phraseological units would inevitably lose their inner form, imagery” [5, 1977]. Phraseological semantic series in the language, which contain the same component in different phraseologisms, do show hidden or implicit values of phraseological unit components. Among classified types of components’ markers (connotative, archaic and relict, prepositive, particular and others) a special interest is given to an issue on symbolically marked components. Although the author states that “there are not quite clear criteria, in accordance with which some words, before they become components, are acknowledged as symbols, and others are not”, but an original symbolic meaning of the component is at least partially kept in semantics of the fixed phrase and quite regularly reproduced in many phraseological units. Moreover, even if a symbolically meaning word is updated in the language, it can vary its semantics to a rather broad extent [6, 1996].

The theory of stylistic pattern is also one of the fundamental concepts in phraseology. Phraseological units (PUs) are crystallized metaphors the expressiveness of which is often intensified by parallelism, antithesis and alliteration. Researches in phraseological units show that they have significant role in language. The problem of the study of phraseological units of the Russian and English languages has been considered by A.I. Smirnitsky, A.V. Kunin, I.V. Arnold and other scholars. At the same time phraseology is a field of science where not all the questions have been resolved. The idea that phraseology has the right to exist as a separate linguistic discipline was first put forward by Kunin. He also introduced the term phraseological stylistics to denote the study of stylistic properties of PUs [7, 1996]. Kunin viewed phraseological stylistics as part of both general stylistics and phraseology. He developed his ideas of

stylistic use of PUs in his subsequent works. Following his, idea phraseo-stylistics as a subject of stylistic description in its own right to study the communicative effects of phraseological units and their occasional, individual modifications. The growing interest in phraseology can be explained partly by the complicated processes which occur in this part of vocabulary, partly by a focus on lexicography as well as an increasing interest in stylistic features and its relevance to pedagogy.

A.I. Smirnitsky is one of the scientists who has made a clear distinction between phraseological units and idioms using idioms in practice. According to his theory, phraseological units are such speech turnovers that their alternative can be ensured by other vocabulary, while idioms do not observe this situation.

As we know Smirnitsky classifies phraseological units according to their stylistic features [8, 1956]:

- 1) Phraseological units (stylistically neutral, with faded metaphorical motivation)
- 2) Idioms (they are based on metaphor, they are emotionally and stylistically colored)

Thus, in the following paragraphs phraseological units with the components “money” will be analyzed according to particular classifications.

**III. Research Methodology:** All the investigations are held with the help of investigation methods, and all the methods should be determined and chosen in connection with the topic investigated. Phraseological units with the component ‘money’ have been identified by continuous sampling from various phraseological dictionaries and subjected to the semantic and stylistic analysis. The use of the component analysis allowed one to distinguish the features of the lexeme ‘money’ in each phraseological unit and classify them under consideration into semantic and stylistic groups. The generalization method has been applied to identify a set of objective meanings of the phraseological units with ‘money’ component under study. The linguistic and cognitive analysis allowed one to reveal the cultural specifics of the perception of money in the English language picture of the world.

**IV. Analysis and results:** The semantic group ‘*money as power*’ includes phraseological units (proverbs, idioms, set-expression) associated with power. Throughout the human history currency has influenced mankind; it united and separated people, brought great joy and much grief. Money from ancient period was used as a form of metal (gold, silver and etc.) It was the cause of intrigues and wars (*Lend your money and lose your friend, Gold does friendship separate, money is the sinews of war*) [9, 2003] and from year to year it only strengthened its position.

Rich people are doomed to live in fear and danger. A lot of money causes a lot of worries (*much(gold) money, much care*) since there are a lot of those willing to take possession of somebody else’s property. When people possess money they are afraid of losing it. They fear crisis, bankruptcy. People who have wasted their wealth fall into sadness and cannot go on (*sink money, lost money on the deal*).

Next semantic group refers to ‘*money as good luck or opportunity*’. This semantic group contains idiomatic expressions with the positive connotation. The idiom number (*marry money*) expresses luck, the phraseological unit (*money for jam, money makes the man*) correlates with the idiom ‘hit the jackpot’. In other words, money is considered as the source of well-being, happiness, satisfaction in something.

Another semantic group is express '*as easy money*'. The given phraseological units below are attributed to the named semantic group as having negative connotations and including lexemes black, mad, easy and etc. Wealth can seize a man, his thoughts, mind, and body. Having acquired the taste of gold (money) and its might, one cannot stop (*black money*). The history knows the periods of gold mining, so-called 'golden rush' when people went mad because of money. People were willing to do anything for making money, even to make a deal with the devil himself (*mad money*, *dirty money*, *easy money*), not able to escape a man is trapped (*hush money*) [10, 1984]. The analysis of phraseological meaning implies a seminal analysis of the semantic structure of phraseological units. The classification of phraseological meaning is based on the identification of various types of rethinking and taking into account the structures in which they are implemented. The degree of abstraction of meaning is distinguished depending on the nature of abstraction on the lexical and grammatical meaning of the components of phraseology, on the prototype of the phraseologism and on the meaning of the syntactic construction. In the next group of examples, we see that the concept of a monetary unit is considered in the meaning of the entire phraseological units and given data of English phraseological units with a 'money' component in English languages by phrase-semantic groups.

For example; 1) hard cash – money in cash

2) pocket money - money for expenses

3) money makes the man - no money, no respect [11, 2005].

The conducted analysis of the proverbs and sayings with the component 'money' suggests that, the delivered meanings of the component under study are quite different and meaningful.

Now, we turn our attention to the stylistic classification of phraseological units with the component 'money'. Many phraseological units express their attitude to the situations they designate, qualities, properties, actions, persons: irony, mockery, playful admiration, neglect, contempt, etc., and, therefore, an assessment of what is called with the help of a phraseological unit. The stylistic and emotional coloring of idioms with component 'money' is largely due to the source of their occurrence, the sphere of their initial use, which in turn largely determines the nature of the word-components that make up the idiom.

Presence of figurative phraseology gives vividness, beauty and flexibility to the language. Besides the certain semantic contents such phraseological units comprise wealth of expressively - stylistic shades making speech bright and emotionally saturated. That is why the task of the translator is not only to transfer meaning of English phraseological unit, but also to inform its figurativeness and expressiveness. Phraseological unities more often than fusions keep their stylistic characteristic in translation. Distinctly perceived internal figurative core creates favorable conditions for the reconstruction of the image or its substitution while translating. Therefore equivalents, analogues and word for word translation are widely used while translating phraseological unities with components 'money'.

As we know phraseological units borrowed to English from the literature of Ancient Greece and Rome are provided with extraordinary colorfulness and expressiveness, and this explains their prevalence not only in English but also in other

languages of the world. The examples were created by people, and were widespread circulations. Moreover phraseological units with components 'money' which are taken from historical sources are expressed with lexeme penny, pound, cash-ew, *mouth* and etc. For example: "*In for a penny, in for a pound*" means "To risk a penny or pound" or "*Bite off more than one can chew*" or "*To take the mouth more than you can swallow*" means "To take an impossible business" [12, 1958].

Except this there are phraseological units with different stylistic colors. They add a new color to the speech, or mainly, may be used in the literature in order to catch listener's attention, or to create an interesting situation: A) ironic turns: "*money talks*" - consider that someone has a lot of power; "*pin money*" - small amounts of extra money that someone earns or gets in order to buy things that they want but that they do not really need. [13, 2003]; B) vulgar or negative form of expressions: "*Blood money*" means "If someone makes a payment of blood money to the family of someone who has been killed".

There are some phraseological combinations which may be translated in several languages that are regionally or culturally close to one another: for example, "pocket money", "money box", "not worth a red cent" and so on [14, 1999].

As far as we are concerned metaphorical rethinking is the transition from one detonates to another, associated with it on the basis of real or imagined similarity. Complicated rethinking in the secondary phraseological nomination arises just like simple reinterpretation, by converting the literal meaning of the prototype. But with complex transformations, there is always a complicating factor, for example: the non-motivated value of phraseological units, associations with extra linguistic factors as a preliminary link in the process of rethinking. Unmotivated value does not interfere with communication, as it is supported by the tradition of use. An example of a non-motivated phraseological unit can be the phraseological unit, which means "monetary unit" in the analyzed languages. *For instance: penny pig, yellow boy (gold coin)*. A complex rethinking of unmotivated phraseological units cannot be an object of direct observation, but is established on the basis of a diachronic etymological analysis.

Also we may interpret some phraseological units with the metaphorical stylistic device through the literary text. Firstly, for comprehending the plot of the novel "Theatre" we should know the meaning of the idioms which are used in sentences: For example, "*Roll in money*" means "*to have a lot of money*" "*to bathe in gold or money*" [S.W. Maugham, Theatre]. This phraseological unit is translated by Russian analogue, which fully corresponds to the functional-stylistic features of the context. The literal meaning of it "*to bathe in money*" is not adequate for the context where it was used by the author. "*Of course some of those Middlepool manufactures were rolling in money*". The expression "to bathe in money" fully corresponds to the author's communicative intention, clearly depicts the scene described by him.

From the results of the stylistically analysis of the phraseological units with the component 'money' we can see the different stylistic colors which can be used in the literature forms; ironic, metaphorical, positive or negative even can express the vulgar turns.

**V. Conclusion:** All in all, phraseological value is a category which is interpreted in different ways depending on understanding of the nature of a phraseological unit, its



components and volume of phraseology. The conducted analysis of the phraseological units with the component 'money' suggests that, on the one hand, the delivered meanings of the component under study are quite diverse. Due to these materials which are extracted from phraseological dictionaries of English and Russian languages, showed the phraseological units are quite actively used in the lexicon of representatives of different language cultures.

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**UDC:383.6/.8:681.24**

#### **LEXICOGRAPHIC INTERPRETATION OF UZBEK TOURISM TERMS IN ACTIVE AND PASSIVE TRANSLATION DICTIONARIES**

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**Аннотация.** Мақолада инглиз ва ўзбек тилларидаги сайёҳлик терминларининг актив ва passiv ўзаро таржимаси ва муаммолари ҳар томонлама ўрганилганлиги кўриб чиқилади. Актив ва passiv таржима луғатларининг



лексикографик талқини таҳлил қилинади. Уларнинг сайёҳлик матнлари таркибида қўлланилишининг асосий мақсади функционал-чорловчилик вазифаси саналади ва буни тилларнинг фарқли имкониятларини мувофиқлаштирган ҳолда амалга ошириш зарурлиги ҳақида сўз боради.

**Калит сўзлар:** реалия, терминосистема, сайёҳлик, нейтраллаштириш, туризм контенти, эквивалентлик, модуляция.

**Аннотация.** В статье рассматривается комплексное исследование активного и пассивного перевода и проблем туристических терминов на английский и узбекский языки. Анализируется лексикографическая интерпретация словарей активного и пассивного перевода. Основной целью их применения в структуре туристских текстов является функционально-риторическая функция, и речь идет о необходимости делать это в координации с различными возможностями языков.

**Ключевые слова:** реалия, терминосистема, туризм, нейтрализация, контент туризма, эквивалентность, модуляция.

**Abstract.** The article deals with a comprehensive study of active and passive translation and problems of tourist terms into English and Uzbek. The lexicographic interpretation of active and passive translation dictionaries is analyzed. The main purpose of their application in the structure of tourist texts is a functional-rhetorical function, and we are talking about the need to do this in coordination with the various possibilities of languages.

**Key words:** reality, term system, tourism, neutralization, tourism content, equivalence, modulation.

**Introduction:** Passive translation dictionaries are used by dictionary users to see the meaning of a particular word. In many cases, they can even guess the meaning. Because they have a context (i.e. text) in the presence of that word. Not only the content of the word, but also the methodological-contextual color, morphological features and syntactic relations are understood from the text. Therefore, there is no need to provide such information in the dictionary microstructure.

However, sentence patterns involving the word in the target are important in passive dictionaries. In particular, their role in distinguishing word meanings of a polysemantic nature is great. Although the term words rarely have multiple meanings, they also contribute to a fuller understanding of the content of the quotation examples.

**Literature review:** The following are interpretations of several Uzbek tourism terms in passive translation dictionaries. In this case, their meaning is explained in the form of an expanded commentary.

**Honest tourism** noun phrase ^ tourism structure a subcategory of tourism which is geared towards Muslim families who abide by rules of Islam. The hotels in such destinations do not serve alcohol and have separate swimming pools and spa facilities for men and women; also provides flights where no alcohol or pork products are served, prayer timings are announced, and religious programs are broadcast as part of entertainment offered on board[1]:

*“According to experts, the main condition of "honest tourism" is the availability of infrastructure for the provision of food and services with the label "honest", family recreation, clean food outlets.” (What is the place of Uzbekistan in the rating of*

"Honest tourism"? [Http://xs.uz/uzkr/post/halol-turizm-rejtingida-ozbekiston-nechanchi-orinda](http://xs.uz/uzkr/post/halol-turizm-rejtingida-ozbekiston-nechanchi-orinda))

**Analysis and results:** Lapar noun ^ music musical folklore genre; close to songs sung in a narrow range, without repetition, without instrumental accompaniment, which is not very complicated in terms of event and melody structure:

*"Lapar, Cantos, chansons performed by girls gave a special charm to the holiday." (Navruz celebrations in Andijan colleges <https://kun.uz/77616819>)*

*"Lapar is a song." (<https://mfa.uz/uz/uzbekistan/282/>)*

**Almond** noun ^ 1. plant a type of nut that has been cultivated in Uzbekistan for a long time. Widespread in Central Asia, mountainous regions of China, Mongolia, the Mediterranean, Central America. The essence of the fruit has a unique nutritional value, is a source of vitamins and microelements[1]:

*"In folk medicine, the mixing of sweet almond kernels with sugar is widely used in the treatment of diseases such as shortness of breath, dizziness." (HEALING PROPERTIES OF ALMONDS. [Http://dawo.uz/ethnoscience/233-bodom.html](http://dawo.uz/ethnoscience/233-bodom.html))*

2. **bodomcha** national clothing a type of pattern looking like an almond which is used as an ornament on skullcaps, suzanes or Islamic men's cloaks:

*The skullcaps at the festival are decorated with almond-shaped embroidery.*

*Unique images of roses, carnations, roses, tulips, rooster crowns, almonds, peppers, almond blossoms, peacocks, roosters, nightingales are reflected in the embroidery.*

*([Https://www.unesco-ichcap.org/kor/ek/sub2017\\_7/pdf\\_down/Uzbekistan%20ICH%20promotional%20book\(uzb\).pdf](https://www.unesco-ichcap.org/kor/ek/sub2017_7/pdf_down/Uzbekistan%20ICH%20promotional%20book(uzb).pdf))*

**Witticism** noun ^ uzbek oratory one of the forms of Uzbek folklore, which consists of fan dialogues between several persons or groups. The performance of askiya – askiyagui – is usually conducted at the leisure time, friendly parties – oshi kharifona, weddings, teahouses, picnics etc. for the purpose of amusing, competing, and relaxing. The main specialty of the genre askiya is concluded in an immediately following embarrassing reply, witting, talent of metaphorical building statements and expressions as well as contribution to a loud laugh. In the tradition, a slow reply is considered as the loss of participator / group participators, what is typical to such genres as badeha, baytbarak, and latifa:[2]

Rasul Muhammadiyev, a scholar who has studied the art of witticism, said that Uzbeks' recitation of witticism dates back to ancient times. (<http://uza.uz/oz/society/zbek-askiyasi-1-aprel-azil-kunidan-oldinro-paydo-b-lgan-31-03-2018>)

Uzbek national art of humor - witticism is included in the list of intangible cultural heritage of UNESCO. ([Http://turizm.kasaba.uz/uz/news/147](http://turizm.kasaba.uz/uz/news/147))

**Gachkori** adjective ^ carving a variety of decorative-applied arts, connected with the craft of carving / engraving. Gach is the variety of white soft stone, especial mineral that is boiled and then used to decorate buildings mildly. The powder of gach is also used, which is remarkable for its special mildness. It is called gulgach. As distinct of carving, the craft kachkori is easier and simpler 57 in carving. However, the use of it requires a strict observance of special difficult rules:[3]

*The Gachkori method was used in the Middle Ages to decorate mosques and madrasas, their doors, frames and ceilings.*

*It is noteworthy that the plaster patterns created by Muhamidov are elegant and harmonious with modern buildings. ([Http://taqvim.uz/uzc/event/view/1104](http://taqvim.uz/uzc/event/view/1104))*

**Doira** (doyra) noun ^ musical instruments an ancient percussive musical instrument, it is made from mulberry, acacia, and vine trees. The chorchuba volume of doyra is usually 14 – 40 sm., thickness is 3 – 5 sm., the skin of bull, goat, and colt is covered on it, and it is roundly decorated with iron rings. The instrument has a round form. The palms and fingers of both hands are used at playing on doyra. While playing, doyra is supported with a left hand; the palm and all fingers of right hand play actively:[4]

*"Doira and percussion instruments close to it are called Tajik, Armenian, Azeri, Uyghur - dap, dapp, daff, def." (<https://qomus.info/encyclopedia/cat-d/doira-uz/>)*

*"By the way, this is my second attempt - I created a 1.5 meter diameter circle with my students early last year. Then I decided to break my record and make a circle larger than 20 centimeters," said the master. (<https://kun.uz/news/2019/01/11/tojikistonda-dunyodagi-eng-katta-doira-yasaldi>)[2].*

Active speech skills require the language practitioner to apply knowledge of various aspects of language in an active speech process. In the process of creating information, lexical units, first of all, correct graphics (in the presentation of written information), phonetics (in the presentation of oral information), series, morphological features, in other words, syntactic relations, contextual and stylistic features, phrases and stable combinations all important. As the language practitioner creates speech in a foreign language, all of the language aspects listed above are given in dictionaries in relation to equivalents. When the process of creating a speech in a foreign language is consciously imagined, the speaker first thinks of the information he wants to convey in his native language. It then looks for the necessary lexical-grammatical tools to create that information in a foreign language. If any of them feels a lack of knowledge, he tries to fill the gap in that knowledge with the help of a dictionary. This requires him to find acceptable equivalents from a dictionary through a word in his native language. There are several equivalents presented in the dictionary, which may differ in their methodological contextual features[3].

Since our target dictionary is representative of English-speaking culture, dictionary lemmas will be tourist terms in English. Due to the fact that all information about them is known and insignificant to the user of the dictionary, we will show only their category (zero, the phenomenon of homonymy in English is very common).

**Discussion:** The first complication encountered will be the transcription of equivalent words. Due to differences in the phonetic systems of English and Uzbek, it is difficult to express the pronunciation of Uzbek tourist terms in transcriptional symbols that are understandable to an English-speaking reader.

There are 24 consonant phonemes in English: [p], [b], [t], [s],

[k], [g], [n], [ŋ], [l], [m], [h], [v], [d], [z], [ʃ], [ʒ], [tʃ], [dʒ], [w], [r], [j], [θ], [ð], [f].

The group of Uzbek consonants consists of 23 consonant phonemes: [p], [b], [f], [v], [s], [z], [t], [d], [sh], [j], [k], [g], [x], [gʻ], [q], [h], [n], [l], [r], [y], [ch], [m], [ng].

[θ, ð, w] English consonants do not have an equivalent in Uzbek. There is no English equivalent of Uzbek consonant phonemes [x, gʻ, q].

Sounds available in both languages have different articulatory, acoustic, and phonological features[4]:

⇒ Uzbek consonant sounds [t, d] are pronounced and are dorsal, English / t, and d / phonemes are alveolar and apical;

⇒ In Uzbek [s, z] are dorsal, [sh, j] are palatal alveoli, in English [s, z] are apical alveoli;

⇒ English [n] is apical-alveolar, Uzbek [n] is dorsal and dental;

⇒ In English [r] is a cacuminal, post-alveolar sound, but in Uzbek it is a vibrating sound.[5]

The remaining consonants show similar interlinguistic features: [p, b, m, f, v, sh (ʃ), j (ʒ), ch (tʃ), j (dʒ), k, g, ng (ŋ), h].

A comparative analysis of English and Uzbek consonants (consonant sounds) can be seen in the following table: [6]

nutq organlarining harakati			Lab undoshlari		Til undoshlari								B O G I Z
					Til oldi					Til o'rta	Til orqa		
Hosil bo'lish ko'ra	Hosil bo'lish usuliga ko'ra	Lab-lab	La-b-tis-h	Dor-sal	Apikal			Kalkuminal		Pala-tal	Sa-yoz	Chu-qur	
				Den-tal	Int-er-den-tal	Al-ve-ola-r	Palta-alve-olar	Alve-olar	Pos-t-alve-olar				
Okkulisiv undoshlar	Portlovchi	Ing	p, b				t, d				k, g		
		O'z	p, b		t, d						k, g	q	
	Sonorantlar (burun)	Ing	m				n				ŋ		
		O'z	m		n						ng		
Konstruktiv Undoshlar	Sirg'aluvchilar(frikativ)	Ing		f, v		θ, ð	s, z	ʃ, ʒ				h	
		O'z		f, v	s, z			sh, j			x, gʻ	h	
	Sonarantlar	Ing	w						r	J			
		O'z								y			
Affrikatlar (qorishiqalar)		Ing						tʃ, dʒ					
		O'z						ch, j					
Titroq undosh ( rolled kon-sonantlar)		Ing											
		O'z			r								

In order not to confuse the dictionary user in active language practice, to help him to have a clear and understandable pronunciation of a foreign language (i.e. our Uzbek language), it is necessary to describe the articulatory difference of interlingual sounds in the dictionary instructions.

We base our theoretical ideas on the following examples:

**Locality** noun ≈ noun [possessive case] жой/joy/:



*The location of the building does not look safe, it is as if the deposit is shaken as the train passes.*

*Several mineral deposits have recently been discovered in the area.*

≈ noun ҳудуд /hudud/, макон /makon/, майдон /maydon/[7]:

*From here you can observe the unique nature of the whole village.*

*Information on the area's flora and fauna can be obtained from your local conservation organization.*

*Friendship, nobility, and generosity are glorified in this space; greed, deceit, and enmity are condemned.*

**Sights** noun [plural] ≈ noun phrase [plural] [applies to different kinds of places] диққатга сазовор жойлар /diqqatga sazovor joylar/[8]:

*The festival area includes an exposition of models of special historical monuments and sights from each emirate.*  
(<https://uzbektourism.uz/cyrl/newnews/view?id=905>)

≈ noun phrase [plural] [applies to architecture] меъморий ёдгорликлар /me`moriy yodgorliklar/:

*It will take a few days to get acquainted with all the architectural monuments.*  
(<https://damda.uz/uz/blog/buhara/>)

*Pahlavon Mahmud Mausoleum is one of the architectural monuments in Khiva.*  
([Http://turizm.kasaba.uz/uz/sights\\_of\\_uzbekistan](http://turizm.kasaba.uz/uz/sights_of_uzbekistan))

≈ noun phrase [plural] [applies to architecture] тарихий обидалар /tarixiy obidalar/[9]

*Our country is one of the leaders in the world in terms of tourism and the abundance of historical monuments.*([http://turizm.kasaba.uz/uz/sights\\_of\\_uzbekistan](http://turizm.kasaba.uz/uz/sights_of_uzbekistan))

≈ noun phrase [plural] [literary form] historical steps:

*It is no exaggeration to say that the Central Asian countries are famous in the world for their richness of historical monuments.*

*Let's take a look at the list of the most popular (historical) monuments compiled by kalpak-travel.com.* (<http://xs.uz/uzkr/post/markazij-asiyodagi-diqqatga-sazovor-zhojlar-10-taligi>)[10]

**Conclusion:** First of all, the creation of active and passive translation dictionaries for representatives of English culture is of great importance for the economic potential of our country. When creating tourist dictionaries for English-speaking people, it is necessary to form a dictionary based on the existing tourism services and goods in our country, as well as the cultural conditions of our country. In conclusion, for representatives of English-speaking cultures, the expression of the transcription of Uzbek tourist terms in active dictionaries is complicated by interlingual phonetic and phonological differences.

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**UDC: 178.9(575.2)**

**SEMANTIC AND LINGUCULTUROLOGICAL PROPERTIES OF THE  
TERMS OF WEDDING CEREMONY USED IN BUKHARA DIALECT**

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**Abstract** – Analysis of phraseological units and poems representing the concept of "Wedding" in the Uzbek language (based on the material of the survey) It should be understood that the ritual phraseology of the Uzbek people, of course, is not limited to the framework of the wedding ritual and this layer of vocabulary can become the subject and object of a separate, specially, full-fledged study. However, in the context of this section of this work, the epicenter of the analysis will be wedding rituals that clearly characterize the customs and traditions of the people.

**Key words:** phraseological units, ritual phraseology, framework of the wedding ritual, customs and traditions.

**Аннотация** – Анализ фразеологических единиц и стихотворений, репрезентирующих концепт «Свадьба» в узбекском языке (на материале анкетирования) Следует понимать, что рамками свадебного ритуала обрядовая

фразеология узбекского народа, естественно, не ограничивается и данный пласт лексики может стать предметом и объектом отдельного, специально, полноценного исследования. Однако в контексте данного раздела настоящей работы эпицентром анализа станут свадебные ритуалы, ярко характеризующих обычаи и традиции народа.

**Ключевые слова:** фразеологизмы, ритуальная фразеология, рамки свадебного обряда, обычаи и традиции.

**Annotatsiya** – "To'y" kontseptsiyasini o'zbek tilida ifodalaydigan frazeologik birliklar va she'rlarni tahlil qilish (so'rovnoma materiallari asosida) shuni anglash kerakki, o'zbek xalqining marosimdagi frazeologiyasi, albatta, to'y marosimi doirasi bilan chegaralanib qolmaydi va bu lug'at qatlami alohida, maxsus, to'laqonli o'rganishning predmeti va obyekti bo'lishi mumkin. Biroq, ushbu asarning ushbu qismi doirasida tahlilning epitsentri xalqning urf-odatlar va urf-odatlarini aniq tavsiflovchi to'y marosimlari bo'ladi.

**Kalit so'zlar:** frazeologik birliklar, marosim frazeologiyasi, to'y marosimining asoslari, urf-odatlar va an'analari.

**I.Introduction:** The paremiological fund of the Uzbek language, that is, proverbs, sayings, as well as poems (zarbulmasal proverbs and poems) associated with wedding ceremonies, clearly express the purpose and semantics of both a single ritual and a set of rituals that coordinate the wedding ceremony from beginning to end. It is known that wedding events in Uzbekistan are a rather long and complex process, which is why the lexicosemantic and terminological design of events is expanding. These linguistic signs of culture have ethnic and cultural specifics and represent the attitude of Uzbeks to wedding rituals[1].

**II.Literature review:** Phraseological material reflecting the accumulated wisdom of the people for centuries, a clot of culture and opinions that exist in society is the most valuable database for research on cognitive linguistics. Indeed, it is in phraseology, in view of its being "the soul of every national language, in which the spirit and originality of the nation is expressed in a unique way," that the uniqueness of the figurative systems of national linguistic pictures of the world is reflected to the greatest extent. [2]. The study of ritual terminology from the point of view of semiotics implies the presence in each ritual term of an emphasis on signs and symbolism.

Rituals often include information about extra-linguistic reality, filled with symbols and sacred meanings. Proverbs and sayings in the Uzbek language with the "Wedding" component can be considered a vivid confirmation of this[3]. They describe a specific situation, demonstrate an attitude towards it, highlight it: "The level with ritual terms is replaced by terms-symbols, the interpretation of which is difficult (or impossible) without involving an extended, general cultural context" [4]. Consider such paremic units as phraseological units, proverbs and sayings, as well as poetic sayings, in which one of the basic components is the concept of "Wedding".

**III.Analysis:** The material for the study was the results of a questionnaire survey conducted at UNU (Uzbek National University), all 100 subjects were students of the philological faculty[5]. Language in society serves to express and exchange human judgments. All types of sentences reveal and convey any feeling and attitude of the speaker to the subject of speech: in exclamation or incentive sentences, the feeling is

expressed clearly, it is demonstrated by the dynamics of intonation, and in declarative and interrogative sentences there is an implicit representation of emotions with their inherent "restrained" expression.

In the second case, the speaker's attitude to the subject of speech is set out within the meaningful part of the text. In particular, this also applies to the smallest units of the language, such as words and phrases[6]. A speaker's emotions can be expressed with a variety of words with specific semantics. For example, the word *hub* - good, together with the nominative meaning (kind, sympathetic) also conveys a positive emotion. The words *qahr* - offense, on the contrary, are not only a distinctive personal characteristic, but also cause negative feelings. Emotional significance in the phraseology of the Uzbek language is one of the most important, but, unfortunately, still not fully studied issues, which has not been sufficiently studied[7].

The second place in relevance is taken by research on the typological aspect of phraseology. Among all part of speech, established turns of speech, it is the verbal phraseological units that have a high degree of significance. The metaphor based on the figurative semantics of words is designed to evoke an emotional response from the recipient. Emotionally expressive verbal phraseological units can be classified as such according to the following features[8]:

1. The presence of metaphorical meaning. Metaphorical semantics is alien to almost all components of phraseological units, except for the cases of the presence of allegorical meaning.

So, in the dialect of Bukhara "gauvora" (cradle), "kelin" (daughter-in-law), "hushdoman" (mother-in-law), "az" (from), "osmon" (sky), "jang" (quarrel), "karda "(Did)," omadaast "(came) as separate words do not have a metaphorical meaning, but when combined, they form a phraseological phrase with a pronounced metaphorical semantics:" *gauvorai kelinu hushdoman az osmon jang karda omadaast* ", literally:" daughter-in-law's cradle and mother-in-law, swearing, descend from heaven"; meaning two housewives in the same kitchen never get along, two housewives in the same kitchen hold knives differently and cut bread differently, i.e. the interpersonal relationship of the mother-in-law and the bride is a foregone conclusion by heaven[9].

Such comparisons, of course, perform a justifying function, I mean, if something goes wrong, then it is a foregone conclusion. The display of ritual ceremonial actions in Uzbek wedding texts, being metaphorized, takes on the function of symbolic images: *kelin chil ro'z pesh az khushdoman ast* (34) - the future daughter-in-law becomes like a mother-in-law forty days before the wedding, i.e. and the positive and negative qualities of the mother-in-law are transferred to the bride in forty days[10]. Vivid examples of verbal phraseological units with the dominant word "ishkel" are shackles, *kandali - asos chor ishkeli butun* - which means, most importantly, that a healthy child was born. They are used when the newly-made father is not happy with the birth of his daughter.

2. Possesses explanatory combinations by which a variety of feelings can be identified. In the Uzbek language, the feeling of resentment can be expressed as "bar qahri zanu shavhar ostonai dar xandid" literally: "the threshold of the house laughed over the offense of a husband and wife" (when those who really love each other quarrel,

their quarrels quickly end in reconciliation and therefore are not taken seriously), the equivalent in Russian is "cute scold, only amuse themselves." [11]

**Dar guftam, devor bishnav, duxtar guftam, sunor bishnav** - the mother-in-law scolds her daughter - she gives science to the daughter-in-law, the mother-in-law beats the cat, and she gives the daughter-in-law, (the gift - that is, the door is the daughter, and the devor - that is, the wall is daughter-in-law). **Modar chi guna, duxtar namuna** - choose a cow by horns, and a girl by birth! Like the mother, so is the daughter, the image of the daughter-in-law in the minds of people is identified with her mother [12]. **Kelini xub az aro'siyash malum ast** - a good daughter-in-law is initially good, it is understood that from the first days of her arrival at the groom's house, the daughter-in-law should rise with the first roosters, sweep the yard and brew tea by the time her husband's family members wake up.

**IV. Discussion: Aro'si xub ba hamai xonavoda xushbaxti meorad** - a good daughter-in-law brings happiness to the whole family, they also say kelini ba payu, qadam, or, in some areas they say ba povu qadam, that is, with the arrival of the daughter-in-law, happiness reigns in the house, all family affairs go well if she has sister-in-law, then soon, it is believed that they will successfully marry [13]. Or, on the contrary, with the arrival of the daughter-in-law, a misfortune happens in the family, someone gets sick or dies, in which case they say kelini be payu qadam. **Gula surx mego'yan, zardasham hast, bacharo mard mego'yan, nomardasham hast** (the flower is called red, sometimes it is yellow, the guy is called a man, but there are also cowards among them) [14] - the love of a coward disgraces a woman, no matter how noble she may be, is used in modern society, where there is a tendency for betrayal by men. Belief in sincere and selfless love is characteristic of girls, but their belief is not always justified by the male gender. **Aro's pesh az to'yash ba oilai shavharash monand meshavad** - before marriage, the bride unconsciously becomes like her husband's family, a girl getting married, adapts to her husband's family, adopts their customs, traditions and rituals, it cannot be said that she has it easy, but she does it all for the sake of her beloved husband [15]. **Xonai sho' arra dora arrai shashbara dora** - in the husband's house they saw from all sides, the word **arra** - saw means sister-in-law and mother-in-law, that is, marriage has a multifaceted nature of relationships within the family. The daughter-in-law's behavior will not always please the groom's family, the equivalent in English - there are no two housewives in the same kitchen. **Aro's to yakbarfa, nashavad baho nadeh!** - until the bride lives in her husband's house for one winter, you should not prematurely praise her until a certain period of time has passed, or, as they say, until three years have passed [16].

Most often, initially living in a new family, the daughter-in-law tries to show all her best sides, but sometimes she shows character, in such cases, experienced people instruct, using this proverb, with the arrival of a new daughter-in-law. **Kelini chaqqon xushbaxtii xonadon** - daughter-in-law is a needlewoman, happiness of the whole family [17] - in most cases, the groom's family prefers a daughter-in-law-of-all-trades, so that she knows how to cook and bake, wash and iron, ensure comfort in the house, but also so that, for example, she could sew dresses, thus bringing additional income to the family. **Xushdoman bachoi modar ast** - the mother-in-law replaces the mother - it is believed that the mother-in-law should become the mother of the daughter-in-



law, i.e. by acquiring a daughter-in-law, she acquires a daughter. **Marda qoshash zana yoshash** (a man's eyebrows a young wife) - all ages are submissive to love, however, this applies only to the groom, even if there is a difference of 20-30 years between the groom and the bride, he is considered a worthy groom, also in such cases they use the proverb **shah dar minbaray, aro's bargi taray** — the groom sits on the throne, and the bride is very young, **bargi tar** — the bride is compared with a young fresh petal.

**V.Conclusion:** In this article, an attempt was made to consider the nominative units associated with the concept of "Wedding". Secondly, the comprehensive analysis of the theoretical and practical material, as well as the methodology of this research chosen as the basic methodology, made it possible to realize the goals and solve the tasks formulated in the introduction of the work. Thus, a cognitive analysis of the wedding ritual vocabulary, structure and subject-effective composition of the ritual wedding text made it possible to reveal a high degree of its relevance, due to the rapid, almost widespread destruction of the ritual institution of marriage, as a result of which there is a loss, sometimes irrevocable, of many significant names and nominations.

In conclusion, the study of the wedding vocabulary, terminology, along with its semantics and symbols, made it possible to discover the presence of systemic connections between the concepts of wedding rituals and the lexemes that denote these concepts.

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UDC: 81`373.2:821.512.133(092)

## TURA SULAYMON'S TWO POEMS ABOUT SPRING

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**Аннотация:** замонавий ўзбек шеърляри бадий такомилда таниқли шоир Тўра Сулаймоннинг ўзига хос ўрни бор. Хусусан, шоирнинг самимий туйғу ва кечинмалар билан тўлиб тошган баҳорга бағишланган шеърлари бу жиҳатдан эътиборни тортади. Мақолада Т.Сулаймоннинг “Илтижо”, “Қайта кетмас бўлиб келдингми, баҳор” шеърлари бадий таҳлил этилган, ўзаро муқояса қилинган. Шу асосда шоирнинг рамзий тимсолий фикрлаш тарзи ёритилган, шеърларнинг ҳаётий фалсафий мазмуни очиқ берилган.

**Калит сўзлар:** лирик қаҳрамон, рамзий образ, халқона оҳанг, таносуб, ташбеҳ, талмех, истиора, синтез, кульминация.

**Аннотация:** Известный поэт Тора Сулейман занимает особое место в художественном развитии современной узбекской поэзии. В частности, в этом плане привлекают внимание стихи поэта, посвященные весне, наполненные искренними чувствами и переживаниями. В статье художественно анализируются и сравниваются стихотворения Т. Сулеймана “Илтижо”, “Қайта кетмас бўлиб келдингми, баҳор”. На этой основе описывается символическое мышление поэта, раскрывается жизненное философское содержание стихотворений.

**Ключевые слова:** лирический герой, символический образ, народный тон, пропорция, метафора, талме, аллегория, синтез, кульминация.

**Annotation:** there is a special place of the popular poet Tura Sulaymon in the literary development of modern Uzbek poetry. In particular, the poet's poems about spring, which are filled with sincere feelings and experiences, draw attention in this regard. The article contains artistic analysis and comparison of the poems by T. Sulaymon "Iltijo", "Qayta ketmas bo'lib keldingmi, bahor"? On this basis the symbolic figurative thinking of the poet is illuminated, the philosophical meaning of the poems is revealed.

**Key words:** lyric hero, symbolic image, folk melody, rhyme, imitation, talmeh, istiora, synthesis, culmination.

**Introduction:** Tura Sulaymon captivates the hearts of literary lovers with his poems, songs and epics written in the national way. In his poems, feelings of kindness, love for the Motherland, parents, and the beloved are blown away. Especially in the poems of the poet, dedicated to nature and the seasons, the unique beauty, purity and vitality of the Bakhmal Mountains shine.

**Literature review:** Literary critic N. Rakhimjanov rightly noted that for the poet, nature appears "as a symbol of tolerance, generosity, beauty and kindness" [1, 165]. Or, in the words of Abdulla Aripov, "Tura Sulaymon thinks and writes in pure Uzbek. Some complex philosophical observations, rebuses, puzzles are not typical of his work" [6, 211]. Consequently, the artistic charm of the poet's poems is ensured by the folk tone.

As you know, a lot has been written in our literature about spring. However, in Tura Sulaymon's poems on this subject, intellectual clarity, emotional sensitivity, vitality are clearly visible. There is a harmony and connection between the spring of nature and the spring of human life.

**Analysis:** The popular poem of the poet "Iltijo" confirms our comments. First of all, about the title of the poem, why is it called "Iltijo"? What is the poet asking for from whom? In the spring, not only nature, but also man himself is reborn, as if forgetting the pains of the heart. Spring gives a person new feelings, dreams, joys. The poet asks the chapter, which has given him so much vitality, that he will never leave it, begs and pleads with him. In the first lines of the poem we read:

Bahor kelsa boshlanur bog'da bulbul xonishi  
Sava, qumri nag'masi, suralay tovlanishi... [2, 2]  
When spring comes, the nightingale begins to sing in the garden  
Sava, kumri's melody, suralay's glitter... [2, 2]

Indeed, the spring visit is known in the garden as the gentle singing of nightingales, sava, and ants. Because spring is such a season, during which everything comes to life, a person's sense of enjoyment of life increases:

Qirlarda lola sayli, qishloqlarda yilboshi:  
To'xtagay tabiatdan Haqqushlar zorlanishi  
Bahor, ketma mening bog'imdan [2, 2]

Tulip festival in the mountains, New Year in the villages:

The rape of wild birds by nature

Spring, don't leave my garden [2, 2]

In the above lines, the arts of tanosub (arrival of spring, nightingale singing, sava, kumri's melody, tulip festival, New Year) and tazod ("begins", "stops") are used. In fact, the arrival of spring, according to the Eastern calendar, marks the beginning of a new year. This is exactly what the poet means when he says "New Year in the villages." In addition, the chirping of different birds in this season - "song" evokes the mood of living and creating. That is why the poet says, "Stop the rape of the Swans in nature." Because rape is typical of birds.

Qilmishi qing'ir zotga davr qayda, davron qayda?

Vatangado kimsaga beminnat makon qayda?

Yolg'iz otga olamda nom qayda, nishon qayda?

Bahor, sensiz sahro-yu tog'-u toshga joy qayda?

Ketma, Bahor, mening bog'imdan [2,2].

Where is the time, where is the time for the deceiver?

Where is the place of gratitude to homeless man?

Where is the name and destination of a lone horse in the world?

Spring, where are you in the desert, in the mountains, in the rocks?

Don't leave, Spring, from my garden [2,2].

In these verses, the poet summarizes his thoughts about spring, and turns to the images of a stubborn, patriotic, lonely horse. It embodies folk proverbs to embody images and places them in rows. It should be noted that in the above four lines the art of tajohuli arif is used, the answer is hidden within the rhetorical interrogative sentence content. In the lines that reflect the intellectual balance, the image of a man who always strives for spring stands out.

O'lmaslikka ishora- o'langa oshiqligim,

Saodatga ishora- zamonga oshiqligim.

Teranlikka ishora- ummonga oshiqligim,

Go'zallikka ishora- bo'stonga oshiqligim.

Bahor, ketma mening bog'imdan[2, 3].

A sign of immortality is my love for death,

A sign of happiness is my love for the time.

A sign of depth - my love for the ocean,

A sign of beauty is my love for the garden.

Spring, don't leave my garden [2, 3].

In fact, "falling in love with the dead" is an expression of longevity. In our view, "die" here is a symbol of the people, their traditions and customs, immortal values; to him "love," that is, to love and revere him, is a sign of this eternity - "immortality." "Love of time" is a symbol created by a life-loving poet. And the heart of a person who loves life will always be full of goodness and happiness. Love saves the world is an ancient truth. The lyrical hero is as deep-thinking as the oceans, and his heart is home to beauties.

Bu kun qay bir yerda qish, ayda xazonrezgilik,

Qaylarda yoz, qayda kuz, qayda jondan bezgilik [2, 3].

Where is winter on this day, where is the treasury on the moon,  
Where there is summer, where there is autumn, where there is fatigue [2, 3].

Poetry is a product of an instantaneous state and emotion. Then you have no time limit. Most importantly, the experiences reflected in the lines we are reading can be felt in these moments. At that moment, at some point in the world, a terrible war broke out, bombs exploded and weapons were fired.[8] There are also droughts, arid lands, or vice versa: floods, homeless people, hungry and destitute people, people who are "tired of life"; Earthquakes and fire-eyed volcanoes are the manifestations of nature's extraordinary mysteries. Spring is a powerful force that helps solve these mysterious sins.

Ko'klamning har nafasi umrga arzigulik,  
Bog'siz, bog'bonsiz yerda ne ham qilsin ezgulik...  
Ketma, Bahor, mening bog'imdan [2, 3].

Every breath of spring is worth a lifetime,  
What good is a garden without a gardener?  
Don't leave, Spring, from my garden [2, 3].

In our heavenly country, spring, "every breath of spring" is worth a lifetime. According to the poet, our homeland Uzbekistan is a "garden" in the eyes of God. And there is a "gardener" who fills this "garden" with goodness, kindness and happiness. Spring does not leave such a garden at all.

Giyoh bilan qoplanmish ko'hna qabr boshlari,  
Maysadagi shudringlar- kimlarning ko'zyoshlari?  
Bu yerda yotar otam ham uzangidoshlari,  
Har bahor eslar uni qavmi-qarindoshlari,  
Bahor, ketma mening bog'imdan [2, 3].

Ancient tombs covered with cocaine,  
The dew on the grass - whose eyes?  
Here lies my father and his companions,  
Every spring his relatives,  
Spring, don't leave my garden [2, 3].

The pain and suffering in these verses are familiar to each of us. Spring is such a season that it fills even the cemetery with flowers, bringing the breath of life to a quiet place. In this sense, these lines reflect a noble spirit, a feeling. In other words, the poet is talking about the end of human life. "Dew on the grass" is an artful use of the poet. The poet uses it as a metaphor for tears and reinforces that noble spirit and substantiates his thoughts [9].

Yoz bo'yi qorga zorman, qishda bahorga zorman,  
Chamanda gul bo'yiga intiqman, intizorman...  
Kuz kelmay xazon bo'lgan sevgi, guldan bezorman,  
Bahorsiz ham diyorsiz el ichra benazarman,  
Bahor, ketma mening bog'imdan [2, 3].

I spend the summer in the snow, the winter in the spring,  
I'm looking forward to the flower in my bag...  
Love without autumn, I'm tired of flowers,  
Without spring, without land, without hands,  
Spring, don't leave my garden [2, 3].

In the last verse, the poet's poetic thoughts about spring are further deepened and clarified. At the same time, spring represents the image of the Motherland. That is, in the eyes of the poet, a person who does not understand the beauties of spring, who does not think about the past and the future, about himself in this season, is a homeless person. In addition, the seasons of nature change. This situation gives a new meaning to human life, the quality of "every season" attracts it. T. Sulaymon reflected in the above lines the longing for the good feelings in the human heart. Consequently, the longing for spring expresses the longing for life [10].

**Discussion:** The poet's poem "**Have you become irrevocable, spring**" also resonates with the lines analyzed above in terms of content and form. In both verses of the poem, a new idea is expressed in three verses, and the fourth verse is repeated in one poem as a plea (Spring, don't leave my garden), and in the other as a question (Have you become irrevocable, spring?). But when analyzed from the point of view of images, the difference in the poems is obvious. This feature is evident in the series of simile and parables of both poems separately:

Yer-u samovatda Navro'z nafasi,  
Bog'-u bo'stonlarda andalib sasi,  
Bu nafas, bu sasning yo'q muqoyasi.  
Qayta ketmas bo'lib keldingmi, bahor?[4,16]

The breath of Navruz in the heavens and the earth,  
The smell of garden and orchards,  
It's a breath, it's a breath of fresh air.  
Have you become irrevocable, spring?? [4,16]

It should be noted that in this poem, unlike "Iltijo", the expression "andalib sasi" is used instead of "nightingale's song". Or "New Year's in the villages" sounds like "Breath of Navruz in the sky." The poet emphasizes that this breath, this sound, this mood is not similar. In the following verses, the poet writes that he saw spring "first in the morning" "on the mountain of God", "on the cheeks of girls", "in the state of an angel" [6]:

Dastlab tong chog'inda ko'rgandim seni,  
So'ng Tangri tog'inda ko'rgandim seni.  
Qizlar yanog'inda ko'rgandim seni.  
Qayta ketmas bo'lib keldingmi, bahor?  
Malak holatinda ko'rgandim seni,  
Qushlar qanotinda ko'rgandim seni,  
Kuychi bayotinda ko'rgandim seni.  
Qayta ketmas bo'lib keldingmi, bahor? [4, 16].

I first saw you in the morning,  
Then I saw you on the mountain of God.



I saw you on the girls' cheeks.  
Have you become irrevocable, spring?  
I saw you as an angel,  
I saw you on the wings of birds,  
I saw you in Kuychi Bayot.  
Have you become irrevocable, spring? [4, 16].

In both verses, the poet's familiarity with classical melodies ("nightingale's song", "first in the morning", "on the mountain of God", "on the cheeks of girls", "in the state of an angel") is clearly seen in the use of words and affixes. Kuychi Bayoti, on the other hand, connects the two poems with an invisible link of internationalism as a new expression of "love for the dead."

In the following verses, the poet emphasizes that spring has a special place in nature and human life:

Hali ayilmagan tarifi qancha,  
Sen to o'r-u qirni aylanmaguncha  
Bog'lar gulga kirmas, ochilmas g'uncha.  
Qayta ketmas bo'lib keldingmi, bahor? [4, 16].

What is your unspoken formulation,  
Until you turn around  
The gardens don't bloom until they open.  
Have you become irrevocable, spring? [4, 16].

In the poem, spring is portrayed as a beautiful girl with "swollen eyebrows, red eyes, and flowery skirts." It is this verse that can be interpreted as the culmination of the poem - the lyrical protagonist's emotions. The reason is that the thoughts are so rich in passion that they sound like the fiery cry of a lover:

Qoshlari o'smalim, ko'zi surmalim,  
Etak-etak gulli, bari burmalim,  
Seni dunyoda hech kima bermalim!  
Qayta ketmas bo'lib keldingmi, bahor? [4, 16].

Eyebrows are swollen, eyes are red,  
Flowers in skirts, all twisted,  
I shouldn't give you to anyone in the world!  
Have you become irrevocable, spring? [4, 16].

Erkin Vahidov wrote in a poem dedicated to spring: "Spring has the sweet height of youth" [5,26]. In Tura Sulaymon, this allegory is expressed in accordance with the image of Christ. It is known that in the history of our literature this image has been referred to many times. In this poem, which we are analyzing, spring is also represented in the image of the resurrecting Messiah. This allegory is so vital that in the spring every branch of nature awakens and comes to life. The poet considers this vitality as the basis of longevity:

Sen qayta yaralish, yoshlik timsoli,  
Hayot baxsh etuvchi Maseh misoli.  
Sensiz odamzodning ne kechar holi?  
Qayta ketmas bo'lib keldingmi, bahor?  
To'rt faslning tanho malikasi sen,

Tugal go'zallikning nihoyasi sen,  
Oshiq-mashuqlarning tamannosi sen!  
Qayta ketmas bo'lib keldingmi, bahor? [4, 16].

You are a symbol of rebirth, youth,  
An example of a life-giving Messiah.  
What would happen to humanity without you?  
Have you become irrevocable, spring?  
You are the only queen of the four seasons,  
The end of all beauty is you,  
You are the wish of lovers!  
Have you become irrevocable, spring? [4, 16].

The idea that "spring is the bride of the seasons" is widespread among the people. To liken her to a princess, to describe her as a complete beauty, is a metaphor that is unique to the poet. In the last verse, as in "Iltijo", the poet puts the concepts of spring and homeland side by side again:

Yer birla osmonning tillaqoshi sen,  
Aytar qo'shig'imning avval-boshi sen,  
Oltin beshigimning safardoshi sen!  
Qayta ketmas bo'lib keldingmi, bahor? [4, 17]

You are the gold of the earth and the sky,  
You are the beginning and ending of my song,  
You are the companion of my golden cradle!  
Have you become irrevocable, spring? [4, 17]

Here, the "golden cradle" is the metaphor of the Motherland, and the "companion" is its companion. That is, when spring and the homeland go hand in hand, it means that the country is accompanied by enthusiasm, creativity, beauty and kindness, courage and love. The poet's ultimate goal in depicting spring is to praise the Motherland. This resemblance in both poems is in harmony with the following verses of Erkin Vahidov in the "Spring" mustahzod, because in it, too, the purpose of spring is love for the motherland:

Ey sen, Vatanim, menga o'zing bitta jahonsan,  
bir o'g'ling erurman,  
Jon boricha ko'nglimda senga sidqu-vafolar-  
Sen menga yagona.  
Men neki yozar bo'lsam, o'zing boisi nazmim,  
madhim senga doim,  
Bitdim yana, jonim, yuragim  
Senga navolar, gul fasli bahona [5,24].  
O my Motherland, you are one world to me,  
I am your son,  
I wish you all the best  
You are unique to me.  
Whatever I write, it's my poetry,  
I always sing for you,  
I'm done again, my dear, my heart

To you, melodies are an excuse for the flower season [5,24].

**Conclusion:** So, Tura Sulaymon's "Iltijo" dedicated to spring and "Have you become irrevocable, spring?" Based on the analysis of poems can be concluded as follows:

1. At the beginning of both poems the beginning of spring is described in harmony with the sound of the nightingale and the breath of Navruz.

2. In three verses of the poem a new idea is expressed, and the fourth verse is repeated in the same way as in the psyche of the lyrical hero.

3. In the last verse of the poems, the image of spring has been an expression of love for the homeland and the place of birth.

4. In "Iltijo" through the spring created unique images and parables of a stubborn person, a patriot, a lone horse, a lifelong people, love, beauty, gratitude and respect for human memory.

5. In "Iltijo" you can find a unique synthesis of folk proverbs. This is significant as the poem acquires more social content.

6. In "Have you become irrevocable, spring?" is embodied as a blue angel, a beautiful companion, a symbol of youth, a life-giving Messiah, a lonely queen of the four seasons, the end of complete beauty. The poem is mainly dominated by the depiction of the beauty of nature.

Thus, the two poems of Tura Sulaymon, which we have analyzed above, are deeply rooted in the heart of the poet with their artistic findings, sincerity in expressions and folk tone. That is why many of his poems have become songs and are deeply rooted in the hearts of the people. As the poet embodies the image of spring, he looks at human life, the connection between the spring of nature and the spring of human life. This harmony manifests itself in every metaphor, proportion, and contrast used by the poet. The parables and concepts used by the poet come together to express the poet's **LOVE FOR LIFE**.

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UDC: 821.161.1.0(075)

## LITERARY-AESTHETIC VIEWS OF ZULFIYA

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**Abstract:** This article analyzes the poems of the poetess Zulfiya. At the same time, Zulfiya's literary and aesthetic views were reconsidered. The stage of formation, development and perfection of the poet's work is analyzed on the example of poetry.

**Key words:** poetry, literature, contemplation, literary-aesthetic view, motive of happiness and devotion, motive of emigration and separation.

**Аннотация:** В статье анализируются стихи поэтессы Зульфийи. При этом были пересмотрены литературные и эстетические взгляды Зульфийи. На примере поэзии анализируется этап становления, развития и совершенствования творчества поэта.

**Ключевые слова:** поэзия, литература, созерцание, литературно-эстетический взгляд, мотив счастья и преданности, мотив эмиграции и разлуки.

**Аннотация:** Мазкур мақолада шоира Зулфия шеърлари таҳлил қилинган. Шу билан баробар Зулфиянинг адабий-эстетик қарашлари яна бир бор нигоҳдан ўтказилган. Шоира ижодининг шаклланиш, ривожланиш ва такомиллашиш босқичи шеърят миқсолида таҳлил қилинган.

**Калит сўзлар:** шеър, адабиёт, тафаккур, адабий-эстетик қараш, бахт ва садоқат мотиви, ҳижрон ва айрилиқ мотиви.

**I.Introduction:** An analysis of Zulfiya's views on poetry and art, and her study, made it necessary to re-examine the poet's work. Her first poem was written when she was in college. Written in 1931, the poem is called "Free Girl" and is dedicated to women who wear a red turban on their heads.

I am a very free girl:  
(Men juda ozod qizman:)  
I don't know what darkness is,  
(Zulmat nima bilmayman,)  
In the lap of the factory  
(Fabrikaning qo'ynida)  
I enjoy workin hard.  
(Mehnat qilib yayrayman.)  
When the bell rang in the morning  
(Tongda bong ursa gudok,)  
I wake up right away  
(Turaman apil-tapil.)  
An example of the sun in the sky  
(Ko'kdagi oftob misol)  
My red turban is in my head

(Boshimda durram qizil.)[1]

This is how the poet's first ideas about poetry were formed. Zulfiya's first collection of poems was published in 1932 at the age of seventeen. But the artistic level of the other poems was also at the level of the above poem[2].

**II.Literature review:** In his poems, which are included in the Song of the Girls (1939), she recounts the moments of his youth. The poems "Spring Night" and "Spring" also reflected the spring period of youth. But when the poetess Zulfiya herself said to Hamid Olimjan, **"Why is there no end to the poem I have written? I can continue it no matter where I stop."** He said: **"You want to say everything in the ring, even though it's not worth it. Then, you know, you have to write the poem from the end."** This mentoring relationship, which began when they first met, has continued throughout their short lives together[3]. Zulfiya remembers that when she first met Hamid Olimjon, the poet became acquainted with Russian literature. He asks. Reading the original source of the work gives the poet Nekrasov's collection, saying that it "allows you to feel the whole aroma, the sweetness." Indeed, many of the poems in the second collection were lengthy, and there were many poems of unknown completeness[4].

**III.Analysis:** From Zulfiya's collection of poems "In the days of Hijran" (1944), the motives in it expanded. Poetry now began to reflect not only false emotions, but also the views of a woman with a deep vision, who could look at life broadly and thoroughly. This is even more evident in her poem In the Days of Hijran[5]:

Dear love, dear friend,  
(Ey sevgisi aziz, ey sevimli yor,)   
Don't go away, never go away.  
(Ketma, aslo ketma ko'zimdan yiroq.)   
Although I dream of seeing you  
(Garchi tushimda ham seni bir ko'rish)   
A thousand times better than the days of Hijran.  
(Hijron kunlaridan ming bor yaxshiroq.)

Zulfiya was a courageous poet who was not afraid to sing in the loud voice during the Soviet era[6]. After all, at a time when everyone was required to seek their happiness from communism, she was a poet who was able to show in practice that a woman seeks her happiness in the family, the happiness of her husband, children, and longing are higher than any ideological views. She was a poet who was able to show not only the role of Hamid Olimjan in Zulfiya's life, but also that happiness is in the family for a man in general, and for a woman in particular.

Zulfiya is a poet who has a special joy in the happiness of a child. In her collection "Hulkar" (1947), the themes expand, and the family and the child rise to a separate level[7]:

There is sorrow and grief everywhere  
(U bor yerda qayg'u va hasrat)   
It's a stranger to your life.  
(Hayotingga begona ekan.)   
Oh, tell me, more expensive than a child  
(Qani, ayting, farzanddan qimmat)



That's what's in the world.  
(Bu dunyoda nima bor ekan.)

(“Child”)

This collection describes the beauty of nature and the beauty of the seasons. In the poems "Two Letters", "Night", "Spring has come to interrogate you", the image of nature is combined with the sounds of hijra and begins to appear in the center of the poems[8].

**IV.Discussion:** The poet's collection "People close to my heart" is full of hijran. Especially in the poem "**I'm sorry, in ignorance**" the poet's mental anguish is vividly reflected. The poem was written in connection with the death of Hamid Olimjan. Academician Naim Karimov described the incident in detail in his book Zulfiya. On July 3, 1944, Hamid Olimjon plans to go to the theater with Zulfiya[9]. Zulfiya, who was waiting for the poet to arrive at the appointed time from Dormon, is worried that he will not come, even though time has passed. Because Hamid Olimjan never broke his promise. Hamid Olimjon will not come that day.

I wish I was with you  
(Koshki edi, men yoningda)  
That's when I got up.  
(Turgan bo'lsam o'sha dam.)  
Didn't I get into your blood,  
(Kirmasmidim men qoningga,)  
I wouldn't give a damn.  
(Bermasmidim jonni ham)

Such tragic pathos would usually be typical of the speeches of the protagonists, but Zulfiya was able to express her experiences and at the same time her great love[10].

To the cruelty of death  
(Ajal degan beshafqatga)  
I wish I could shoot my love.  
(Koshki otsam ishqimni.)  
If I fill in the blue,  
(To'ldirsam ham ko'kni dodga,)  
I'll be happy if I keep it.  
(Saqlasam men baxtimni.)  
I wish, in your arms  
(Koshki edi, so'ng qo'lingda)  
I wish I will die  
(Erkalanib bersam jon.)  
If you have one last look,  
(So'nggi nigoh senda qolsa,)  
I'd like to close my eyes.  
(Men ko'z yumsam bearmon.)

The poet prefers to die in the arms of a friend than to stay in exile. Zulfiya's other poems dedicated to her husband also showed the Uzbek woman's boundless devotion to her husband in a sad tone. She was a living symbol of the boundless sorrow and grief in Abdulla Aripov's poem "Woman". "People close to my heart", "Where are you, my heart", "What have you done?" In poems such as "When the apricot blossoms", this tone is intensified. In particular, the poem "Ne baloga etding mubtalo" became a poem that rose to the top with the motive of hijran[7]:

It hurts to open your eyes,  
(Ko'z ochgani qo'ymaydi alam,)   
If I put my head down, the pillow will burn  
(Boshim qo'ysam kuydirar bolish.)   
Unforgivable books and pens,  
(Yupatolmas kitob va qalam,)   
My verses are full of murmurs.  
(Misralarim ko'tarar nolish.)

The image of women has a special place in Zulfiya's case. More precisely, in the works of the poetess dedicated to women, a unique image of an Uzbek girl is drawn. The poet's poem "Don't be tired, girls" shows the playful weight of the poet's lyrics and the harmony of different tones. The poem "For attractive girls" also stands out in the work of the poet[10].

**V.Conclusion:** First of all, the poet's poems are thoughtful and calm. Her poems are full of thought and philosophical depth. Probably a factor as to why they're doing so poorly. Perhaps the complexity of the poet's poems should be connected with this. Secondly, the poet incorporates into the poem her impressions of life events, which are intricately intertwined with thoughts and feelings, and the reader finds these and considers aesthetic pleasure as the main aesthetic principles of poetry.

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UDC:37.015.3

## DEVELOPMENT OF THE COMMUNICATIVE COMPETENCE OF MEDICAL STUDENTS

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**Annotatsiya:** Ushbu maqolada turli fanlarni o'qitishda keng qo'llaniladigan ta'limning interaktiv shakllari haqida soz boradi, bugungi kunda ular chet tilini o'qitish, chet tili o'qituvchisi uchun mavjud bo'lgan texnologiyalarni tanlashni kengaytirish va kommunikativ yondashuvni takomillashtirish bilan bog'liq ravishda o'rganilmoqda. Kommunikativ-interaktiv yondashuv talabalarning real, jonli tildan amaliy foydalanish qobiliyatini rivojlantirishga qaratilgan bo'lib, til vositalarining ularning kommunikativ funksiyalari bilan ongli o'zaro bog'liqligini o'rgatishga mo'ljallangan. Chet tilini zamonaviy usulda interaktiv usullar va multimedia texnologiyalaridan foydalanmagan holda o'qitish deyarli imkonsiz bo'lib qoldi.

**Kalit so'zlar:** Mutaxassis, interaktiv shakl, kommunikativ yondashuv, suhbat, faoliyat.

**Аннотация:** В данной статье рассматриваются интерактивные формы обучения, широко используемые в преподавании различных предметов, сегодня адаптируются применительно к обучению иностранного языка, расширяя выбор технологий, доступных преподавателю иностранного языка, и совершенствуя коммуникативный подход. Коммуникативно-интерактивный подход направлен на развитие у студентов умения практически пользоваться реальным, живым языком, призван обучать осознанному соотнесению языковых средств с их коммуникативными функциями. Современное обучение иностранного языка без использования интерактивных методов и мультимедийных технологий становится практически невозможным.

**Ключевые слова:** Специалист, интерактивная форма, коммуникативный подход, общение, деятельность.

**Abstract:** This article examines interactive forms of education, widely used in teaching various subjects, today they are being adapted in relation to teaching a foreign language, expanding the choice of technologies available to a teacher of a foreign

language, and improving the communicative approach. The communicative-interactive approach is aimed at developing students' ability to practically use a real, living language, is designed to teach a conscious correlation of language means with their communicative functions. Modern teaching of a foreign language without the use of interactive methods and multimedia technologies becomes almost impossible.

**Key words:** Specialist, interactive form, communicative approach, communication, activity.

**Introduction.** At present, one of the requirements for the conditions for the implementation of basic educational programs for training a specialist on the basis of the state educational standard is the widespread use of active and interactive forms of conducting classes in the educational process in order to form and develop the communicative and professional skills of students. The introduction of interactive forms of education is becoming one of the most important areas for improving the training of students in a modern university. The active involvement of students in the educational process contributes to easier assimilation, understanding and memorization of the material, increased attention and performance, the effectiveness of the educational process as a whole. The ultimate goal of teaching any foreign language is to teach free orientation in a foreign language environment and the ability to respond appropriately in various situations of communication with native speakers. In the educational process, this is achieved through a communicative-interactive approach, the implementation of which is possible through the use of interactive learning technologies. Unlike traditional teaching methods, where the teacher is the main actor controlling the course of the lesson, and students act as passive listeners, subordinate to the teacher's directives, interactive methods and forms of teaching are focused on broader interaction (educational communication) of students not only with the teacher, but also with each other, and on the dominance of student activity in the learning process. Interactivity (from Lat. Inter between and action action) is one of the characteristics of the dialogue forms of the cognition process.

Therefore, interactive learning is, first of all, interactive learning, during which there is interaction between the student and the teacher and between the students themselves, and it is a special form of organizing cognitive activity. The future doctor should possess not only the professional competence for professional work realization, but also the communicative competence as a basis of his effective business communication. At present time the requirement for ability of direct communication at scientific conferences, in cases of an exchange of an experience, an acquaintance with concrete techniques and a work of medical institutions is growing. Besides, the foreign language is necessary for physicians for the mediated professional work, i.e. for reading special literature: periodicals, monographs, textbooks, directories, abstract editions etc. Today the future doctors should have such level of a foreign language communicative competence which allows them to use it as “means of getting of new knowledge”, and as “communication means” with foreign partners in situations of study and professional work.

**Research Methodology.** In interactive learning, language is acquired during natural communication, the organizer and participant of which is the teacher. Students become subjects of this communication and must constantly interact. In teaching a

foreign language as a subject area within the educational system, the need for interactive methods and forms of teaching is very great, since the main task in teaching Russian to foreigners is to organize vigorous speech activity in the classroom. Achievement of this purpose is promoted by the communicative approach which should give knowledge and generate abilities which will allow using confidently a foreign language in a real life where the emphasis becomes on development of communicative skills, i.e. on activation of speech activity of students.

Thus, we acquaint students with bases of communicative cultures, we produce abilities to differentiate and to interpret speech tokens, to reveal the general motives of partners' behaviour at the moment of communication and we help to draw up the self-improvement plan. At English lessons we create such emotionally-psychological atmosphere which promotes formation of communicative competence of students in the process of joint cooperation of the teacher and students. Purposefully we form communicative professional competence and communicative abilities on the basis of principles and rules of medical etiquette, we aspire to combining insistence and kindness, sensation of pleasure from communication. We also use group, individual and independent work, role games, situational games, psychological trainings and creative works that promote the development of atmosphere of good nature, responsibility and help. It is considered that the leading tendency of a modern technique of foreign language teaching is the communicative orientation. The purpose of such training is to form the communicative competence speaking another language which is a major component of any foreign language competence.

Interactive methods make it possible to solve several problems at the same time, since the development of communication skills and skills, as well as an increase in students' interest in learning the Russian language; effective assimilation of educational material; formation and development of speech skills: speaking, listening, reading and writing; formation and development of communication skills in the professional sphere; stimulation of students' independent speech activity; development of skills of analysis and reflection; development of skills in modern technical means and technologies of perception and processing of information; reducing the share of classroom work and increasing the volume of students' independent work.

In addition, interactive forms of teaching a foreign language allow you to achieve the following goals: - educational: to improve the communication skills of students on the material of various types of texts, including scientific and specialty texts, to control grammatical skills; - developing: to introduce one or another phenomenon, topic, to develop the ability to work in a group, communication skills and the skill of perceiving information of a different nature, the ability to conduct a dialogue, skills of professional behavior; - educational: to establish emotional contact between students, create a team spirit in group work, educate the creative personality of the future specialist, increase interest in the Russian language, reveal personal qualities in conventional (game) situations that simulate the life or professional sphere of communication, relieve emotional stress. In the practice of teaching Russian to foreign medical students, the key aspect of the educational process is the language of the specialty, the level of proficiency in which depends on the improvement of the professional training of future specialists. The interactive learning makes the process of learning productive that



can be called a special form of organization of cognitive activities. It concerns very specific and predictable objectives. One of these is to create a comfortable learning environment in which learners feel their success, their intellectual consistency of training. The effectiveness of interactive learning techniques in teaching is increased by the requirement and demand for the successful classroom teaching. The interactive teaching methods contain a lot of effective activities and approaches which are directed to fast the teaching process and get success.

Interactive methods:

- communicative language teaching,
- direct method, Interactive methods,
- language immersion, natural approach,
- silent way,
- suggestopedia,
- total physical response (TPR).

Communicative language teaching

Communicative language teaching (CLT), also known as the Communicative Approach, emphasizes interaction as both the means and the ultimate goal of learning a language. The 'Communicative Language Teaching' is not so much a method on its own as it is an approach. In recent years, task-based language learning (TBLL), also known as task-based language teaching (TBLT) or task-based instruction (TBI), has grown steadily in popularity. TBLL is a further refinement of the CLT approach, emphasizing the successful completion of tasks as both the organizing feature and the basis for assessment of language instruction

**Analysis and results.** The main goal of classes with foreign medical students is to facilitate the understanding and perception of scientific (medical, etc.) texts in Russian, to prepare students for communicating with patients, and to form communicative competence for professional activities. Traditionally, teaching the language of a specialty takes place on the material of educational texts in the specialty, since such texts are the main source of information necessary for future medical workers.

Operating with the informative content of a scientific text is considered as the main component of training. The main components of interactive text-based learning are interactive exercises and assignments. Performing such exercises and assignments, students not only and not so much consolidate familiar material in their memory, but learn new one, integrating their own ideas, their educational, life and communicative experience into the process of cognition.

**Conclusion.** The success of the formation of professional foreign language communicative competence largely depends on the degree of formation of intercultural competence among students. Students should be aware of the differences in situational speech behavior and communication in the professional environment of their country and the country of the studied language and tolerate them, recognize and predict difficulties in communication, understanding the language and speech behavior of the interlocutor, know the basics of non-verbal communication and be able to develop strategies for overcoming these difficulties. The listed skills and abilities will help students feel like full-fledged subjects of communication in a foreign language

environment. Interactive forms and methods of active learning noticeably intensify the cognitive activity of students; give them the opportunity to independently (individually or in a group) find solutions to the problem / task; create an emotional background for vigorous activity; change the role of the teacher to the role of the organizer of the educational process, consultant; establish subjective-subjective relationships between the teacher and students both directly and indirectly through the study group, educational text, computer, etc.

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UDC: 372.881.111.1

## REPRESENTATION OF 'FATHER' AND 'MOTHER' IMAGES IN ENGLISH AND UZBEK LULLABIES.

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**Abstract:** The article demonstrates the representation of 'father' and 'mother' images in English and Uzbek lullabies. Linguoculturological aspects of images are analysed in lullaby texts.

**Key words:** 'father' in lullaby, 'mother' in lullaby, linguoculturological aspect, leading idea, secret education

**Аннотация:** Мақолада инглиз ва ўзбек аллаларида 'ота' ва 'она' образининг ифодаланиши ақс этган. Алла матнларида образларнинг лингвокултурологик хусусиятлари таҳлил қилинади.

**Калит сўзлар:** аллада ота образи аллада она образи лингвокултурологик жиҳат, етакчи ғоя, яширин тарбия

**Аннотация:** В статье демонстрируется представление образов «отца» и «матери» в английских и узбекских колыбельных. В колыбельных текстах анализируются лингвокультурологические аспекты.

**Ключевые слова:** «отец» в колыбельной, «мать» в колыбельной, лингвокультурологический аспект, ведущая идея, тайное воспитание.

**Introduction.** The image of the father is highly regarded in lullabies. The main motive is to honor the father. The father is mentioned in both languages as the breadwinner of the family. The feeling of respect for the Father is evident. Although in Uzbek lullabies we meet the complaints of a mother who has suffered from the oppression of her husband, in many lullabies the idea of instilling a high sense of respect and love for the father into the child has been promoted.

It is the responsibility of every person to ensure that every family has peace, stability, tranquility, that their children are healthy and well-rounded, that there is a healthy environment and a healthy lifestyle in the family. Such a responsible and honorable task is done by a woman, a respectable mother, who sincerely, without complaining, proudly raises her head, finds strength in the difficulties of life and helps those around her.

What we hear most in lullabies is the voice of the mother. The song she sings allows us to see the closeness of the world she shares with her child. Leslie Daiken described lullaby as "a song of motherly love." [4] In lullabies, a mother's love for her child is conveyed in the most beautiful way. It is said that a mother puts all her needs aside and devotes herself completely to her child.

Ohunjon Safarov states "Lullabies are lifelong songs that have been passing from thousands of generations of mothers, combining the feelings of motherly love and harmony". [9]

**Literature review.** Clarence Wesley Sumner described lullaby as ‘this is the very first step in teaching the child the love of books and reading. Every mother should realize this fact when she is singing or humming softly to her baby.’[3]

Attitude and respect towards mother and father is beautifully described in M.Yoqubbekova’s research work.

Alla deyin, o’payin alla  
Qiyosingni topayin, alla  
Tiling chiqib non desang, alla  
Kunda kulcha yopayin, alla.

In this text, which reflects the devotion and love of the mother, the mother offers her services to the child. Her readiness to perform all the desires of the child sometimes reaches its peak. She offers to make a difficult task for her child by making small bread every day.

A particular feature of lullabies is that child is acquainted with his close relatives:

Hozir dadang keladi, alla,  
Oyni olib keladi, alla.  
Do’mboqlaringa deb-o, alla  
Qo’yniga solib keladi, alla.

Father goes and brings something unusual- the moon in the sky. He is the head of this family. He adores his children. This information appears from this lullaby passage. Accordingly, a special attitude towards the father is brought up. The motive reinforces the attitude of the father as a breadwinner and a caring person in the family. [10]

Irene Watt states that “In ‘Hush-a-bye-my-Bairnie’, ‘daddy’ is on the angry sea, enduring wet, cold and tempestuous weather in order to provide a living for his family from the perilous fishing, from which he may never return.

Hush-a-bye-my-Bairnie’  
Hush-a-bye, my ain wee lamb  
Daddy is on the angry sea,  
Toiling hard for you and me.

In England it was the custom to place a piece of the father’s clothing in the crib so that a child would have an instant connection with him. Should the garment be red, all the better because it would also serve as a protection from evil.[7]

The lullabies sung by the mother strengthen the bond that is still present between the mother and the baby so much more. Because the mother keeps the communication fresh and permanent through her lullabies and thus doesn’t let the bond between become weaker. In this way the baby grows up as a whole, united in one body without getting foreign to its own mother.

The fact that babies are able to hear the world outside the womb was declared following the experiments carried out in the 19th century. Whereas the tradition of singing lullabies, which has its origins in our own culture, has been carrying out the same function for centuries. Consequently, this reality is the evidence of how significant the tradition and culture of speaking with children through lullabies, being continued for centuries, is in fact. [5]

**Research methodology.** We used the methods of comparison and description. We have selected English and Uzbek lullaby texts based on textual sources. Current research is regarded as exploratory research and it intends to explore the main aspects of an under-researched lullaby genre which is included in children folklore. Qualitative analysis method helped to collect information for our research.

**Analysis and results.** In lullabies, the father is often portrayed as being outside home, at work or elsewhere as needed. In the following examples, we can see that the father went to the market in the Uzbek lullaby, and in the English lullaby father went hunting.

Bye baby bunting,  
Daddy's gone a hunting,  
To get a little hare's skin  
To wrap a baby bunting in. [2]

As has been stated in lullaby passage, the father went hunting to bring hare skin for his son. There appears a presumption that the lullaby may have sung for the first time by a mother lived in cold climate. Because father is going to bring hare skin to wrap his baby. Besides, it is emphasized that the father gave up the pleasures of the house and went hunting in spite of danger, and sacrificed himself for the sustenance of his family.

Dadang bozorga ketdi-yo, alla  
Ko'zingga uyqu kepti-yo, alla  
Uxla, qo'zichog'im-o, alla  
Dadang novvot keltirdi-yo, alla,  
Senga zo'r ot keltirdi-yo, alla,  
Uxla, toychog'im, alla.[8]

The image of a father in lullabies is not always glorified. In some Uzbek lullabies we see a mother crying over the absence of a father, in some lullabies we see the image of a mother accustomed to the oppression of the father because of the child. Apparently, the father is described as a tyrant. In the following lullaby the father is portrayed in a negative light.

Hovuzda oy o'ynaydi, alla,  
Choy idishda choy qaynaydi, alla.  
Dadang seni suymaydi, alla,  
Onang senga to'ymaydi, alla.

Unfortunately, there are also fathers who do not love their children. In the passage we meet a mother who is complaining about one of them. The heart-wrenching pain is coming from the mother's heart. Yet, as always, a mother's love for her child is boundless.

Zarga to'ldi bilagim,  
Zardobga to'ldi yuragim.  
Dadang o'lsin, ayang kuysin,  
Ma'rifatxon, alla.

The mother's wrist is full of gold, but she is unhappy and in pain. Involuntarily, she is singing because her heart is full of pain. Although not clearly stated in the quartet, it is clear that the father is portrayed in a bad light. Perhaps the mother is tired of the



oppression of her father. Perhaps the mother is suffering from daily pain. The desire to see the father's death is also reflected in the lullaby she sings.

As mentioned above, the father is described as the head of the household. The fact that a father brings a gift to a child shows that the father cares for his child and loves him dearly. The mother, on the other hand, tries to instill the child's heart into a feeling of love for the father. In this way, the mother creates a warmth between the father and the child. In Uzbek families, the market is mostly run by men, which shows that they are the head of the household. While a father's provision of bread is a source of livelihood, bringing a horse for his child is a sign of his deep love for the child.

My heart is like a fountain true  
That flows and flows with love for you  
As clings the bark unto the tree  
So clings my pretty babe to me.  
And it's O sweet sweet!  
And a lullaby.  
There is not a rose, where'er you seek  
As dainty as my baby's cheek  
There is not a comb of honey bee  
So full of sweets as babe to me.  
There is not a star that shines on high  
Is brighter than my babe's eye  
There is not a boat upon the sea  
Can dance as baby does to me.

In this example of lullaby, the mother emphasizes that nothing on earth can be like a child. She compares the child's relation to his mother to the density between the bark and a tree to show their inner closeness and to express that they are not easily separated. To express the view, even nature says that neither a flower nor a star can be more beautiful than a child. She compares the sweetness of a child to the honey of bees, but the child is sweeter than that. In fact, the mother does not measure the child by any beauty in the world. He is more precious than all the blessings and riches of the world. A mother sees her happiness in her child. As long as the child is healthy, there is no happier person than her in the world.

Qizil gul novdasidan, alla,  
Kamar qilay belingga, alla,  
Sochlarim tolasidan, alla,  
Bog'ich qilay to'ningga, alla.[8]

In the verse, mother is seen making a belt for her son from a branch of a red flower and is ready to make a waist belt for his son's chapan (traditional Uzbek clothing for men) from her hair. Logically, weaving a belt from a twig and making a waist belt from hair strand is impossible task to do. But a mother's love for her child is paramount. So, for her, any hard work seems easy. In the following example, we can see that a mother is not only willing to work hard, but also willing to give her life for her child.

Suyansang so'rilar bo'lay, alla,  
O't yoqsang mo'rilar bo'lay, alla,  
Boshingdan parvonalar bo'lib, alla,

Uyingda cho'rilar bo'lay, alla.[1]

A mother who is ready to do anything to support her child is also ready to be a seat for him. Acting as a chimney and even being a slave for her child is nothing for a mother. All of these sacrifices show that the mother is ready for anything for the pleasure of her child.

**Conclusion.** Both language lullabies show that respect for mother and father is highly valued. Lullaby examples are illustrated with linguoculturological elements. These elements show English and Uzbek mentality, national identity and values, culture and way of thinking. Ideas expressed in lullabies no matter which country they belong to are innermost feelings and desires of mother. They teach children the culture of his country with the help of lullabies.

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UDC: 81`1:004=512.133

## **THE IMPORTANCE OF LINGUISTIC MODULE FORMS IN THE NATIONAL CORPUS**

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**Abstract:** The state analyzes the linguistic module and the algorithm and its types from independent components of the linguistic program code. The need for algorithms for phonological, morphological and spelling rules for the formation of the

lexical and grammatical code is scientifically substantiated. The importance of such linguistic modules as phonology, morphology and spelling in the formation of the linguistic base of the national corpus of the Uzbek language is emphasized.

**Keywords:** corpus, spelling module, morphological module, linguistic module, word-combination modules, word algorithm, formula algorithm, tabular algorithm, graphical algorithm.

**Аннотация:** Мақолада лингвистик дастурларнинг мустақил таркибий қисмларидан бир лингвистик модул ва алгоритм ҳамда унинг турлари таҳлил қилинган. Лексик-грамматик кодни шакллантириш мақсадида фонологик, морфонологик ва орфографик қоидалар алгоритми зарурияти илмий асосланган. Ўзбек тили миллий корпусининг лингвистик базасини тузишда фонологик, морфонологик ва орфографик каби лингвистик модулларнинг аҳамияти ёритилган.

**Калит сўзлар:** корпус, орфографик модул, морфологик модул, лингвистик модул, сўз бирикмасининг модуллари, сўзли алгоритм, формулали алгоритм, жадвалли алгоритм, графикли алгоритм.

**Аннотация:** В статье анализируется лингвистический модуль и алгоритм и его типы из независимых компонентов лингвистических программ. Необходимость в алгоритме фонологических, морфологических и орфографических правил для формирования лексико-грамматического кода научно обоснована. Подчеркивается важность таких лингвистических модулей, как фонология, морфология и орфография, в формировании лингвистической базы национального корпуса узбекского языка.

**Ключевые слова:** корпус, орфографический модуль, морфологический модуль, лингвистический модуль, словосочетательные модули, алгоритм слова, алгоритм формулы, табличный алгоритм, графический алгоритм.

**Introduction:** It is no secret that today's growth in developing countries is due to many factors, including the process in innovation-advanced innovations, commitment to timely implementation of technologies. Innovation is, in fact, the key to growth. As a consequence of the event of new developments in research, the adoption of recent words in language at the expense of external sources, the scale of their use is increasing on a daily basis. In particular, we can see that Uzbek 's computer linguistics is getting richer thanks to the words learned from international computer linguistics. Let's observe the term "module" as an example.

This term is used in the field of informatics: "1) module - program file; 2) module - an object that makes up the code; 3) module - a set of computer cooling systems; 4) MOD is used in such senses as music file format "[13], in mathematics: "1) absolute height; 2) vector modules; 3) modulus of automorphism; 4) the coefficient of conversion of a logarithm in one system to a logarithm in another system, as well as the absolute value of the magnitude "[9]. In the field of mechanics: "1) Young's module; 2) modulus of elasticity; 3) displacement module "[14]. Today, "a module is a complete functional part of a program; modular teaching is modern education, ie step-by-step teaching according to the level of knowledge "[3,12].

The term "linguistic module" plays an important role in the field of computer linguistics. For example, the conversion of natural language into a machine language ,

i.e. the development of ways to process text via a computer system. In this end, linguistic programs in other languages are being created. The linguistic module is an integral part of these linguistic programs. For example, if the lexical module is surrounded by a dictionary layer (words), the grammatical module edits symbols, punctuation, letters and other characters, the spelling rules of the spelling module, the morphological module analyzes words (from word to lexeme analysis) and the synthesis process (lexeme formation), the supersyntactic unit in the syntactic module-the interconnecti phenomenon.

**Literature review.** Analysis of the relevant literature. In her research, M. Abzalova notes: "In order to obtain realistic results in the development of a linguistic framework of word classes, first of all, the affixes that form them and their combinations are attached to words and are the best way to reach the linguistic base." We recommend using the following linguistic modules suggested by M. Abzalova in the formation of the Uzbek Language National Corps:

"The affixes added to the key words in the modulation of the noun category are defined as follows:

affix of affiliation: q\_a= -niki;

affix of place : u\_j= -dagi;

affix of limiting: ch\_q[3]= {-gacha, -kacha, -qacha};

affix of plural: Pl\_a= -lar;

consonant affixes (with variants): k\_a [7] = {-ning, -ni, -ga, -ka, -qa, -da, -dan};

possessive affixes: e\_a [9] = {- m, -im, -ng, -ing, -lari, -miz, -imiz, -ngiz, -ingiz};

noun-forming affix: sh\_y = -lik;

1st type affix of person-number category: sh\_sl [-man, -san, -miz, -siz; -simiz, -sisiz]

affixes: -mi, -chi, -gina, -kina, -qina, -dir, -u, -yu, -da, -a, -ya.

The following examples can be given to the module of attaching the given affixes to the core (A = base, N = derivative): 1. N=A□□q\_a; боланики= бола□□ники

2. N=A□□u\_j; boladagi = bola□□dagi

3. N=A□□ch\_a[1]; bolagacha= bola□□gacha

4. N=A□□Pl\_a; bolalar= bola □□lar

5. N=A□□k\_a[7]; bolaning= bola □□ning

6. N=A□□e\_a[6]; bolam= bola □m

7. N=A□□k\_a□□e\_a[6]; bolalarim= bola □□lar□□im

8. N=A□□k\_a[6]; bolamga = bola □□m□□ga

9. N=A□□Pl\_a□□e\_a[6] □□k\_a[6]; bolalarimga=bola□□Pl\_a; lar□□e\_a[6];m□□k\_a[7];ga

10. N=A□□e\_a[6] □□u\_j; bolamdagi=bola□□m□□dagi.

The modulation continues in this order" [2].

In the process of creating a national corpus in the Uzbek language, an optimum version of M. Abzalova is being used. The algorithm of phonological , morphological and orthographic rules shall be established in order to form a lexical-grammatical code in the linguistic norms module of the Uzbek language phrases.

**Methodology of research.** *What's the [6] algorithm?* Algorithm, algorithm-a clear rule (program) for the execution of actions in a certain order that are used to solve problems of a particular type. One of the basic concepts for cybernetics and mathematics. The rule that performed four arithmetic operations on a decimal number system was called an algorithm in the Middle Ages. [15] The computer with its computing power is fast, clean, accurate and at the same time "completely incomprehensible"[7]. The idea that when we use it to solve a number of problems, the computer invents something on its own is a mistake, and a clear and complete instruction is needed for the computer to work. An algorithm is a rigidly set order that performs the action needed to produce the final result. This may sound strange, but we're always confronted with an algorithm in real life. An example of this is the use of a payphone, which includes a sequence of actions required for a successful phone call. The rules for the use of home appliances, etc., in a short, understandable way, tell us what to do in one way or another, and determine the algorithm of our actions. According to historians and mathematicians,[21] the word "algorithm" is derived from the name of our great ancestor Abu Abdullah Muhammad ibn Musa al-Khwarizmi, and his famous book "Kitab al-jabr wa al-muqabala" has given rise to another popular term "algebra." It is fair to say that the basic algorithm for the production of instructions is controlled in the process of computer-assisted activities. We can not, however, transfer our records directly from the algorithm to the computer, because they are written in a language that the computer does not understand, only people understand. For a computer to understand an algorithm, it is translated into a machine language, just as algorithms written in a machine language are called programs or computer programs. Important features of the optional algorithm: the accuracy of the algorithm - the value of each step, discreteness - the process of solving the problem can be divided into several simple steps (execution steps) so as not to cause difficulties for the computer or person, the publicity - usefulness of the algorithm - the end of the actions of the algorithm, which allows to obtain the desired result with the initial data in the final steps [20].

In practice, there are the following types of algorithms: linear-algorithm in which actions are carried out sequentially, without any conditions being checked, branching-algorithm in which instructions are predetermined by conditions change, cyclic-algorithm in which individual processes or groups of processes are repeated. Methods of writing algorithms are considered to be verbal, formulaic, tabular, graphical.

The information available serves as a raw material for the processing of computers. In metallurgical production, that is, as metal ore is considered a raw material. However, in order to be effective in processing, the optional raw material must have an initial preparation. First, we collect information about the event we're interested in, then we systematize and classify this information. Next, we're building a module that represents a given event. The module represents an event using a special mathematical device, graphics, diagrams. The module is structured to show the characteristics and key aspects of the situation. Mathematical and simulation modulation is also available. Mathematical modulation is the application of a mathematical instrument to the study and expression of an event. The exact mathematical module allows you to observe and analyze the status of an object.



Simulation modulation-mainly used in industry, allows you to perform a series of tests on devices that do not exist in real time using computer equipment and special software. The application of this modulation accelerates the production of raw materials, as the construction and research process is reduced, the number of errors and their costs are reduced. For example, Boeing declined to implement a long-standing plan for the position of passenger seats, the development of natural cabin modules, and replacing them with computer modules. This saved millions of dollars and reduced the time for the production of new aircraft parts. Once the module is built, it moves to the step of creating an algorithm that matches it. Problems that have been solved by algorithms. In a computer language (machine code), the algorithm used to solve a problem in the form of a series of commands is called a machine program. The command of a machine program or machine is an elementary machine instruction that is executed automatically without additional instructions and concepts. Programming is a theoretical and practical program activity. The process of translating an algorithm into a machine language is called compiling. The first step in "humanizing" machine language was to create programs that convert symbolic names to machine code. Then programs for converting arithmetic expressions were created, and finally, in 1958, the Fortran translator, widely used in the programming language, came into being. Since then, many programming languages have been developed. Computer processes information by controlling machine program commands, using different data in the process. The data used are divided into: 1. Incoming-inputs to the computer and is used as a condition to solve the problem. 2. Current or internal-used to store and process information in the program. 3. Output-data generated by the program as a result of the processing of information : Text, graphics , video, etc. It could be visible. This means that it is always important to create an algorithm for the creation of the national corpus of the Uzbek language, as it is controlled in the process of computer work.

**Analysis and results.** The national corpus of the Uzbek language is the lexical unit that exists in the Uzbek language, such as synonyms , antonyms, homonyms, assimilation words, hierarchies of words; it is necessary to be able to automatically analyze the morphological structure of the word, the construction of the word, the meaning of the word, its morphological features. In other words, in the process of composing, lemming, marking the corpus, it is necessary, on the basis of individual searches, to find and interpret those words which form part of the corpus in the texts. In order to do this, the above-mentioned algorithm, linguistic modeling, must be carried out. M. Abzalova 's research "Linguistic modules of the program for editing and analyzing texts in the Uzbek language"[2], A. Eshmominov 's research "Synonymous database of the Uzbek national corpus"[17], automatic analysis of the morphological characteristics of words. It is necessary to use some parts of Sh. Khamroeva 's research on "Linguistic bases for the creation of the author's corpus of the Uzbek language"[18], N. Abdurahmanova 's research on "Linguistic support for the program for the translation of English texts into Uzbek"[1].

“Dictionary of synonyms of Uzbek language”, “Explanatory dictionary of Uzbek words”, “Dictionary of obsolete words of Uzbek language”, “Dictionary of synonyms of Uzbek language”, “Dictionary of Uzbek words”, “Dictionary of synonyms of Uzbek language” "Dictionary of contradictory words of the Uzbek language", "Dictionary of

word classification of the Uzbek language", "Educational etymological dictionary of the Uzbek language", "Educational toponymic dictionary of the Uzbek language" can serve as a linguistic support. Only such dictionaries are reworked, lemma words; depending on the nature of the words, it is necessary to delimit their series and connect the members of the lemma series with each other. Only then can the revised dictionary form the basis of the software for the programmer.

In the final stage, texts prepared with meta-metric and morphological markings undergo several more automatic transformations. The following programs written in "Perl" language are used:

1) The converter converts the working format of the socket to the final format. The converter converts the morphological analysis in parentheses to the correct format `<w lex =... ..gr =....>`. It also checks for some spelling errors in order to further improve the quality of the search engine, translates the name into Latin, adds insufficient characters, identifies different forms of the verb;

2) **Semantic markup program (Semmarkup).** The program adds basic semantic characters to words using a special semantic dictionary. This method makes semantic search in the corpus much easier. The semantic dictionary is formalized in the form of a table, the first column contains a lexeme and a phrase, and the remaining columns contain semantic symbols. After the program compares the morphological characters of the word with the dictionary and finds similarities, it copies the semantic characters in the sem attribute of the `<w>` tag. In multi-character words, however, certain errors may occur in the semantic search;;

3) **Statistical programs (Gramstat, Metastat).** These programs are designed to collect statistics on the distribution of grammatical and metamaterial characters in texts. This method allows you to quickly find errors in the characters. The **gramstat** program allows distribution in morphological analysis (lexeme, word group, lexeme, and grammatical features of word form) for individual parts.

The above technology helps automate complex processes for the preparation of corpus texts. Some operations (cleansing of text, removing homonymy, metametric) are not automated at all, but a number of service tools have been developed for these operations, which makes it much easier. From the start the data was deliberately easy to encode so that the additional marks did not interfere with the text edition. The complex formatted output format takes place in the last stage automatically.

The Russian National Corps, the Modern American English Corps, Oxford English Corps and Czech National Corps have been established worldwide. Uzbekistan has, however, not created a linguistic foundation. Ziyonet does not work at the system to process text automatically and perform searches based on different characteristics from the text although it currently has an electronic library. It is not meant for vocabulary or language learning. The text can not be heard aloud. A system of automatic processing of texts and searches based on several characteristics is established in the national corpus program, the database. Word, phrases and combinations that are rarely used are very easy to find, use and spell (spell) from. This allows the learner to hear the text aloud. This opens up the possibility for directional education. A key role for the body is to mark or to identify (linguistic analysis). Marking means separating special tags into texted and their components in linguistic and extra-linguistic terms. Currently,

there are the following types of markups: morphological, semantic, syntactic, anaphoric, prosodic, discrete, and others [11]. An extralinguistic mark is distinguished by the following features: a mark that reflects the specificity of the text format (chapter, paragraph, section, etc.) and a mark that represents the information belonging to its author.

**Analysis and results.** Most modern layout languages are based on SGML / XML, in which the defined text covers two parallel data layers: visible (text itself) and hidden (tagged or marked) [11]. In this case, the hidden part of the information is placed inside the text, but special markers <...> are included, which, in turn, separate it from the visible text. Unlike external methods of annotation writing (e.g. comments), the markup is always incorporated into the text and is an integral part of it. Subsequent levels of structural analysis are used by some corporations. In particular, some small corpuscles will be connected on the basis of a complete syntactic analysis. Such cases are usually characterized by a profoundly interpreted or syntactic structure. For example, a syntactic markup is like a large tree in itself. We know that manual analysis of texts is a valuable and time-consuming task. Currently, various software analysis tools are available on Russian and foreign sites, which are open (directly) accessible. They are individual, i.e. independent and subdivided into websites. In this case, it should be noted that in recent years, developers have focused on web applications. These systems have several advantages: the ability to analyze (mark) a single document by multiple users at once does not require the installation of additional software, but with the exception of the browser, access rights are limited, and the marking process can be monitored. In particular, let's pay attention to the process of analyzing the text from the story "Speech" by A.Qahhor. Text goes as following: *"You don't love me, you're not happy with our marriage, I've been waiting until this hour, this minute, you haven't said a word, it's been a year since we put our heads on a pillow ...*

*The speaker really forgot about it, but he was talking."*

The text mentioned above is distinguished by the following features:

1-table

№		Type according to the sentence structure		
	[simple sentence]	<SS>, </SG>		
	[organized speech]	<UG>, </UG>		
	[complex sentence]	<QG>, </QG>		
№		The type of sentence used for the purpose of expression		
	[darak gap]	<dg>		
	[so'roq gap]	<sg>		
	[buyruq gap]	<bg>		
№		Depending on whether or not the owner is represented in the linguistic construction of the speech		
	[egali gap]	<E+>		
	[egasiz gap]	<E->	[shaxsi nomalum gap]	<sh.n.g>
			[atov gap]	<a.g>
			[semantic-funksional gap]	<s.f.g>

<b>№</b>	<b>According to the participation of the primary and secondary segment</b>	
	[yigik gap]	<yg>
	[yoyiq gap]	<yg>
<b>№</b>	<b>According to the presence of parts that do not make grammatical connection with the sentence</b>	
	[undalma]	<u>, </u>
	[kiritma]	<k>, </k>

The morphological marking system includes word, lemma, and tag. A word form is a morphological unit in a selected text. The first step in marking a word is to lemma it, that is, to bring out the lexeme form of the word. The most difficult step in marking inflected languages is lemmatization, that is, attaching the lexeme form of a word to a word as a tag. Because we know that in inflected languages the grammatical meaning of the word is mixed with the core of the word. Unlike inflected languages, the process of lemma in agglutinative language is much easier [4]. Initially, the analysis options for word forms are given in the form of a list, by selecting the correct option or editing the existing option. The editor makes it easy to navigate the text and make global changes and alterations. Thus, the marking application falls into a familiar environment and makes effective use of all the features of this editor. For the purpose of visual separation, different elements of the text are decorated in different colors and styles. Particularly,

—Analysis of the layout and the command variant is formalized in the form of hidden text and is usually not visible in normal mode;

—word forms are formalized in different colors depending on the number of analysis options: zero, one or more.

The grammatically impersonal part of the word is the same as the stem or base lemma. The mark is given in the character <\*> of the lemma. If the lemma in all the word categories is based on this principle, that is, the principle that "the root part of the word is equal to the lemma," the verb lemma II in the verb group is given in the form of an imperative mood. In dictionary articles, the verb is given in the form of an action name: <go>. However, this form is not appropriate for the corpus because the text in the corpus is searching for the <bar> form, not the <go> form of the word. The verb lemma is therefore given as <taught>, not <be>, shown as <blind>, received as <received> [17]. The marking process requires writing 5 to 10, sometimes even more, morphological tags (comments) for each word.

The main advantage of SGML / XML compared to other layout languages (TEX, RTF) is that it has strict syntax of markup commands, differentiating attributes and elements, clear indication of element boundaries, self-documentation, automatic verification of grammatically correct entry.

The most authoritative standards for corpus data encoding are: TEI (Text Encoding Initiative)[5], CES (XML Corpus Encoding Standard)[8], EAGLES (European Advisory Group on Language Engineering Standards)[10]. In particular, TEI is recognized as a well-developed standard, defining the rules for the expression of different types of texts and textual information elements, with particular emphasis on:



structure, title, style of speech (prose, poetry, drama), pages, quotations, footnotes or links (footnotes, comments), corrections, tables, formulas, specific characters (characters), linguistic annotations, etc. The special title of the standard shall be subject to the rules for the coding of the case. Although TEI is not specifically tailored for corpus applications, it often works in conjunction with similar standards. For example, the British National Corpus (BNC), the Czech National Corpus, the Hungarian National Corpus, etc. The XCES standard is an advanced application of TEI, designed solely for the corpus and intended to identify specific labels specific to the corpus.

But when we studied the TEI and XCES universal standards in detail, we found that they were too complex, unnecessary, and inconvenient for text mass marking. The full provisions of the TEI are very broad and not always reasonable, and it is therefore difficult enough to comply with all the requirements of this standard. The format is not compact, and the size of the content is usually increased. The format loses its clarity function, for example, it is suggested that meta-attributes be written in the form of text in the tag, so that when the markup is removed, the original text returns to its original state, error occurs.

You can also restrict yourself to TEI applications by rejecting "redundant" tags. The minimum set of tags is selected from the TEI to represent the body: <text> -text, <p> -header, <s> -word, <w> -word, and morphological analysis is written in the form of <w ana = ...> attribute. However, such an appearance does not fully comply with the standard of the housing layout. This view is reminiscent of a simplified HTML version.

The complexity of XML formats is not the main problem, but the complete lack of popular programs such as preparation, processing, indexing and searching, which is a major problem. Linguists have relatively simple programs available to them. Among them: XML-analysts, editors, converters, linear search programs are widely used. It turns out that such a set of programs is not enough for a corpus with a volume of millions of words. Of course, tasks such as preparing the internal problems and markings of the case can be solved with the help of specially written converters, macros and other tools.

The data representation format in the case is developed based on existing coding standards (TEI, XCES). HTML belongs to the SGML / XML family, is the most common format, and can be used in many applications [19]. Today, search engines have the ability to understand the semantics and structure of HTML tags.

HTML is a very simple format that provides minimum requirements in terms of content and layout size, and is not able to use many commands in practice. It's a very convenient and compact format for manual editing and visual perception. Typically, when displaying language units, there are no tags in the standard itself, but HTML can allow non-standard tags to be used, and this problem is resolved through a special setup (correction) of the search server.

The corpus format has a number of HTML languages, with some special tags attached for linguistic units. This format specifies the coding requirements for important text information and includes:

- 1) meta text attributes;
- 2) text structure elements (title, paragraph, poems, footnote or link (footnotes, comments) and tables at the bottom of the page);
- 3) linguistic units (sentences, words);



- 4) lexical information (grammatical, semantic signs);
- 5) text formatting parameters, special characters, etc [20].

Meta text attributes are written in texts in different situations, so that steps 2 and 3 can be done in parallel or arbitrarily. But the text must have the name of the file identified and recorded. It does not perform any actions, such as renaming a single connection or file, as such actions could disrupt the operation of the entire system. For the purpose of storing metadata, simple Excel spreadsheets with a predefined structure are used, with the first column containing the name of the file (clearly specified path) and the other columns with metadata attributes and process information. This allows you to use Excel's built-in tools effectively and makes the search engine much easier. For example, search, filtering, analysis and data processing (to-do list, auto-filling, statistics). In this case, the tables must be stored in a text format, and this format must be understood by Excel. This allows the file stored in the spreadsheet view to accept not only Excel but also other spreadsheet programs and increase the runtime efficiency.

Theoretically, metadata can be stored separately from each text, but according to the HTML rules, the data must be stored in the file header so that the Yandex-server can index the data. When storing metadata in separate memory, there is always a problem of synchronization, meta-tables, and text interactions with each other.

**Suggestions.** The following methods are used to store metadata in separate memory:

- 1) The *metas* table creates meta-table headers by collecting meta-text attributes from the file headers. In Excel, it can be modified manually. At the initial processing stage, some metadata can be added to the text, such as the author's name, title and date of creation. At the final stage, the Metas.bat program collects all attributes and completes the verification phase.
- 2) Meta.txt takes the meta text attributes from the modified meta-tables and transfers them to the existing text. This program checks the availability of the file and updates the title. In the tables, most attribute actions are separated by a " " symbol. When the text is changed, each action will appear as a separate attribute. Metadata attributes can therefore move freely between text and meta-tables. Meta-metric, on the other hand, will need to be carried out interactively with several cycles of verification.
- 3) MetaTest checks the accuracy of the meta-table. In this case, the actions of the attribute in the normative table are compared with those shown in the templates. The program identifies incorrect actions with a "#" character and can be checked and corrected manually.

All the above programs are done in Perl.

At the final stage of processing, texts prepared with meta-metric and morphological markings undergo several more automatic transformations. The converter checks for some markup errors in order to further improve the quality of the search engine by converting the morphological analysis in parentheses to the correct format `<w lex =... ..gr =....>`.

The semantic markup program adds basic semantic characters to words using a special semantic dictionary. This method has the property of greatly facilitating semantic search in the corpus. The semantic dictionary is formalized in the form of a table, the first column contains a lexeme and a phrase, and the remaining columns contain semantic symbols. After the program compares the morphological characters

of the word with the dictionary and finds similarities, it copies the semantic characters in the sem attribute of the <w> tag. In multi-character words, however, various errors can occur in semantic search.

The above technology helps to automate complex operations in the preparation of texts for the corpus. Some operations are not automated at all (clearing texts, removing homonymy, meta-metric), but a set of service tools has been developed for such operations, which makes it much easier. From the very beginning, the data encoding format is developed in a special simple form. As a result, a complex layout development format occurs automatically at the final stage.

**Conclusion:** In conclusion, it should be noted that the role of linguistic modulation in the formation of the national body's linguistic base is incomparable. It is therefore necessary to create an algorithm as a basis for the production of controlled instructions in the computer process. It is important to develop specific linguistic module forms by marking each word group in the development of a morphological marking algorithm.

Given that increasing the international status of the Uzbek language, raising it to the level of a world language of communication, learning and teaching Uzbek abroad, and expanding and polishing the capabilities of our national language directly through the national body, the practical significance of the work will be a key factor for development and survival.

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**UDC: 811.44**

## **PRAGMATIC BASIS OF ADVERTISING COMMUNICATION**

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**Abstract:** This article discusses the pragmatic foundations of advertising communication, the main theoretical provisions related to the analysis of the pragmatic foundations of advertising communication. It also talks about the theory of speech acts, analyzes the pragmatic factors of advertising discourse, their influence on the content of the advertising text.

**Key words:** communication, information, pragmatics, communication, speech act, advertising, addressee, destination.

**Аннотация:** В статье рассматриваются прагматические основы рекламной коммуникации, основные теоретические положения, связанные с анализом прагматических основ рекламной коммуникации. Также рассказывается о теории речевых актов, анализируются прагматические факторы рекламного дискурса, их влияние на содержание рекламного текста.

**Ключевые слова:** общение, информация, прагматика, коммуникация, речевой акт, реклама, адресат, адресант.

**Аннотация:** Мақолада реклама коммуникациясининг прагматик асослари таҳлил қилинган. Рекамада интерактив алоқа воситаси, нутқ актларининг прагматик омиллари ҳамда уларнинг матн таркибига таъсири кўриб чиқилган.

**Таянч сўз ва иборалар:** мулоқот, маълумот, прагматика, коммуникация, нутқ акти, реклама, сўзловчи, тингловчи.

**Introduction:** Pragmatics is a discipline of linguistics. The study of language signs was represented by two scientific approaches: semantic and syntactic. There is a need for a third approach: pragmatic, analytics of the language of the linguistic phenomenon.

Linguistic pragmatics is the attitude of a sign to the one who creates and uses it in a specific speech situation. This discipline studies the functioning of language in speech practice. In pragmatics, language is studied as a discursive, communicative and social phenomenon. Like semantics, it deals with meaning, but with a meaning that is determined only through the use of linguistic forms. Pragmatics is the semantics of a language in action. It is necessary to know the relationship of signs to each other and the relationship of signs to things in order to consider the relationship of signs to their interpreters. Syntactic rules define the relationship between characters and carriers; semantic rules correlate signs carriers with other objects.

**Literature review:** The rules of pragmatics express the conditions concerning interpreters under which a carrier sign is a sign. A language, in the full semiotic sense, a set of carrier signs, the use of which is determined by syntactic, semantic and pragmatic rules [2].

Often defined as the science of context, pragmatics distinguishes between different types of context or different levels of structuring of non-verbal context:

1. the adverbial context corresponds to the immediate physical environment of the protagonist (protagonist), this is space, time, nature and structure of communication;
2. the situational context coincides with the cultural environment of the discourse. The context acts as a matrix of genres depending on the practices it defines;
3. turns, gestures, this interactive context characterizes the forms of discourse and the system of signs accompanying it; context encompasses knowledge, attitudes, beliefs and shared values [3].

**Analysis and results:** Basic concepts or parameters of pragmatics:

1. The concept of the act: language serves not only to represent the world, but for that; to take action with a utterance. To speak is to act, literally - to influence others.
2. The concept of context: this refers to the specific situation in which words are sent, or spoken; place, time, speaker identification; general knowledge, etc., all that is necessary to know in order to interpret and evaluate what has been said. Without context, words become ambiguous, devoid of meaning.



3. The concept of "performativity": performative statements in their structure coincide with the narrative sentences, but, unlike the latter, do not describe an action, but are equivalent to the implementation of an action. A performative statement is equivalent to an action.

4. Pragmatic presupposition is central to characterizing the advertising context. In any statement, it is possible to single out the statement contained in it (explicit information) and presuppositions (implicit information) - those background aspects of the content - statements that are not subject to doubt.

Presuppositions form a condition for the meaningfulness of an utterance, since they relate to the knowledge and beliefs of the addressee and addressee.

In our article, linguistic pragmatics is of interest from the standpoint of the functioning of linguistic units in advertising discourse and the relationship between the utterance, the sender of the message and the context. Types, or genres of discourse, reflecting a particular discursive practice, constitute a category necessary for the inclusion of a text in its cultural field, in discursive formation [1].

Discourse analysis is an analysis of discourse practices that does not consider legal, religious, political, advertising, and other discourses as identical.

1. Text is the abstract grammatical structure of what is spoken. Discourse is a concept related to speech, actual speech action, while "text" is a concept related to a language system or formal linguistic knowledge, linguistic competence [4].
2. In the understanding of linguists, "discourse represents a complex unity of linguistic practice and extralinguistic factors necessary for understanding the text, ie. giving an idea of the participants in communication, their attitudes and goals, the conditions for the production and perception of the message" [5].

Advertising text is a product of a special sphere of speech activity - advertising discourse, which includes production conditions and is characterized by a number of pragmatic factors. Among the numerous concepts of linguistic pragmatics, the theory of speech acts seems to be especially relevant for the study of advertising text, since it determines the expediency of the statement, the final goal pursued by the speakers in the process of generating the statement. The theory of speech acts as a fundamental theoretical concept of linguistic pragmatics was presented by the English logician John Austin in a course of lectures in Russian called "Word as Action" [6].

Subsequently, these ideas were developed by his follower - the American logician John Searle. In the theory of speech acts, a linguistic utterance is considered as an action that the speaker performs to achieve a certain goal. The essence of this doctrine boils down to the fact that linguistic utterances exist not only in order to inform about the state of affairs in the world and qualify as true or false, but also in order to carry out certain actions with their help. Any statement can be descriptive, including performativity.

According to this theory, any communicative act has a three-sided structure. Any speech act can be considered as: locative act - from the position of using linguistic means; illocutionary act - regarding the purpose of the speaker in a specific context; perlocutionary act - from the point of view of the impact on the addressee. Austin introduced new concepts: locutionary, illocutionary and perlocutionary acts. A locative act is an act of reference (spoken as such). An illocutionary act is an action for which



a phrase is uttered. The perlocutionary act is the result of the influence of the fact of speaking. For Austin, all three structural levels of the same speech act do not have the same status linguistically.

Between the locutionary and illocutionary acts, there seem to be connections of a conditional order, and only analysis makes it possible to differentiate them. On the contrary, no conditional relationship can determine the relationship between the illocutionary and perlocutionary aspects. The illocutionary aspect represents a given amount of code as being relatively predictable. The perlocutionary aspect is nothing more than an unpredictable consequence, devoid of any need. The author examines, in particular, five categories of illocutionary acts: assertions, directives, commissions, expressives, declarations. The illocutionary act performed through the utterance-sentence is a function of the linguistic meaning of the given sentence [8].

Illocutionary acts implemented in advertising messages belong to I and II categories, that is, to assertive acts, which are responsible for the truth of the expressed proposition and directives-guiding acts aimed at encouraging message recipients to make a purchase of the advertised object.

**Discussion:** Advertising discourse is a complex indirect speech act. An act realized by an utterance, the figurative meaning of which differs from the literal content, is called "indirect" or "indirect", as opposed to "direct", where the speaker's illocutionary goal is directly manifested through vocabulary. In advertising messages, information is encoded using linguistic means and is presented implicitly. Implicit information assigns an increased evaluative value to an object and, unlike ready information, is perceived without criticism or doubt, is little controlled by consciousness and is used for manipulation. The effectiveness of implicit information is based on a complex mechanism for its extraction and interpretation by the addressee [7].

The pragmatic function of implicit information in advertising is its impact on the addressee. For an advertising strategy, the most important type of implicit information is presupposition. To avoid confusion, it is preferable that participants in the same context share the same presuppositions.

Presuppositions shared by the interlocutors in the situation of linguistic communication are "important" elements of the advertising context. If the addressee knows nothing about any judgment, the presupposition turns out to be untenable. This inconsistency does not lead to communication failure, moreover, undivided presuppositions are often used in advertising communication models, where information is differentiated and is presented in stages, provoking interest in the subject of advertising. As a visual channel for the transmission of information, written advertising discourse has certain functional features that determine the circumstantial context: the generation and understanding of the utterance is not synchronized, the lack of contact between the sender and the recipient, the lack of involvement in the situation, the one-sided direction of speech impact.

In the structure of advertising discourse, in the framework of pragmatics; the following main parameters are distinguished: the sender (speaker) of the advertising message; recipient or addressee; original message material (advertising text); purpose of the message; internal organization of the message (composition); context, including

the situation of the message; the body of knowledge of the sender and the addressee about each other.

The subject of an advertising communication act, as a type of action, is an advertiser, copywriter (creator of an advertising text). He creates an advertising text designed to be perceived by the addressee and must take into account everything that the addressee knows about the product. The message should be structured so that the encyclopedic knowledge includes the transmitted information. The sender's and recipient's knowledge of each other plays an important role in advertising. Sometimes the advertising message is explicit precisely because there is no common shared knowledge between the sender and the recipient.

It is quite clear that Internet access advertising directed at intellectuals, for example, will be structured and conveyed in a completely different way. On the other hand, all knowledge boils down to guessing the intention of the speech act, that is, to understand the directing intention of the sender.

An important pragmatic characteristic of advertising discourse, which determines the situational context, is its socio-economic parameter. Advertising, which puts subjects in a relationship with the goal of economic agreements, is an example of a special communicative-interactive situation that is not limited to the basic schemes of linguistic communication.

The addressee is approached in order to interest him, arouse interest and desire to read the advertisement. This specificity leads to the fact that the communicative structure should be aimed primarily at finding and establishing contact, and not personal.

The sender of a message (addressee) is a contact who is in constant search of an ever-increasing number of contacts, recipients (addressees), and not familiar to him. The only thing that unites them is the randomness of reading the message with the probability of a successful communicative act or a communicative failure. Advertising communication has a dual character. An economic factor is added to the verbal and pictorial rhetoric of the text-picture: the advertiser finances his "performance" in order to induce the consumer-addressee to make a purchase in order to subsequently recoup their expenses on communications and ensure their dominance over competition. In other words, communication carried out using symbols; and commercial communication - two inseparable aspects of advertising communication, and the economic exchange is carried out with the help of a symbolic one. The socioeconomic dimension of advertising is carefully veiled in favor of values such as health, natural product qualities, a healthy lifestyle, and other benefits. It is impossible to understand the rhetoric of the message without taking into account the factor of the power of money, which is included in the problems of such a special type of communication as advertising. This dual composition has direct consequences for the pragmatic structure of advertising communication.

**Conclusion:** Thus, in this article, an important characteristic of advertising discourse is its interactive nature. Advertising is by no means always addressed to a passive public and acts as a one-way system.

The purpose of interactive communication is to maintain communication, transfer information in both directions, receive a reaction, a response from the

recipient; not impact, but interaction. Interactivity does not mean direct dialogue, but exchange, response, reaction, even if with a shift in time. At least three factors of interactive communication actively influence the production of an advertising message: communication channel, referent (subject of advertising) and addressee (recipient).

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**MODERN PROBLEMS OF TOURISM AND ECONOMICS****UDC: 378.1****DEVELOPMENT OF EDUCATION MANAGEMENT MECHANISM BASED  
ON A COMPETENCE APPROACH USING GEOINFORMATION  
TECHNOLOGIES IN CONDITIONS OF  
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**Abstract:** This article proposes to consider the development of education management mechanism based on a competence approach using geoinformation technologies in conditions digitalization and informatization of the Republic of Uzbekistan. The work substantiates the urgency of the problem, studies foreign experience and proposes an original approach to solving the problem.

**Key words:** mechanism, informatization, digitalization, platform, information space, competence-based approach in education, geoinformation technologies.

**Аннотация:** В данной статье описывается разработка механизма управления образованием на основе компетентного подхода с использованием геоинформационных технологий в условиях цифровизации и информатизации республики Узбекистан. В работе обоснована актуальность проблемы, изучен зарубежный опыт и предложен оригинальный подход в решении поставленной задачи.

**Ключевые слова:** механизм, информатизация, цифровизация, платформа, информационное пространство, компетентный подход в образовании, геоинформационные технологии.

**Annotatsiya:** Ushbu maqolada o'zbekiston respublikasi raqamlashtirish va axborotlashtirish sharoitida geoinformatsion texnologiyalardan foydalangan holda kompetentlik yondashuviga asoslangan ta'limni boshqarish mexanizmini ishlab chiqishi ko'rib chiqilgan. Maqolada muammoning dolzarbligini asoslanib beriladi, chet el tajribasini o'rganiladi va muammoni hal qilishda o'ziga xos yondashuvni taklif qilinadi.

**Kalit so'zlar:** mexanizm, axborotlashtirish, raqamlashtirish, platforma, axborot maydoni, kompetentlik yondashuviga asoslangan ta'lim, geoinformatsion texnologiyalar.

**Introduction:** The impact of the global trend of digitalization of the economy is reflected on the one hand in all the initiatives of the leadership of the Republic of Uzbekistan [1, 2], which has set itself the goal of bringing the state to the advanced level of digitalization and Informatization and on the other hand - actual changes in the domestic market of economic and social services, which includes educational services to the population. According to statistics for the period from 2016 to the current year, the quota selection in the country was increased from 10% to 20% and assumes a gradual increase to 50% next year.

In order to employ graduates of higher education institutions, it is necessary to implement a competence-based education (CBE) in their training, which implies close cooperation between employers of the regional labor market and universities in the preparation of curricula, the formation of professional and personal competencies of graduates. To this end, this article examines the changes in the structure of the labor market in modern digital realities. Only by introducing a competency-based approach to training graduates in the higher education system can they achieve successful employment, as well as successfully continue to implement the "open door" policy for all those who want to get a higher education. This is facilitated by the state's implementation of the task of digitalization of all structures of the country's economy.

**Literature review:** The competence-based education includes categories such as "competence" and "being competent". If competence is a set of knowledge, skills and abilities of an individual used in relation to certain subjects and processes, then being competent, being manifested in a particular activity, implies the individual's possession of the corresponding competence, including his attitude to the subject of activity. The competence-based education is focused on the result, namely, on the ability of a graduate of an educational institution to independently implement and act in various situations. The competence-based education to training graduates of higher school, popularized in the United States has been continued and is being successfully implemented in economically developed European countries [3, 4]. Currently, competence-based education is reflected in the system of training specialists in Russian universities and the urgency of the task of implementing this approach in the system of training graduates of higher educational institutions of The Republic of Uzbekistan becomes obvious [5, 6].

**Analysis:** The introduction of ICT and digitalization in the higher education system in the Republic has acquired the features of an urgent need during the COVID-19 pandemic and the measures taken to non-proliferation of the dangerous virus. It provides opportunities for students and teachers to communicate on the MOODLE platform.

We propose to consider how the labor market is changing and, accordingly, the requirements for competencies in the process of digitalization of the economy and implementation in all areas of ICT. Currently, electronic services to the population are actively developing, such as the single window system, e-government concepts being implemented, Internet banking, and e-clinics.



Having a huge economic potential for the introduction of ICT, such as construction, agro - industrial complex, industry, mining, energy, transport, which provide for the urgent problems of the population, the Republic has set a goal to achieve modern quality of industry based on the introduction of ICT, which is the basis of all production processes and relations.

The growing demands of the global market dictate the need to introduce modern technical solutions, high technologies based on ICT, which form a new quality not only of the industry, but also of economic relations, including relations between the labor and education markets [7].

Based on research conducted in the Republic to study the experience of leading countries and identify the positive effects and risks of the introduction of ICT and the use of digital technologies, priorities in the development of the digital economy in the Republic of Uzbekistan were identified. Based on these areas of development, competencies that are relevant in the modern labor market are formed.

Let's look at some of the fundamental components for the formation of these directions. Let's start with the legal sphere that ensures the transition to the digital economy.

The current legislation is subject to a thorough audit in order to create a regulatory framework for the modern model of relations between state structures, business, and scientific organizations in the digital space, taking into account the introduction of artificial intelligence systems in various economic sectors, medicine, education, and public administration; and the operation of unmanned ground and air transport; implementation of state control mechanisms in the field of robotics and artificial intelligence – in order to maintain a balance between effective development of the industry and minimum security requirements.

Increasing the level of motivation of the population and organizations to move to relationships in the digital space; providing a favorable environment for enterprises aimed at digitalization of production by eliminating bureaucratic and administrative obstacles as much as possible, providing legal and tax incentives; developing preferential lending and leasing for the purchase of robotic equipment.

Providing public services to the population based on digital technologies in order to effectively interact between citizens and the state through online services for direct communication between citizens and government agencies; providing feedback on government websites to maximize the involvement of citizens in making management decisions (including discussion of draft regulatory legal acts); modifying the websites of the government, ministries and departments in order to eliminate obstacles to accounting for international ratings required for calculating indicators (Fig.1).

Here one can legitimately recognize only such transformation of public administration, which leads to improving the quality of public policy-making, efficient management of costs, state property, and minimization of undue government intervention on the basis of the full implementation of information and communication technologies, big data (big data), blockchain Internet of things, artificial intelligence planning, monitoring and evaluation of the performance of the Executive and the judiciary.

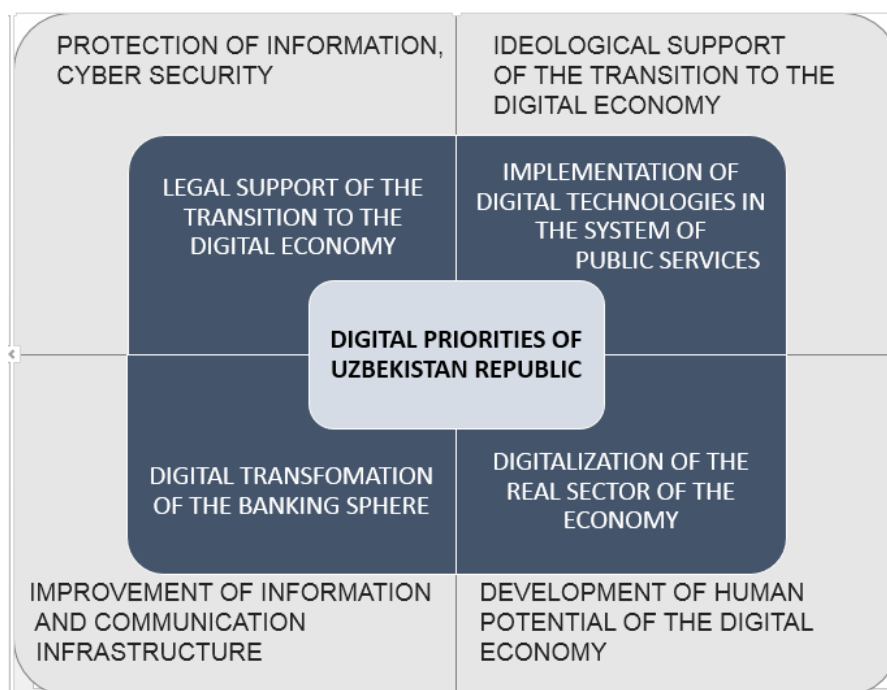


Fig.1. Digital priorities of the Republic of Uzbekistan /Author's development/

Digitalization of the real sector of the economy implies a transition from centralized to decentralized digital production based on the widespread introduction of cloud technologies and artificial intelligence systems, robotization of production, introduction of industrial Internet of things and additive technologies, customization of production, and unmanned transport systems; due to the predominance of the agricultural sector of the economy, it is necessary to widely use digital technologies of smart agriculture to increase labor productivity, reduce specific energy costs and production costs, and minimize the negative impact on the environment.

Development and optimization of renewable energy resources, to implement the concept of smart grid, implementation of smart contracts for generation and implementation of decentralized energy supply; implement a model partnership between the state and private business in the financing of digital economy, transport and energy sectors, capacity development of national ICT, attracting large scale private investment; operational audit, monitoring of economic activities and measurement of digital business as an economic industry.

The digitalization of the banking sector implies a profound study of the experience with customers, analyzed existing needs, and identifies new; widespread deployment of digital technology in all spheres of banking services, extending the availability of these services through mobile apps; extensive introduction of modern ways of providing banking services through continuous improvement apply digital technologies to maintain competitive advantages (including expansion of the client base due to the universal and round-the-clock availability of banking services via mobile devices; development and provision of remote customer identification technologies for accessing information using biometric data, including behavioral data; monitoring the client's cash flow; creation of an automated electronic sales system and current applications based on artificial intelligence; support for payment services using a smartphone as a contactless means: client – PayMe; use of secure distributed storage

instead of centralized data banks; advanced Analytics based on big data in the cloud; use of artificial intelligence platforms to optimize risk management and increase Bank profitability); modification of internal banking processes (optimization of management, management and control, formation of necessary competencies in the conditions of digitalization), gradual reduction and bringing to zero physical branches for working with clients; formation of a common payment space in the CIS countries.

Digitalization of the banking sector includes: creation of digital channels of interaction (Internet banking, mobile banking); widespread introduction of digital products (obtaining access passwords online, data in electronic form); full digitalization of all operations (using Big Data technologies); building a model using artificial intelligence aimed at satisfying customer requests.

The development of information and communication infrastructure involves improving accessibility for the layman personal computers, reducing the cost of communication services as a percentage of total consumer spending; inequality in digitization, providing the legislative provision of modern communication services in remote settlements and rural areas; connection to a broadband high-speed Internet all socially important facilities (medical institutions, institutions of education and culture), covering transport infrastructure networks 5G; increasing the capacity of international broadband Internet access channels; ensuring dynamic distribution of fixed broadband Internet access; development and implementation of wireless communication networks of the "Internet of things" in the territory of The Republic of Uzbekistan, within which technologies, protocols and standards, including cybersecurity and cryptographic information protection, should be defined, and the capabilities of the domestic industry for the production of necessary equipment should be evaluated; expansion and development of additional services based on everyday services (Internet access, pay TV and telephony) in order to further spread fixed broadband Internet access; ensuring the necessary level of popularization of electronic services.

As a result of the above - mentioned modernizations, a crucial moment is coming - the development of the human potential of the digital economy. This includes: universal digital literacy of the population, expanding the social base for the use of ICT. And, finally, modernization of all levels of education systems, including higher education and employment of graduates, in order to provide the state economy with qualified personnel who possess competencies in accordance with the requirements of the digital labor market. It is also necessary to train experts on the digital economy for public administration.

The main task is to implement a competence - based education (CBE) to training graduates of higher education institutions by jointly updating educational programs with employers, improving the skills of existing personnel to acquire the missing digital skills that are relevant in the modern economy. Only the symbiosis of education, business, science and the state will transform the higher education system and bring it in line with the realities of flexible education throughout life.

#### **IV. Discussion**

Currently, economic activity is concentrated in large cities. And we are faced with the task of deurbanization, in other words, the task of awakening the economic activity of the population in rural areas and small cities, which is facilitated by

digitalization. By improving the platforms for interaction between students and potential employers, creating favorable conditions for the development of technology companies and startups, it will be possible to self-actualize highly qualified Uzbek specialists at home, and take measures to improve the quality of life in the country as a whole.

A survey of employers can be conducted on the platform that connects graduates of higher educational institutions and potential employers in order to find out their relevant competencies. Foresight technologies applied to the survey at the first stage will allow you to analyze the results of research.

At the next stage, using geoinformation technologies, we will be able to show the geographical location on a regional or national map of enterprises and organizations that lack personnel with certain competencies.

Specialists from abroad are attracted to quickly eliminate the shortage of qualified personnel. The same is happening with the satisfaction of demand for higher education – branches of the world's leading universities are opening on the territory of the Republic in order to eliminate the shortage of offers in the higher education market. Examples are the universities of Westminster, Singapore, Sharda University, branches of Moscow state University and many others, where education is also based on a competency-based approach, considering the requirements for highly qualified specialists in the market of employers in Uzbekistan.

Among other things, the Republic has accumulated experience in implementing a competence-based approach to teacher training, which should be extended to other specialties for graduates of national higher education institutions [8].

**Conclusion:** Based on the above, we draw the following conclusions on the implementation of the mechanism of employment of University graduates based on The competence-based education:

1. Digitalization of the state economy dictates the need for a qualitative and quantitative review of education in higher educational institutions of The Republic of Uzbekistan, in other words, the creation of new curricula adapted to the economic realities of the labor market [9].

2. In the conditions of digitalization of The Republic of Uzbekistan, in order to ensure future successful employment of graduates of higher educational institutions, we find it expedient to create digital platforms in the format of communication: "educational institution – employers" for the purpose of forming lists of relevant competencies, which will make it possible to create training programs that meet the requirements of employers.

3. The analysis of the specialist's competencies required by employers is carried out using well-known statistical or heuristic methods, as a result of which a picture is drawn from the set of the most relevant competencies [10].

4. Geoinformation system (GIS) technologies will allow you to visualize the distribution on a regional map of the geographical location of employers with needs for highly qualified specialists with a set of competencies indicated by different conditional colors. The methodology of the GIS technology implementation is illustrated in figure-2.



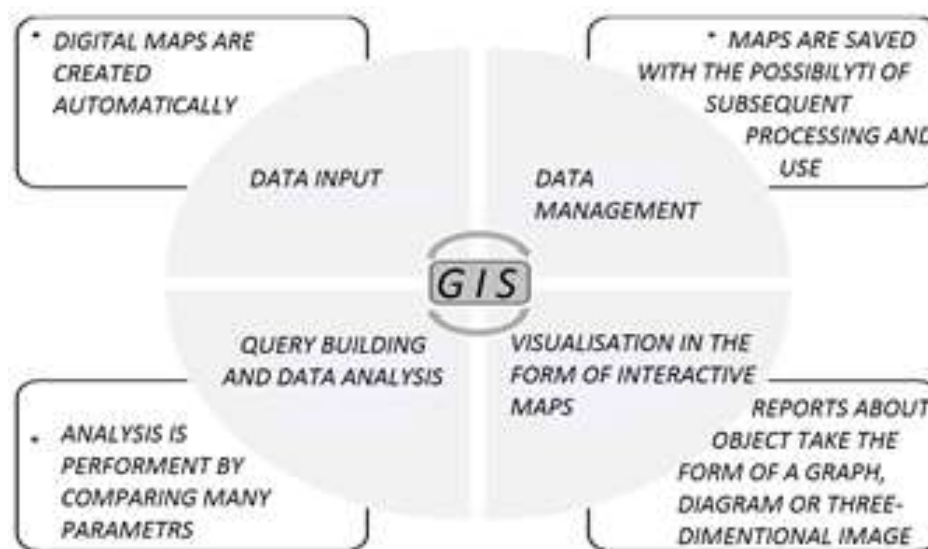


Fig.2. The methodology of the GIS technology implementation /Author's development/.

Thus, this article has developed the mechanism of management of a competence-based education using GIS-technologies in the conditions of digitalization of the Republic of Uzbekistan.

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UDC 339.727.22

**FOREIGN INVESTMENT ATTRACTION THROUGH THE SECURITIES MARKET**

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**Аннотация.** Ушбу мақолада қимматли қоғозлар ва қимматли қоғозлари бозори хорижий инвестицияларни жалб қилиш воситаси сифатида кўриб чиқилган. Ўзбекистон Республикасида қимматли қоғозлар бозорининг пайдо бўлиш ва ривожланиш босқичлари таҳлил қилинган. Қимматли қоғозлар бозори фаолиятининг норматив-ҳуқуқий асоси тадқиқ этилган. Ўзбекистон Республикасидаги қимматли қоғозларнинг ғозирги ғолати таҳлили кўриб чиқилган.

**Калит сўзлар.** Хорижий инвестициялар, қимматли қоғозлар, фонд бозори, инвестор, акция, облигация, еврооблигация, вексель, депозит сертификати.

**Аннотация.** В данной статье рассматриваются ценные бумаги и рынок ценных бумаг как средство привлечения иностранных инвестиций. Анализируются этапы становления и развития рынка ценных бумаг в Республике Узбекистан. Подробна изучена нормативно-правовая база рынка ценных бумаг, а также проведен анализ текущего состояния ценных бумаг в Республике Узбекистан.

**Ключевые слова.** Иностранные инвестиции, ценные бумаги, фондовый рынок, инвестор, акции, облигации, еврооблигации, векселя, депозитные сертификаты.

**Abstract.** This article examines securities and the securities market as a means of attracting foreign investment. The stages of formation and development of the securities market in the Republic of Uzbekistan are analyzed. The regulatory and legal framework of the securities market has been studied in detail, as well as an analysis of the current state of securities in the Republic of Uzbekistan.

**Key words.** Foreign investments, securities, stock market, investor, shares, bonds, Eurobonds, bill of exchange, certificates of deposit.

**Introduction.** The volume of foreign investment is one of the indicators characterizing the degree of integration of the country into the world community and depends on the attractiveness of the investment object. Receiving foreign investment, the conditions for attracting them is a factor that characterizes investment activities and contributes to the further development of foreign economic relations. Investment attractiveness is determined by the subjects of investment according to the general investment climate in the country, the conditions of foreign economic activity, including legal and customs.

The securities market is a natural mechanism for attracting foreign investment in the context of the emergence of global capital markets. It allows governments and businesses to broaden their funding sources beyond self-financing and bank loans. Potential investors, in turn, with the help of the securities market, get the opportunity to invest their savings in a wider range of financial instruments, thereby increasing their choice. The distribution and redistribution of resources is carried out by financial markets and financial institutions that perform various intermediary services.

The transition to market relations in Uzbekistan necessitated the formation of a stock market, which over the years has turned into a stably functioning institution with an established circle of participants and a developed infrastructure. However, until recently, its role as an effective mechanism for attracting funds for investment and stimulating production growth is insignificant. One of the most important problems in Uzbekistan is the lack of investment in the presence of obsolete facilities created in the era of the USSR. Huge financial resources are needed, which enterprises are not able to generate from internal sources. In this regard, the role and importance of the stock market in the development of the economy can hardly be overestimated. In order to ensure the inflow of investments into the real sector of the economy and prevent the emergence of crises, it is necessary to study the mechanism of the stock market in a transforming economy, the reasons for its ineffective functioning and to develop measures of state influence that contribute to the development of the stock market in the country.

**Literature review.** Among the foreign authors who dealt with the problems of attracting investments, the stock market and pricing should be named W. Sharp and his fundamental work "Investments"; Analysis of Securities by B. Graham and D. Dodd; the theory of reflexivity presented in the works of J. Soros. R. Tewles, B. Williams, E. Bradley, D. Garner dealt with the issues of the influence of stock market development on economic growth, ownership structure as a factor determining the model of a market economy, clarification of the causes and substantiation of methods for preventing financial crises, and development of policies for the development of national stock markets. The theoretical aspects of the formation of the market infrastructure are reflected in the works of H. Singer, P. Samuelson. The most in-depth studies in this area were carried out by specialists from the World Bank, the International Monetary Fund, the International Organization of Securities Commissions, and the World Federation of Exchanges.

**Research methodology:** In the scientific paper, analysis and synthesis, systematic approach, abstract-logical thinking, economic analysis, grouping, expert evaluation and comparison methods were used.

**Analysis and Results.** In the Law of the Republic of Uzbekistan "On the Securities Market" (new edition), securities are defined as follows, "Securities - documents certifying property rights or loan relations between the legal entity that issued these documents and their owner, providing for the payment of income in the form of dividends or interest and the possibility of transferring rights arising from these documents to other persons". [1]

This law defines the following securities:

**share** - a registered equity security without a specified period of validity, certifying the right of its owner to receive part of the profit of the joint-stock company in the form of dividends, to participate in the management of the joint-stock company and to part of the property remaining after its liquidation;

**a bill of exchange** is a non-issue security that certifies the unconditional obligation of the drawer or another payer specified in the bill of exchange to pay a certain amount to the owner of the bill at the onset of the term stipulated by the bill;

**government securities** - treasury bonds of the Republic of Uzbekistan and bonds issued by the body authorized by the Cabinet of Ministers of the Republic of Uzbekistan, as well as bonds of the Central Bank of the Republic of Uzbekistan;

**certificate of deposit** - a non-issue security that certifies the amount of the deposit made to the bank and the rights of the depositor (certificate holder) to receive the deposit amount and the interest specified in the certificate at the bank that issued the certificate or any branch of this bank after the expiry of the established period;

**corporate bonds** - by bonds issued joint stock companies and commercial banks regardless of their organizational and legal form;

**bond** - an issue-grade security certifying the right of its holder to receive from the person who issued the bond, within the period stipulated by it, the par value of the bond or other property equivalent, to receive a fixed percentage of the par value of the bond or other property rights;

**international bond** - a tradable equity security issued by an issuer and placed by a group of financial organizations, offered in one or more countries other than the issuer's country, initially purchased (including by subscription) only through this group;

**option** - an equity security certifying the right to purchase, within the period specified in it, a certain number of securities of its issuer at a fixed price;

**futures on securities** - a security that certifies the obligation to buy or sell a certain number of securities at a fixed price within the specified period;

**treasury obligations of the Republic of Uzbekistan** - emissive securities certifying the deposit by their owners of funds into the State budget of the Republic of Uzbekistan and giving the right to receive a fixed income during the entire period of holding these securities.

Securities are the most effective means of attracting foreign investment. In turn, it is necessary to dwell on the role and formation of the stock market in the Republic.

In March 1991, the Tashkent Universal Commodity and Stock Exchange was established in the Republic as an open joint-stock company. In January 1992, the stock department of the Tashkent Stock Exchange began regular trading in securities for the first time in the country. In June 1992, the Law of the Republic of Uzbekistan "On exchanges and exchange activities" was adopted. This law introduced significant changes in the activities of stock exchanges and established mandatory requirements. According to the law, the authorized capital of the exchange was to be at least 50 million rubles. Exchanges could not create any trading structures. Ministries, agencies, state committees and others could be the founders of the exchange. [8]

The Law "On Securities and Stock Exchanges" adopted on September 2, 1993 was an important event in the development and regulation of the stock market of

Uzbekistan. This Law used to regulate the activities of the stock exchange and other professional participants in this market, as well as determine the legal status of the issuer of securities (shares, bonds, treasury obligations, derivatives, certificates of deposit, bills of exchange). [3]

On April 8, 1994, in accordance with the Presidential Decree No. 745 of January 21, 1994 "On measures to further deepen economic reforms, protection of property and ensuring the development of entrepreneurship", the Republican Stock Exchange "Tashkent" was established. In 1995, branches of RSE "Tashkent" were established in Andijan, Camarkand, Bukhara and other regions. These branches began to represent the interests of the exchange in the regions of the Republic.

In accordance with the Presidential Decree No. PF-1414 of March 26, 1996, the Center for Coordination and Development of the Securities Market under the State Competition Committee of the Republic of Uzbekistan was established. The Center has been designated as the state body responsible for regulating the securities market.

On April 25, 1996, the Law of the Republic of Uzbekistan "On the mechanism of the securities market" was adopted. This law established liability measures for securities market participants, as well as for non-compliance of securities market participants with the legislation.

On April 25, 1996, the Law "On Joint Stock Companies and Protection of Shareholders' Rights" was adopted. This law stipulates the protection of the rights and interests of the joint-stock company, its organization, management, operation, liquidation of the organization, investors and shareholders.

On August 29, 1998, the Law of the Republic of Uzbekistan "On the activities of depositories in the securities market" was adopted. Under this law, a two-tier system of depositories was created: the state depository and the secondary depository.

In 1997-2000, the government short-term bond market was formed. In 2001-2006, new securities appeared: certificates of deposit, corporate bonds, bonds of the Central Bank.

On July 22, 2008 the law "On the securities market" was adopted. This law included 4 previously adopted laws: "On securities and stock exchanges", "On the mechanism of the securities market", "On the activities of depositories in the securities market" and "On protection of investors in the securities market." In 2015, the law "On the securities market" was adopted in a new edition. Simplification of the procedure for issuing securities through the introduction of information and communication technologies, the conclusion of transactions with securities are among the distinguishing features of the new law. The requirements for professional participants in this market have also been revised. This law provides for the implementation of professional activities in the securities market of the following persons:

- investment intermediary (broker, dealer),
- investment consultant,
- investment fund,
- trust manager of investment assets,
- transfer agent,
- over-the-counter cavdo organizer of securities. [1]



On August 29, 2016, thanks to the efforts of the State Competition Committee and the Korean Stock Exchange, a new Single Software and Technical Complex was launched in the stock market.

In accordance with the Resolution of the President of the Republic of Uzbekistan dated January 14, 2019 PQ-5630 "On measures to radically improve the system of management of state assets, antitrust regulation and capital market management", the Capital Market Development Agency of the Republic of Uzbekistan was established. The Agency is the successor of the Center for Coordination and Development of the Securities Market under the State Competition Committee of the Republic of Uzbekistan. The highest body of the agency is the Cabinet of Ministers of the Republic of Uzbekistan. The Agency is the state body authorized to regulate the securities market.[6]

If we analyze the history of the development of the Republic's stock market, we have now created a legislative framework and the necessary infrastructure of the stock market. The regions have a well-developed network of branches and representative offices, a technologically advanced stock exchange, and coordination and development bodies that contribute to the comprehensive development of the stock market. However, it should be noted that today the mechanism of the stock market in our country is not as efficient as in other countries. According to the results of 2017, the turnover of the largest exchange - RSE "Tashkent" amounted to only \$ 37.8 million, or 0.12% of GDP. [9]

World practice shows that one of the strongest segments of the investment market in developed countries is the stock market, which helps to accumulate large investment recurrences and achieve maximum mobility of investments. At the current stage of development of the economy, the stock market is not ready to solve the problems associated with providing the economy with investment recurrencies.

Despite the positive trends in the stock market, it remains one of the weakest elements of the country's financial system. In the early stages of the formation of the Uzbek stock market, it played a narrow role, one of the leaders of which was technical support for the privatization of shares of state-owned enterprises. In this regard, a primary market has emerged in Uzbekistan, but it has its own characteristics: it was used only in the process of privatization, in most cases there was almost no public placement. Thus, a large proportion of the issuance of shares by enterprises was not related to attracting investment. In modern conditions, the function of redistribution of property rights is losing its significance - privatization has ensured the emergence of private property owners. The need for a developed stock market will increase in the context of further liberalization of economic policy and deepening global integration.

The main goal of the functioning and development of the stock market in Uzbekistan should be to attract strong sources of investment to restore modern production and ensure its future growth. That is, in our opinion, such sources of investment should be directed primarily to the implementation of projects of innovative and technological modernization of the production co-haci. Improving the system of regulation of the securities market in the country requires the identification of priority areas of public policy in the stock market and the development of measures for its



further development, the formation of a unified approach to regulating the activities of both banking and non-bank financial institutions.

According to the Law "On Foreign Investments", foreign investors can invest in the territory of the Republic of Uzbekistan in the following ways:

Participation in the share funds and other property of economic societies and companies, banks, insurance companies and other enterprises established jointly with legal and (or) physical persons of the Republic of Uzbekistan;

establishment and development of business associations and companies, banks, insurance companies and other enterprises that are wholly owned by foreign investors;

acquisition of property, shares and other securities;

inclusion of rights to intellectual property, including copyright, patents, trademarks, utility models, industrial designs, company names and know-how, as well as business reputation (goodwill);

concessions, including the acquisition of concessions for the exploration, development, mining or use of natural resources;

ownership of objects of trade and services, residential buildings together with the land plots on which they are located, as well as ownership and use of land (including lease use);

by obtaining the right to identify, search and extract minerals in the subsoil in accordance with production sharing agreements, etc. [2]

*Shares* are the most common type of securities and one of the key financial instruments for attracting foreign investment to the Republic of Uzbekistan. Joint-stock companies began to emerge after the independence of the Republic through the transformation of large state-owned enterprises into joint-stock companies. By the end of 1994, 26.1 thousand enterprises were transformed into joint stock companies. Their shares formed the basis of the stock market in the republic. As of January 1, 2004, there were more than 1 million shareholders in the republic - individuals who bought shares on the Republican Stock Exchange. [7]

In accordance with the Resolution of the President of the Republic of Uzbekistan dated August 1, 2018 "On measures to radically improve the investment climate in the Republic of Uzbekistan": currently, the minimum capital of joint stock companies is 400 million soums; the minimum amount of equity capital of enterprises with foreign investments is 400 million soums, previously it was 600 million soums; the minimum share of a foreign investor in the authorized capital of an enterprise with foreign investment is 15% (previously 30%); a foreign founder can be a legal entity or an individual. [4]

*Certificates of deposit.* On July 6, 1992, the State Bank of the Republic of Uzbekistan approved the "Rules for the issuance of certificates of deposit and their circulation" for legal entities and individuals. Small batches of deposit certificates of some banks, such as Turon Bank, were put up for auction in the stock department of the Tashkent Stock Exchange. Currently, commercial banks are actively involved in the market of deposit certificates. The procedure for issuing certificates of deposit and savings is regulated only by the Central Bank of the Republic of Uzbekistan.

*Bonds* are another important element of the stock market of the Republic of Uzbekistan. In the bond market, corporate bonds occupy a leading position. The main

issuers of corporate bonds are commercial banks. Until 2003, private companies, limited liability companies and open joint stock companies could be issuers of corporate bonds. Then the practice was stopped. To date, about 338 billion soums worth of bonds have been issued. [10]

*Government securities* were issued in 1992 for a period of 20 years and were fully liquidated after 22 years. In 1996, government short-term bonds were first issued. These securities were issued by the Ministry of Finance to cover the state budget deficit. Under the terms of the emission, the main investors were resident legal entities of the country.

No government bonds have been issued in Uzbekistan since 2011. The decision to issue government securities was made only in the event of a state budget deficit. Since 2005, the state budget has been running at a surplus. However, the state budget for 2019 was planned with a deficit of 4.5 trillion soums, or 1.1% of GDP. The budget deficit was planned to be covered by state treasury obligations in the amount of 3 trillion soums.

*Eurobonds.* The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated January 16, 2019 "On measures to issue and place international bonds of the Republic of Uzbekistan" was adopted. In 2019, the Republic issued debut Eurobonds worth \$ 1 billion for 5 and 10 years. [11]

*Municipal securities.* To date, the issuance of municipal securities has not been observed in the history of the republic. However, by the Decree of the President of the Republic of Uzbekistan PF-5515 dated August 17, 2018, the issuance of bonds of the city of Tashkent was allowed to attract free funds of the population. Paragraph 17 of the decree states: "To authorize the mayor of Tashkent to attract free funds for profitable investment projects of the population through the issuance of securities in the form of bonds of the city of Tashkent or shares of newly established business companies". [5]

**Conclusion and Recommendations.** To conclude from the above,

1) the main legal document regulating the stock market is the Law of the Republic of Uzbekistan "On the securities market". The securities listed in Article 3 of this law are identified, from which the purchase and sale of shares, corporate bonds, certificates of deposit can be seen. The issuers of the bonds are joint-stock companies, mostly commercial banks. Positive changes are expected (Eurobonds, municipal bonds) due to the measures taken to radically improve the stock market and the investment climate in the country.

2) Although the Securities Market of Uzbekistan is unstable, there is an upward trend. However, this trend is mainly driven by the growth of the primary unorganized securities market. It is well known from world practice that the general functioning and development of the securities market depends on the secondary trading of securities. The conclusion is that the development of the secondary securities market in our country is relevant. The volume of Securities Market's turnover has not reached 3% of the country's GDP, and its role in the economy is still low.

3) The issue of government securities was resumed as a source of covering the state budget deficit and financing large investment projects of the state. These securities are purchased by commercial banks at the Uzbek Republican Currency

Exchange, and the yield of these securities is constantly updated throughout the year, as many securities are issued during the year, as many are placed.

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**UDC: 336.142**

### **LOCAL BUDGET REVENUES - AS AN IMPORTANT PART OF THE PROFITABLE POTENTIAL OF THE REGION**

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**Abstract:** the article discusses the current state of local budget revenue generation practices in the Republic of Uzbekistan based on the objectives of effective

fiscal policy in 2020, its problems and new aspects, as well as ways to improve the efficiency of local budget revenue generation.

**Key words:** links of the budget system, local budgets, local budget revenues, own (attached) revenues, regulatory revenues, transfers.

**Annotatsiya:** Maqolada O'zbekiston Respublikasida davlatning 2020-yildagi samarali byudjet-soliq siyosati vazifalaridan kelib chiqib mahalliy byudjetlar daromadlarini shakllantirish amaliyotining hozirgi holati, uning muammolari va yangi jihatlari hamda mahalliy byudjetlar daromadlarini shakllantirish tizimi samaradorligini oshirish yo'nalishlari ko'rib chiqilgan.

**Kalit so'zlar:** byudjet tizimi bo'g'inlari, mahalliy byudjetlar, mahalliy byudjet daromadlari, o'z (biriktirilgan) daromadlari, tartibga soluvchi daromadlar, transfertlar.

**Аннотация:** в статье рассмотрены современное состояние, проблемы и новации в действующей практике формирования доходов местных бюджетов в Республике Узбекистан, исходя из задач бюджетно-налоговой политики государства на 2020 год, а также были рассмотрены пути повышения эффективности системы формирования доходов местных бюджетов.

**Ключевые слова:** звенья бюджетной системы, местные бюджеты, доходы местных бюджетов, собственные (прикрепленные) доходы, регулирующие доходы, трансферты.

**Introduction:** The medium-term development strategy of Uzbekistan identifies important tasks such as increasing the base of local budget revenues, ensuring their financial independence, creating a competitive environment between the regions, and it is important to study and apply the best practices of developed countries in our country.

Reflecting on the development of the regions, the President of the Republic of Uzbekistan Sh.M. Mirziyoyev says that "local budgets do not have enough funds to finance sustainable socio-economic development of the regions" [1].

The Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 aims to increase the base of local budget revenues, ensure their financial independence, improve inter-budgetary relations aimed at strengthening the revenue side of local budgets, comprehensive and regional Priorities have been identified, such as balanced socio-economic development, active attraction of foreign investment in the regions through the improvement of the investment climate. It is important to study the best practices of developed countries and apply their positive results in the country [2].

Our main goal is to strengthen sustainable financing of integrated development of regions and decentralize the revenue base of local budgets, further improvement of inter-budgetary relations, strengthening financial freedom of local authorities, promoting small business and private entrepreneurship, creating new jobs and employment, engineering, increasing their responsibility in the implementation of targeted measures to expand tax capacity through the rapid development of communications, road transport and social infrastructure [3].

**Literature review:** Today in the special economic literature and periodicals there are different views on the system of local budget revenues (Table 1).

**Table 1**

**Interpretation of the content of the system of local budget revenues in the economic literature**

<b>№</b>	<b>Interpretation of the need for local budget revenues</b>	<b>Authors</b>
<i>Foreign authors</i>		
1.	The revenue base of local budgets is based on local taxes and levies and real estate taxes, which are set, calculated and collected by local governments, and they play a special role in determining the medium-term revenue forecast.	Tommazo Olivero, Annaliza Skognamiglo [4]
2.	Local budgets, within the limits of their statutory powers, have their own revenue base, ie financial support for the implementation of expenditure obligations. In this process, local authorities are advocating a pragmatic approach, thereby highlighting the shortcomings of local policy to meet various austerity pressures and restrictions.	Aldag A.M., Kim Yu., Varner M.E. [5]
<i>Local authors</i>		
3.	The basis for the distribution of public funds between the branches of the budget is the independence of local budgets, their financial support by the state, the formation of their revenues from regional sources. Based on these principles, local budget revenues are formed from their own revenues and revenues from managed sources.	Vaxobov A.V., Kasimova G.A., Jamolov X.N. [6]
4.	Although local taxes are considered the primary source of funding in local budgets, they are not sufficient to finance expenditures attached to the local budget. When determining the budget parameters, deductions from national taxes are determined. This process is developed annually during the approval of budget parameters and is determined and approved in accordance with the decision of the President.	Malikov T. [7]

In general, the concept of «sources of local budget revenues» has been used in the authors' speeches since the formation of the country's fiscal system, but its content is still controversial, and the definition of this concept is not reinforced by legislation, and requires clarification of the description of their contents.

Based on these directions, it should be noted that the revenues of local budgets from local taxes, levies, duties and other mandatory payments to the budget of the Republic of Karakalpakstan and local budgets in accordance with the norms established by law, inheritance, gift in accordance with the legislation from the state taxes, levies, duties and other obligatory payments to the budget of the Republic of Karakalpakstan and local budgets in accordance with the norms established by the legislation, income from placement, commissioning of state property. It is formed at



the expense of funds transferred to the state property on the right, budget transfers from higher budgets, non-refundable receipts from legal entities and individuals, as well as from other countries, as well as other income. [8]

**Research Methodology:** In this article induction, deduction, analogy, comparative, observation, comparison research methods are used.

**Analysis and results:** The Presidential Decree on No. PF-5283 of 13 December 2017 “On additional measures to increase the financial freedom of local authorities, strengthen the responsibility of tax and financial authorities to ensure the completeness of revenues to local budgets identified the priorities of fiscal policy at the level of local budgets. Including:

- radically strengthen the revenue base of local budgets by attaching specific types of taxes and other mandatory payments to them;
- Exemption of regional, city and district budgets from subsidies, gradual reduction of their dependence on higher budget allocations, thereby increasing the freedom and responsibility of local authorities in addressing issues of socio-economic development of the regions;
- Identify additional reserves on a systematic basis to increase local budget revenues;
- Strengthening the responsibility of local authorities, finance and tax authorities to strengthen the revenue base of local budgets and ensure the timely, targeted financing of approved expenditure parameters, further development and maintenance of social facilities and infrastructure (Table 2) .

**Table 2**

**Information on strengthening the revenue base of local budgets, creation of additional sources of revenue to the budget as a result of the implementation of the Decree of the President of the Republic of Uzbekistan in December 13, 2017 No PF-5283 [9]**

№	By directions	As of 01.01.2019	
		Number of enterprises	Extra tax base (million soums)
1.	For newly established entities in the field of industrial production	8 522	15 857, 7
2.	For newly established small businesses	28 523	2 205 ,1
3.	For newly established service companies	42 146	1 820,7
4.	Rehabilitation, modernization and re-equipment of existing enterprises	13 856	3 197,0

5.	By rehabilitating unpromising manufacturing companies by selling them to new owners	1 341	613,8
6.	The order in which taxes are paid centrally by the parent companies on the spot	3 387	1 390,9
7.	Due to the expiration of tax benefits	25 976	1 185,2
8.	To increase tax collection	1 804	1 162,0
	<b>Total</b>	<b>125 555</b>	<b>27432,4</b>

As shown in Table 2, as a result of the above measures to strengthen the revenue base of local budgets, as of January 1, 2019, the number of enterprises reached 125,555, and the number of additional revenues to the budget amounted to 27,432.4 million soums.

In the context of accelerating reforms in the framework of the Action Strategy, for the first time the State Budget of the Republic of Uzbekistan, together with experts from the International Monetary Fund and other international financial institutions, was developed in accordance with international standards. For the first time, according to the Law of the Republic of Uzbekistan «On the State Budget of the Republic of Uzbekistan for 2020», the expenditures of the republican budget are allocated by ministries and departments by the chambers of the Oliy Majlis of the Republic of Uzbekistan, expenditures of local budgets are approved by local councils of people's deputies.

ble 3

### Information on revenues, expenditures of local budgets of the Republic of Uzbekistan in 2020 and financial transfers from the national budget [10]

№	Name of regions	Income	Expenses	The amount of transfers	Balance of income and expenses, in %
1.	The Republic of Karakalpakstan	2 833,3	2 833,3	-	100
2.	Andijan region	2 187,4	2 803,6	616,2	78,0
3.	Bukhara region	2 142,3	2 142,3	-	100
4.	Jizzakh region	1 050,8	1 499,0	448,2	70,1
5.	Kashkadarya region	2 935,7	3 693,8	758,1	79,5
6.	Navoi region	1 353,6	1 353,6	-	100
7.	Namangan region	2 016,5	2 994,2	977,7	67,3
8.	Samarkand region	2 714,8	3 036,6	321,8	89,4
9.	Surkhandarya region	1 741,6	2 580,7	839,1	67,5
10.	Syrdarya region	751,1	1 095,0	343,9	68,9
11.	Tashkent region	2 582,9	2 582,9	-	100

12.	Fergana region	3 005,6	3 357,5	351,9	89,5
13.	Khorezm region	1 402,2	1 859,2	457,0	75,4
14.	Tashkent city	3 556,1	3 556,1	-	100
	<b>Total:</b>	<b>30 273,9</b>	<b>35 387,8</b>	<b>5 113,9</b>	<b>85,5</b>

Table 3 shows that in fiscal year 2020, only 5 of the country's 14 local budgets, or 35.7 percent, will be able to cover 100 percent of their expenditures with their own revenues. The remaining 9 regions need to receive financial support from the national budget, ie inter-budgetary transfers. In addition, the fact that this financial support is actually aimed at covering the local budget deficit, trying to express it in general terms - «ensuring the transparency of the state budget», «clear and targeted state measures in the regulation and management of local budgets», «local budgets», it is natural that the implementation of effective measures to stimulate interest will have a negative impact on the implementation of such needs.

**Conclusion:** In conclusion, we can say:

1. The presence of the share of inter-budgetary transfers in the structure of local budget revenues and its high share in the structure of revenues, their financial dependence on high budgets, creates «liquidity» problems in financing current expenditures related to the provision of specific budget expenditures. Therefore, in the near and medium term, it is necessary to have a clear «Roadmap» to reduce the share of inter-budgetary transfers in local budget revenues. At the same time, they need to be targeted, and the prospects for capacity building need to be clarified.

2. In the medium term, local budgets have the potential to increase the additional tax base by strengthening the revenue base of general economic factors, in particular, the rehabilitation, modernization and re-equipment of newly established entities and existing enterprises in the field of industrial production.

3. Among the financial factors in strengthening the revenue base of local budgets, there is an opportunity to ensure a high level of revenues to local budgets through the introduction of centralized tax payment by local enterprises and increased tax collection.

In general, it is desirable to strengthen the role of local governments in deepening reforms to strengthen the revenue base of local budgets in the context of general economic and financial factors.

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**UDC: 338.48 (332.1)**

## **CURRENT CONDITION AND SYSTEMATIC PROBLEMS OF TOURISM DEVELOPMENT IN BUKHARA REGION**

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**Аннотация.** Ушбу мақолада Бухоро вилоятида туризмни ривожланиш ҳолатига баҳо берилган. Жумладан, вилоятга ташриф буюрган туристлар сонининг республикадаги улуши, туризм тармоғи ва бошқа иқтисодиёт тармоқлари ўртасидаги корреляцион боғланиш таҳлил қилинган. Мақоланинг якуний қисмида эса аниқланган муаммолар бўйича хулосалар келтирилган.

**Калит сўзлар.** Туризм тармоғи, ялпи ҳудудий маҳсулот, корреляция коэффиценти, туризм хизматлари

**Abstract.** This article assesses the state of tourism development in Bukhara region. In particular, the number of tourists, visiting the region, in the share of country, the correlation between the tourism industry and other sectors of the economy have been analyzed. The final part of the article summarizes the identified problems.

**Key words.** Tourism sector, gross regional product, correlation coefficient, tourism services

**Аннотация.** В статье оценивается состояние развития туризма в Бухарской области. В частности, проанализированы количества туристов в долине страны, посетивших регион, соотношение туристической индустрии и других секторов экономики. В заключительной части статьи резюмируются выявленные проблемы.

**Ключевые слова.** Сектор туризма, валовой региональный продукт, коэффициент корреляции, туристические услуги

**Introduction:** In the Action Strategy of the Republic of Uzbekistan for 2017-2021, the development of tourism in the regions is one of the priorities. Major organizational and economic reforms are being carried out in the regions for the sustainable development of tourism. It should be noted that the decree of the President of the Republic of Uzbekistan "On measures to further increase the responsibility of local executive authorities in the development of tourism" was adopted.

In accordance with this decree, the posts of deputy governors of Khorezm, Bukhara, Samarkand and Tashkent regions on tourism development were introduced, and their main tasks include in-depth analysis of the industry, identification of existing problems and obstacles. Relatively objective statistics are needed to analyze regional tourism and identify existing problems. Unfortunately, the available statistics do not allow to accurately assess the demand for tourist services within the region. The main reasons for this are the low quality of statistical data, the lack of generalized indicators by sectors and industries related to the tourism sector of the economy, the inconsistency of the existing database with international reports and statistics. The existing shortcomings can be explained by the need to improve the methodology of statistical reporting, which consists of a set of specific complex sectors of regional tourism.

**Literature Review:** Some scientific, methodological and practical aspects of socio-economic development of the regions are the work of a number of foreign and local scientists, M. Bandman [1], U. Izard [2], A. Granberg [3], S.A. Suspitsin [4], Rafiev A.A. [5], A.A.Soliev [6], M.A.Abdusalyamov [7], K.X.Abduraxmonov [8], H.P.Abulqosimov [9], T.M.Axmedov [10], B.R.Ruzmetov [11], A.M.Sodikov [12], F.T.Egamberdiev [13], Sh.Kh.Nazarov [14], and others. However, the scientific literature focuses on the traditional socio-economic development of regions, and models of strategic planning for future development based on growth points (sectors), multiplier effect, single system and interdependence have not been sufficiently studied.

Therefore, it is very important to improve the implementation mechanism as an integrated system, identifying the sectors that will contribute to the future development of the region's economy.

**Research Methodology:** The study used monographic analysis, synthesis, statistical grouping, comparative and econometric analysis, induction and deduction methods.

**Analysis and Results:** It should be noted that a special state program aimed at developing tourism as a leading sector in Bukhara region has not been developed. However, special schemes are being implemented in Kashkadarya, Samarkand and Tashkent regions. On the basis of these programs it is planned to implement only



investment projects, the current situation has not been thoroughly analyzed, additional measures have been developed without the use of special monitoring indicators, without studying the real demand and supply of tourism, the impact and consequences of tourism on the socio-economic development of the region have not been calculated.

At the base of such shortcomings is the lack of objective figures and indicators that assess the development of tourism in the region.

**Table 1**

**Dynamics of tourism development in Bukhara region [15]**

Indicators	Years							
	2012	2013	2014	2015	2016	2017	2018	2019
Volume of services, (in billion soums)	1512,9	1938,6	2511,5	3387,8	2682,6	3270,0	4190,8	5364,1
Volume of tourist excursions and hotel services (in billion soums)	8,7	9,7	10,5	14,4	15,0	17,0	20,5	23,9
The share of tourism and hotel services in total services (%)	0,6	0,5	0,4	0,4	0,6	0,5	0,5	0,5

According to Table 1, in 2012-2019, the volume of tourism services in the region increased with relatively high rates (Table 1). These figures show that despite increase in tourist excursions and hotel services during the analysis period is 2,7 times, their share in the total volume of services is very low (0,5%).

On the one hand, this figure is not at the level of demand for tourism, and on the other hand it shows that not all areas related to tourism are covered. The level of tourism development can also be determined by the number of external and internal visitors (Table 2).

**Table 2**

**Visitor dynamics to Bukhara from foreign countries region in 2018-2019 visitor dynamics analysis [15]**

Indicators	Serviced, person			
	By travel agencies	Placed in hotels and other places	In sanatoriums and resorts	In tourist homes
In 2018				
Republic of Uzbekistan	152616	499146	5246	4511
Bukhara region	14744	68555	116	
In 2019				
Republic of Uzbekistan	160816	605243	6013	4704

Bukhara region	18975	91543	207	
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In Bukhara region in 2019, 110,725 people were served in the field of foreign tourism, compared to 2018, it increased by 32,7%. Also, in 2018, the share of tourists visiting the region in the country was 12 %, while in 2019 this figure was 14 % (Table 2).

According to the study, the current state of tourism development in Bukhara region, despite its high potential, remains low in economic growth.

Determining the relationship between the growth indicators of the tourism industry in the region and the main indicators of socio-economic development is of great methodological and practical importance. We used a correlation coefficient to determine this relationship. The correlation coefficient is determined using the following formula.

$$R^2 = \frac{\sum xy - \frac{\sum x \cdot \sum y}{n}}{\sqrt{\left[\sum x^2 - \frac{(\sum x)^2}{n}\right] \cdot \left[\sum y^2 - \frac{(\sum y)^2}{n}\right]}} \quad [2]$$

Here :  $R^2$ - correlation coefficient;

x- macroeconomic indicators;

y- tourism services;

n- the number of years under consideration;

As a result of the calculations, the relationship between the main macroeconomic indicators of the region and the development of the tourism industry was found. According to the calculated correlation coefficient, there is a relatively high linear relationship between tourism and services (0,80), investment (0,91), gross regional product (0,70) in the region (Table 3). A certain degree of dependence was observed in the production of consumer goods (0,70).

The low correlation between other sectors, including trade (0,62), industry (0,51) and agriculture (0,39) and tourism, indicates that their current contributions to tourism are not at the level of demand.

**Table 3**

**Level of correlation between economic growth indicators of Bukhara region and the leading sector growth point (annual growth rates in percent)**

Indicators	2012	2013	2014	2015	2016	2017	2018	2019	$R^2$
Gross regional product	109,6	109,1	107,9	108,0	108,2	109,1	107,9	101,7	0,70
Industrial production	110,3	107,1	104,8	110,8	107,6	108,0	107,3	100,8	0,51
Manufacture of consumer goods	109,0	108,7	103,6	102,8	110,9	113,4	116,8	97,4	0,70

Agricultural production	107,8	107,1	106,3	106,6	106,8	107,0	107,0	101,6	0,39
Investments	72,0	117,7	107,5	100,4	101,8	104,3	123,9	151,7	0,91
Trade	110,7	118,0	113,1	114,9	114,5	114,6	114,8	100,4	0,62
Services	118,0	110,8	113,5	116,4	112,1	110,1	115,2	103,6	0,80
Tourism services	106,0	112,0	109,0	138,0	108,0	114,0	121,0	132,0	-

**Source:** Researcher's report based on the official website of the State Statistics Committee <https://stat.uz>

**Conclusion and Recommendations:** In conclusion, it should be noted that in general, the results of the analysis of the current state of the tourism industry in Bukhara region on the basis of the proposed methods revealed the following problems:

- knowing that the assessment of the current state of tourism and development trends in the region on the basis of available official data can not give complete and accurate results, the study sought to ensure their objectivity on the basis of the proposed methods, along with statistical information;

- despite the fact that the volume of direct tourism increased by 2,7 times in 2012-2019, their share in total services remains very low (0,5%). This situation shows that the development of tourism in the region is not at the level of demand and the existing potential is not used effectively;

- there is a relatively high correlation between the general services, gross regional product and investment in the tourism industry in the region. The level of connection with industry, agriculture and trade is relatively low, indicating that their contribution to the development of tourism in the region does not meet demand.

The current state of development of the tourism industry in the region shows that there are a number of systemic problems. There is every opportunity to address them and effectively use the regional potential to make tourism one of the leading sectors and growth points of socio-economic development of the region, an important factor in improving the welfare of the population.

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**UDC: 338.48**

## **FACTORS OF DEVELOPING TOURISM POTENTIAL IN KHOREZM REGION**

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**Аннотация.** Ушбу мақолада Хоразм вилояти минтақасида туризм потенциалини оширишнинг омиллари қабул қилинган меъёрий-ҳуқуқий ҳужжатлар орқали изоҳланган ва Ўзбекистон минтақаларининг туризм инфратузилмаси салоҳиятини ҳисобга олган ҳолда таҳлил қилинган ҳамда уни ошириш юзасидан таклифлар келтирилган.

**Аннотация.** В данной статье разъясняются факторы повышения туристического потенциала Хорезмской области посредством принятых нормативных актов и анализируется его с учетом потенциала туристической инфраструктуры в регионах Узбекистана, а также предлагаются предложения по его развитию.

**Abstract.** This article discusses the factors of increasing the tourism potential of Khorezm region on accepted regulations and analyzes it and the potential of tourism infrastructure in the regions of Uzbekistan is studied also there have been offered suggestions for its development.

**Калит сўзлар:** туризм, потенциал (салоҳият), туризм потенциали, глобаллашув, туризм индустрияси, ресурс салоҳияти, инвестор, минтақа, туризм инфратузилмаси, концепция.

**Ключевые слова:** туризм, потенциал, туристический потенциал, глобализация, индустрия туризма, ресурсный потенциал, инвестор, регион, туристическая инфраструктура, концепция.

**Key words:** tourism, potential, tourism potential, globalization, tourism industry, resource potential, investor, region, tourism infrastructure, conception.

**Introduction.** It is known that the fast globalization is expanding international cultural ties, as a result it causes rapid development. According to the statistics of World Tourism Organization tourism is in the fourth place in the world exports of goods and services and third in income. Therefore, in the process of modernization of economy tourism field is considered high-income industry and ontributes to the acceleration of the global market of goods and services, employment and the development of close ties between different countries and regions. The potential of the world tourism industry is growing and developing rapidly so today the main priority is the widespread introduction of tourism services on the basis of modern methods, diversification of tourist services, the connection of historical and modern buildings, thematic improvement of tourist routes and the development of hotels.

For the last years, a number of extensive reforms have been carried out in order to increase quality of tourism as well as quantity, also clear tasks such as development of tourism industry, increase of role and share in economy, diversification and improvement of quality of tourist services, expansion of tourism infrastructure have been identified. Effective implementation of the set tasks is aimed at strengthening the competitiveness of the national economy. In this position, the innovative development of national tourism and strengthening its position in the world market, the rapid development of tourism based on ancient history and rich cultural heritage, the peculiarities of the regions is an important priority.

It is necessary to develop directions with great potential such as pilgrimage and medical tourism. There are more than 8,200 cultural heritage sites in the country but only 500 of them are included in tourist routes. This view is confirmed by the future development of medical tourism, pilgrimage tourism and ecotourism, as well as a great impetus to the development of economic and social spheres. As a result, the number of foreign tourists visiting to the country in 2025 will reach 7 million. per capita and it provides the annual income from tourism exports about 2 billion dollar.

An important task for this activity is to increase tourism and its potential. Because at the current stage of human development, the rapid growth of the level of socio-economic development has led to an increase in living standards and welfare, increasing urbanization, increasing the share of leisure time, radical changes in social values and personal characteristics. These serve as an important basis for the adaptation of the population's lifestyle to these changes, a significant increase in demand and needs for recreation and tourism. Consequently, travel and active recreation in the nature have become one part of the lives of modern people and an important form of health promotion and effective use of leisure time. Besides, there is a great potential



for the development of tourism in mountainous areas, national reserves, the unique nature of our country [1].

If there are great opportunities for tourism development, this chance should be used effectively. The tourism industry is a priority sector in a number of countries with terms of profitability and dynamic development. Tourism can lead to the intensification of economic processes, the growth of foreign exchange earnings and revenues, the development of tourism services, the creation of new jobs in transport and communications, catering, hotel management and construction. Therefore, it is very important to do research, evaluate the tourism potential of the regions and increase the efficiency of using it.

**Literature overview.** Potential plays an important role in the development of different areas in different sectors. First of all, the resource potential of the region is a set of all resources that are and can be involved in the processes of social reproduction. Also the involvement of all types of resource potential in the integrated development of the region justifies the need to study the potential of tourist resources as an important factor in socio-economic development. The concept of "resource potential" is considered as a general economic category, which is a necessary condition for economic development and at the same time a limiting factor of development. This term is widely used to refer to various objects, for example the world and national economy, region, industry, enterprise, etc. [10].

Originally the term "potential" comes from the Latin word "potentia" which means "power", and is considered to be "a means, a resource, a resource that can be used to achieve an existing and specific goal, to carry out a plan, to mobilize for a task". The concept of potential is broadly interpreted in areas such as the set of tools available, as well as the ability to use or realize them. There are some other definitions of potential too [4]:

- potential is a set of accumulated features that determine the ability to perform an activity and achieve the goal, in this sense, represents the past, and potential includes the essence of "resource";
- potential means the use of existing abilities, and includes the essence of "reserve";
- the development of potential means new skills which are formed in this process, and the potential includes the essence of "opportunity".

The tourism potential of the region is determined by the current ability of the economy, its industries, enterprises and organizations to create a tourism product and meet the needs of the population of different countries in tourism market. There are also several definitions of the concept of tourist resource in terms of better understanding of the essence of the concept of tourism and tourism potential, which is explained in the following areas:

- tourist-recreational resources can be natural and historical factors, as well as socio-cultural factors, including the objects of demonstration and study, which can satisfy the tourist's needs and lead to the restoration of physical and spiritual strength;
- a complex of natural-climatic, socio-cultural and infrastructural factors of the region which is used in the creation of tourism products [3].

Indeed, tourism potential is a set of opportunities for businesses to use tourism resources in the region to form tourism products that can attract the maximum number of consumers or tourists. Therefore, the "tourism resource potential" is a set of general and special resources, the combination of which provides the opportunity to conduct tourism activities in a particular area.

**Research methodology.** In the study monographic, economic analysis, comparison, logical analysis, abstraction, induction, deduction, SWOT- analysis was used.

**Analysis and results.** There are regions in Uzbekistan with great potential for tourism development, and the tourism industry is developing rapidly in these areas. The tourism potential of the regions is determined by the resources available in these areas and they also play a fundamental role in the development of tourism in the region. In this regard, there are several documents have been accedpted. The Decree of the President of the Republic of Uzbekistan on December 2, 2016 "[On measures to ensure the rapid development of tourism industry of the Republic of Uzbekistan](#)" DP-4861, on August 16, 2017 "On creating favorable conditions for the development of tourism potential of the Republic of Uzbekistan" Resolution DP-3217 of February 3, 2018 "On additional organizational measures", DP-5326 of February 6, 2018 "On additional organizational measures to create favorable conditions for the development of tourism in the Republic of Uzbekistan" RP-3509 "On measures to develop inbound tourism", RP-3514 dated February 7, 2018 "On measures to ensure the accelerated development of domestic tourism", August 16, 2018 "On measures to develop the tourism industry in 2018-2019" Resolution "On priority measures" dated January 5, 2019 "On tourism in the Republic of Uzbekistan Resolution RP-4095 "On Additional Measures for Accelerated Development". On the basis of these normative documents, promising projects in the field of tourism are being implemented in the region..

Today, region's cities, which have been attracting tourists with their high culture and science, architectural monuments, have also become modern tourist centers. The implementation of these tasks is directly related to the development of tourism, which plays an important role in the improvment of other sectors of the economy, attracts foreign exchange, creates additional jobs and strengthens international relations. In this condition, for the rapid development of tourism in Uzbekistan, it is necessary to attract foreign investment, widely introduce of innovative ideas and technologies in the industry, as well as to make full use of the country's rich natural, cultural and historical heritage, resources and opportunities. Therefore, the growing travel and tourism industry in the country is a factor in achieving high development in the future [5].

According to experts, the development of tourism is provided with certain direct factors. In particular, the development of international tourism is based on the following factors [2]:

- economic growth and social process;
- development of transport;
- an increase in the number of employees in developed countries and the rise in their level;
- labor intensification and expanding of workers' holidays;

- expansion of interpersonal relations at the regional and interregional level in the development of interstate relations and cultural ties;
- development of services sphere;
- development of technologies;
- reduction of border barriers, currency exchange and export barriers and decline in paperwork. These factors are considered as main basics in tourism developing and increasing its potential.

There are sufficient conditions and factors to increase the tourism potential in Uzbekistan. In particular, the country is among the top 10 countries in the world in terms of the number of historical sites. There are more than 7,000 unique historical monuments and architectural objects of great tourist value in our country, the famous British newspaper “The Financial Times” has published a list of the most interesting destinations for those who want to travel around the world in 2017 and among the nine countries mentioned in it, Uzbekistan is ranked second in the ranking of the most attractive tourist destinations in the world [9]. The newspaper is published in 24 cities around the world and is read by more than 2.2 million people every day. Nevertheless, today the level of use of the rich and diverse, huge recreational and tourism potential of Uzbekistan is not satisfying. In the future, it is planned to build about 60 hotels, more than 20 restaurants, a number of parks and gardens in Bukhara. These projects are being implemented together with potential investors from Germany, Russia, India, China, South Korea and Turkey. As a result, the region will be able to receive more than 10,000 tourists a day. Great opportunities for such tourism potential create special opportunities for the development of tourism in the regions.

More precisely, the determination of tourism potential will directly depend on the importance of the development factor of the selected industry, their impact and the reliability of statistical data. In particular, according to the research, the potential of the tourism infrastructure of the regions of Uzbekistan can be assessed in a generalized way. It focuses on determining the number of tourism companies and organizations in the regions, the number of hotel and alternative accommodation facilities in the regions, the number of places in sanatoriums and resorts in the regions and the tourism potential of the region. All indicators are evaluated with a number from 0 to 1. This indicates a connection to potential infrastructure network.

**Table 1. Uzbekistan regions tourism infrastructure potential [7]**

<b>№</b>	<b>Regions</b>	<b>The share of tourism potential of the region, in units</b>
1.	The Republic of Karakalpakstan	0,073
	Andijan region	0.050
	Bukhara region	0,112
	Jizzakh region	0,039
	Kashkadarya region	0,071
	Navoi region	0,054
	Namangan region	0,054
	Samarkand region	0,297
	Surkhandarya region	0,065

	Syrdarya region	0,005
	Tashkent region	0,156
	Fergana region	0,127
	Khorezm region	0,061
	Tashkent city	0,874

Analysis of the data in this table shows that the leading regions in terms of tourism potential include the city of Tashkent, Samarkand and Tashkent regions. Despite the fact that the lowest rates are recorded in the Syrdarya and Jizzakh regions, there are great opportunities for the development of agroethnographic tourism in these regions. However, today the share of tourism in the gross regional product of Khorezm region is growing year by year. Today, the region has the necessary tourist resources for the development of cultural and historical tourism, archeological tourism, ecological tourism, gastronomic tourism, cultural and entertainment tourism, agrotourism and pilgrimage tourism.

Khorezm region is rich in tourist resources and currently it is being used effectively. These will greatly increase the tourism potential in near future. At present, 208 cultural heritage sites, including 20 archeological, 124 historical and architectural monuments, 7 ensembles, 28 attractions and shrines are registered in the tourist destinations the region [6]. Of course if these tourist facilities continue being used effectively it will serve to increase the tourism potential in the future. Based on this, the effective development of the tourism industry, the problems and status of its structure, the processes associated with its solution allow to form an overview of the tourism potential.

**Table 2. General information on the structure of tourism potential in Khorezm region [11]**

№	Indicators	Years		
		2017	2018	2019
1	Visited tourists	1160600	1653665	3622777
2	Hotels	56	69	152
3	Hostels	-	1	9
4	Guest houses	1	10	64
5	Motels	-	-	-
6	Campsites	-	-	-
7	Sanatoriums and health centres	1	2	2
8	Tour operators	22	34	58
9	Guides	-	103	114
10	Tourist class vehicles	17	28	133
11	Main restaurants and cafes	11	17	30
12	Folklore ensembles	22	25	26
13	Artisan workshops	36	42	2018
14	Souvenir shops	48	63	105
15	Amusement parks	12	13	13
16	Theme parks	-	1	1
17	Water parks	-	-	-

18	Water attractions	-	1	1
19	Tasting halls	-	-	1
20	Cultural heritage sites	237	237	259
21	Restored cultural heritage sites	6	12	26
22	Museums	12	17	25
23	Pilgrim tourism destinations	7	7	8
24	Forestries	3	3	3
25	Protected areas	2	2	2
26	Eco-agritourism facilities	3	4	15
27	Eco-parks	-	-	-
28	Free Wi-Fi zones	-	3	17
29	Tourist information centers	-	4	12
30	Tourist road signs	8	15	46
31	Sanitary-hygienic outlets in tourist facilities	125	95	220
32	Sanitary-hygienic stations along the road	35	20	55

According to this table, the general information about the tourism potential of the region includes a total of 32 indicators. In addition, one of the directions and factors of increasing the tourism potential in the region is the development of tourism products and serving to tourists. At the same time, consumers should be tourists and guests, and great attention should be paid to the development of their arrival in tourist areas. Significant increase in the number of visitors to the region will have a great impact on the growth of the country's economy and rise the share of gross regional product, interest rates, replenishment of foreign exchange reserves. However, for this it is necessary to attract more tourists to increase the number of their visits, their interest in our country from where they are, and open the door for them to ease and wide opportunities. In this regard, the state pays more and more attention to tourism. Reforms and activities in the field of tourism serve to improve quality and efficiency.

In addition, the effective use of the potential of the four major recreational and tourism resources, which are of great scientific and practical importance in the implementation of important measures outlined in the conception of tourism development, it is expedient to focus on the solution of such problems as the improvement of the tourism management system and the development of the concept and program of development of the industry. In the development and implementation of this concept and program, the state determines measures for the development of tourism as a strategic sector of the economy.

According to factors which are given above, a certain contribution will be made to the identification of measures for the accelerated development of the regional tourism sector, the definition of priorities, the identification and solution of key problems. Therefore, in the framework of the program "Complex development of tourism potential of Khorezm region and the city of Khiva in 2017-2021" on the implementation of long-term plans for the development of tourism in the region for the effective development of tourism services, the state plans to implement 63 items. To fulfill the tasks in the band, it is planned to accelerate the development of the tourism industry, including the construction of modern hotels and similar accommodation



facilities that meet today's standards and requirements, attract foreign direct investment in the development of the hotel industry in the country.

It is obvious that the Khorezm region attracts tourists from all over the world with its ancient cities, history and modernity, unique cultural and spiritual heritage, traditions, customs and natural potential. In this condition, hospitality, modern hotels and resorts, high-quality services create a favorable environment for meaningful recreation of tourists.

The richness of historical sites, especially at the crossroads of the Great Silk Road, and the breadth of tourism is one of the top ten countries in the world in terms of. There are more than 7,000 historical and cultural monuments in our country. In particular, there are about 60 historical and cultural monuments in "Itchan kala" inner town and 127 historical and cultural monuments in the "Dishan kala" outer town of Khiva. Creating necessary conditions for tourists visiting them, getting acquainted with the history and description of the places visited is important in the development of this industry.

Of course, on the basis of accepted decrees and resolutions to increase the tourism potential, promising projects in the field of tourism are being implemented in the region. The main purpose of this visit to Khorezm region is the effective implementation of projects aimed at increasing tourism potential and the transformation of Khiva into a zone with high tourist potential.

If the number of tourists visiting to the region increases, it will affect the growth of the regional economy gradually, the percentage of income of the population, the replenishment of foreign exchanges reserves. However, this requires attracting more tourists, increasing the number of their visits, increasing their interest in the region from where they are located, opening the door to benefits and a wide range of opportunities for them. It is also important to turn Khorezm region into a modern tourist center with its ancient high culture, science and architectural monuments. This is evidenced by the rich cultural and historical heritage, the unique potential of the ancient city of Khiva, which is associated with eternity, and the high potential of the region in the international tourism market. Khorezm region, located at the crossroads of many important branches of the Great Silk Road for many centuries, today is highly valued by experts for its rich tourism potential.

Ecotourism is expected one of the most perspective type of the tourism industry in the region, which leads to expand the network of protected natural areas, including nature reserves, parks, eco-centers and biosphere reserves. In particular, comprehensive measures are being taken to assess the potential of ecotourism facilities, to create a cadastral system, to train qualified specialists in the field, to further demonstrate the ecotourism potential of the region to the world.

**Conclusions.** By analyzing it is known that the number of tourists to the region is growing. It is necessary to further increase the flow of tourists and improve the quality of tourist routes and services, which will ensure their stay in the region, while introducing new types of exotic tourism in the coastal zone of the Amudarya River. It is necessary to improve the condition of tourist facilities and strengthen their material and technical base. These measures will significantly increase the tourist potential of ancient cities of world importance located in the region. And in the future it will be

possible to develop such types of tourism as equestrian tourism, handicraft tourism, hunting tourism, medical tourism, MICE tourism, home tourism, ceremonial tourism, scientific tourism. This is due to the fact that the state has adopted regulatory documents for the effective implementation of new directions in this area.

Based on the above, the following measures should be taken to increase the tourism potential in Khorezm region:

- establishing modern accommodation for tourists in the existing natural areas on the basis of national forms;
- expanding the attraction of foreign and domestic investors in the field of tourism and hotel business;
- organizing open tourist zones in historic cities and increase the number of small hotels based on national traditions;
- expansion of special opportunities for tax and hotel business entities in tax benefits.

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**ACTUAL PROBLEMS OF HISTORY AND PHILOSOPHY****UDC: 9.93.930.2 (575)****THE ROLE OF MODERN TECHNOLOGIES IN HISTORICAL RECONSTRUCTION**

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**Abstract** – This article analyzes the role of modern information technology in the study of historical reconstruction, foreign experience in this field and its specific features. This article gives you a brief overview on “digital history”.

**Key words:** “Digital history”, historical reconstruction, geographic information systems, 3D modeling, modern technologies.

**Аннотация** – В данной статье анализируется значение современных информационных технологий в изучении вопросов исторической реконструкции, зарубежный опыт в данной сфере и его особенности. В статье освещены особенности направления “цифровой истории”.

**Ключевые слова:** «Цифровая история», историческая реконструкция, геоинформационные системы, 3D моделирование, современные технологии.

**Annotatsiya** – Ushbu maqolada zamonaviy axborot texnologiyalarining tarixiy rekonstruksiya masalalarini o‘rganishdagi ahamiyati, mazkur sohadagi xorijiy tajriba va uning o‘ziga xos xususiyatlari tahlil qilingan. Maqolada “raqamli tarix” yo‘nalishining o‘ziga xos jihatlari yoritilgan.

**Kalit so'zlar:** “raqamli tarix”, tarixiy rekonstruksiya, geografik axborot tizimlari, 3D modellash, zamonaviy texnologiyalar.

**Introduction:** One of the most important issues for science and education is the limited use of science and education in the positive aspects of innovations gained from advances in technology.

In today's fast advances in science and technology, the use of the latest developments in a particular field of science has had a positive effect. Effective use of modern information technologies is also important in the field of history and archaeology and historical reconstruction.

It can be widely used in the study of important aspects of foreign experience in the field of innovation and the use of modern technologies in scientific research and in the study of the history and archaeology of Uzbekistan.

Today, much attention is being paid in our country to the preservation, research and promotion of historical and cultural heritage, in this regard, appropriate decisions

are made at the national level and practical activities are being carried out within the “Road Maps”. One of the perspective tasks is the introduction of tourist routes along the famous archeological sites of Uzbekistan [1]. In this process, it is important to use modern information technology capabilities, to use high-tech technologies in researching modern laboratories, and to promote historical-cultural heritage.

**Literature review:** A number of foreign researchers have conducted research on the subject mentioned in the article. Some researchers such as E.L.Ayers, W.G.Thomas, P.Arthur, L.I.Borodkin, I.M.Garskova, D.I.Zherebyatev’s scientific works play a great role to study the issue.

E.L.Ayers, W.G.Thomas, P.Arthur have done significant research in the field of “digital history”. L.Borodkin wrote in his book: “However, computer models have successfully applied change in historical and cultural studies, on the basis of no longer quantitative (statistical) data, and text and visual sources. The importance of the latter is also actualized in the context “Visual” and “digital” turns experienced by historical science” [2]. I.M.Garskova [3] and D.I.Zherebyatev’s [4] researches connected with the “digital history” and methods of historical reconstruction.

**Research methodology:** in this article used scientific research methods such as retrospective, systematization, comparative analysis, generalization of historical data.

**Analysis:** As we consider the use of information technology in the field of history and archaeology, we must first focus on such concepts as “digital humanities”, “digital history” and “virtual archaeology”.

“Digital Humanities” is a research area at the intersection of computer technology and the humanities. This field of research covers such topics as history, archaeology, philosophy, linguistics, literature, art, music and more [5].

“Digital History” is a special area of humanities that studies the use of computer technology and digital media in historical analysis [6]. The word “digital history” does not fully explain the meaning of the word. There are two main areas of application in this area:

1. Familiarize the Internet audience with electronic archives, interactive maps and events;
2. Create new research tools for historians.

The introduction of the term Digital History is associated with the names of American researchers Edward L. Ayers and William G. Thomas (Center for Digital History, University of Virginia, 1997) [7].

In recent years, a number of research papers have been published by researchers in this area, and these authors have analyzed various aspects of Digital History based on their experience in the use of computer technology in their work.

The author of important scientific works in this area is Paul L. Arthur’s research is particular importance [8]. According to the researcher, converting primary sources into an electronic format will give greater access to the database, and this possibility is of practical importance.

According to P. Arthur, there are four main areas of Digital History. The first direction is practical visualization - the issue of virtual reconstruction of cultural heritage sites. In this direction, three-dimensional modeling is created to restore the model of objects. Illustrates the restored 3D model of the Roman Forum of Antiquity,

created in 1997 - 2003 at the famous University of California (UCLA Cultural Virtual Reality Laboratory). The first direction also focuses on historical maps created on the basis of Geographic Information Systems (Geographical Information Systems) technology [7].

The second direction relates to a wide range of information resources known as online encyclopedias, atlases, and dictionaries.

Many of them are open to the basics so that users can improve their knowledge. An appropriate example is the British Museums Online Learning Project, launched in 2009.

As part of this project, nine British museums collect funds that can be searched and used to access important information from the project-based portal.

The third area is the use of interactive hypermedia technologies. An example of this is the development of the Labyrinth project in the Annenberg Center at the University of Southern California. Multimedia document processing (including biographical visual data, easy navigation, 3D rendering, and maps).

The fourth field is related to Web 2.0 mashup resources in social media. Web 2.0 includes plenty of aspects and technologies of: Wiki is a technology for creating community hypertext, Flickr is a social service; Youtube - social video service; Google Maps - Satellite imagery and maps of the Earth; Blogs - network diaries; Del.icio.us - online bookmark; Netvides - network desktop and more. The mashup-type resources of countries and continents are based on photographic data and historical commentaries on them.

“The Road Map”, designed for the protection, preservation, research scientifically, promotion and rational use of the material cultural heritage sites in 2019-2021, will be used to promote cultural heritage in the Internet (Wikipedia, Youtube, Facebook, Twitter and others) to place scientifically based information on the material cultural heritage, as well as photos and videos about them [9].

It is noteworthy that the issue of electronizing history information is also being handled by private companies with high-tech and experienced specialists. Such projects can be found in the works of scientists such as Y.V.Dunaeva, L.I.Borodkin and I.M.Garskova [10].

In addition, for example, the British Library, in cooperation with a private firm, electronically distributed about 4 million pages of national and local newspapers of the XVII and XIX centuries, and XX century newspapers were also involved in this process. The electronic collections are also included in such newspapers as The Times Digital archive (1785–1985), The Observer (1791–2003), Daily Express (1900–2009), Daily Mirror (1903–2009), and (Manchester) Guardian 1821–2003, The Scotsman (1817–1959), The Irish times (1859–2008). Such case studies make it easy for researchers to find and analyze the information which they need [7].

Another large collection of British history sources is the innovative archive of “Mass Observation Archive”. The archive contains information (diaries, letters, albums) for 1930-1950. At the beginning of 2011, more than half a million pages of information collected through this project were made available to online users.

**Discussion:** Today, a number of possibilities of modern information technologies in archaeology and historical reconstruction are available. Here are some of them.



**Electronic Database.** This information should be systematized to facilitate the search and analysis of archaeological and historical data. It is well-known that electronic databases are more user-friendly than paper catalogs. Therefore, “database management systems” are now widely used. The system is capable of collecting a large amount of data and targeting and searching for it. It is possible to create various databases: catalogs of archaeological sites, database of excavations, catalogs of museums, bibliographic catalogs, etc.

It should be noted that the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan № 792 dated 21.09.2019 “On radical improvement of archeological researches” is reflected in the Program of measures on creation of album catalogs of large archeological sites for tourism development in the country (2020-2023) [11].

**Using quad copters (multicopter, drones).** It is well-known that quadrakopter (multicopter, drones) is widely used today in the world experience in the identification and study of monuments of historical and cultural heritage.

It is worth noting that currently the search for monuments from drones involves two tasks.

1. Observation (aero-visual) the monuments from the space. The purpose of this method is to determine the location of the monuments and their relationship to each other according to the landscape, and to locate and map the unexplored monuments. This information will help to organize archeological expeditions to study the monuments.

2. Provides ample opportunities for taking photos (aero-visual photography) and video from the sky. At the same time, the overall structure of the monuments will be clarified. Pictures are usually taken on a large or medium scale.

It should be noted that the first samples of aerial photos of archeological sites on the territory of Uzbekistan were made by S.P.Tolstov during the study of the Khorezm archeological ethnographic expedition [12]. It is also worthy to note that this was one of the most important scientific discoveries of its time.

**GPS, GIS.** GPS is called the "Global Positioning System" is a global positioning system derived from the first letters of the words. GPS consists of 24 navigational satellite systems that rotate orbit around the earth. Comrades regularly report exact time and location. The use of GPS is associated with the use of modern information technology and is mainly based on computer repositories and geographic information systems (Geographic Information System).

GIS is an automated hardware and software complex that provides for the collection, processing, storage, updating, analysis, and processing of topographic, geodetic, land, water resources and other cartographic information about the objects and events of nature and society [13].

The use of professional GPS devices in archaeology is a special method of archaeological exploration. The remote method is the identification of particular characters of an archaeological site at a certain distance.

Currently, the most efficient, compact and relatively low-cost method in archaeology is GPS technology. The main tasks of GPS are to collect, verify and analyze data. GPS by 2 types

It is divided into: 1) navigation receiver, 2) geodetic precision system [14].

The first is to determine the current fixed coordinates of a known object, that is, the location of the surface at a distance of up to 15 meters. This type of equipment is easy to use and can take seconds or minutes to receive coordinates. Although the geodetic GPS system is a relatively sophisticated device, it can detect the location of the object with a few centimeters in error [15]. On the territory of Uzbekistan, Uzbekistan-Japan (K.Kyudzo, B.A.Turgunov, Sh.Pidaev), Uzbekistan-Germany (Sh.Shaydullaev, D.Huff, K.Kaniut), Uzbekistan-France (P.Lerish, Sh.T.Annayev, Sh.Pidaev), Uzbekistan-Russia (E.V.Rtveladze, J.Ilyasov, T.Mrtychev, S.Bolelov, N.Durechenskaya), Uzbekistan-Czech Republic (K.Abdullaev, A.Shaydullaev, L.Stancho), Uzbekistan-China (Wu.Xin, V.Sverchkov, N.Boroffka) and other international expeditions are used by local and foreign archaeologists [16]. In addition to this, the use of new techniques and technologies during the expeditions has made some improvements to the archaeology and history of Uzbekistan. It is worth mentioning service of GIS technology; and nowadays the numbers of monuments in Sherabad district of Surkhandarya region are over 200 [17].

This means that archaeological and historical research is now widely used in aerophotoscope, GIS, magnetometry, geolocation and others [18].

Numerous GIS are used in scientific research and practice, including individual GIS. They include GeoDraw, GeoGraph, (Russia), AtlasGis and WinGis (USA), ArcInfo, MapInfo (USA) and many more.

Using maps features such as Google Earth and Google Map, it is possible to renew maps of archaeological sites, to reconstruct migration, trade and cultural links. Maps of archeological monuments of the Southern Uzbekistan in Bronze and Early Iron Age period are also reflected in today's modern research [19]. Also, the Uzbek-Czech-French archaeological expedition carried out a planigraphic and stratigraphic survey at the Burguttepa archeological monument in 2015-2018. At the beginning of the study, Burguttepa's satellite image and topographical map has got based on Google Earth [20].

**3D (three-dimensional) modeling.** One of the most important issues in virtual archaeology is 3D (three-dimensional) modeling technology. This technology is widely used as a technology that will achieve positive results in many areas.

3D modeling is the creation of a three-dimensional project based on any architectural plan or draft, image and etc. Today, it is possible to reconstruct archaeological sites, ancient architectural structures using computer technologies.

Foreign archaeologists use a wide range of software such as AutoCad, MicroStation, AutoCad Map, Easy Cad, 3DsMax, and more. These programs can be used effectively by archaeologists in field research, in the restoration of three-dimensional models of archaeological findings, settlements, architectural structures and archeological finds.

The work of researcher D.I.Zherebyatev covers the use of three-dimensional modeling in the field of history and archaeology [21]. On this basis, one can analyze some aspects of foreign historiography.

Since the 1980s, foreign researchers have begun to use three-dimensional computer modeling techniques in historical research. The initiator of the use of three-dimensional technologies in historical research is the team of scientists, historians,

architects and art historians who have virtualized (virtual reconstruction) of historical and cultural heritage with the help of IT specialists. In the early 1990s, researchers in this area increased significantly [22].

From 1980-1990 theoretical and practical works on using of modern information technologies in historical and archaeological researches began, and the concept of “virtual archaeology” began to appear in science. This issue is reflected by archaeologist Paul Reilly [23].

P.Reilly is the founder of the direction “virtual archaeology” (virtual archaeology, digital archaeology). P.Reilly offers a scientific analysis of the restored model of the historical and archaeological site. In our view, this method is especially important in the architectural study of archaeological sites that have been studied extensively in the past but have not survived to this day. Unfortunately, such monuments exist in the territory of Uzbekistan (for example, one of the most important objects of our study is the Kyzylcha 6 fortress). It should be noted that in September-November 2018, the Democratic Party “Milliy Tiklanish” re-registered objects in the form of public control, acted on 5287 objects and collected 45,000 photos. As a result, 827 objects were not found, and 381 objects were identified in an accident [24]. These statistics show the need for systemic reforms in the sector.

The main purpose of virtual archaeology is to create high-quality images and models of archaeological objects using computer technologies.

Research and discoveries in this area will be discussed at a permanent conference (CAA - Computer Applications and Quantitative Methods in Archaeology) [25]. These aspects have had a significant impact on the development of practical areas such as virtual anthropology and “digital history”.

Abroad, research on the three-dimensional modeling of historical reconstruction in the 1990s and 2000s began at the humanities faculties of US universities (Brown, Harvard, Columbia, Stanford). Research has also been carried out in universities in the United Kingdom (University of Birmingham, King's College London), France, Italy, Spain, Austria and other countries.

In this regard, it is worth mentioning some of the noteworthy research done at the above mentioned universities. In particular, E.L.Vote, who led his research at Brown University, proposes a new methodology for the analysis of archaeological data [26]. He offers a method for archaeologists to use visual circuits. According to the researcher, good results can be achieved by analyzing archaeological data using visual circuits and technological advances.

The Giza project, dedicated to the study of the historical and cultural heritage of Egypt, by Harvard scholars is also of particular interest. This project also envisions the restoration of 3D models of monuments using high technologies and their implementation in the education system and the media. It is planned to develop and popularize “educational tourism” (“Edu tourism”), a specific area of tourism. According to the authors of the project, anyone who has access to the Internet can make a virtual tour of the Giza project, as well as increase the impact of social media tools (Facebook, Google+, Twitter, etc.) [27].

Researchers at the Royal College of London, B.Richard and Henard, have done research to revive the virtual project of the Theatre of Pompey in ancient Rome [28].

Russian scientists have lagged behind the use of three-dimensional technology in historical research, and the first studies in this area are related to the names of Y.M.Baranov and E.E.Kurlaev. It is worth noting that the History and Computer Association of Russia (AIC - Association "History and Computer") is making a significant contribution to the widespread introduction of three-dimensional modeling technologies in the field of history.

Since 2006, Tambov State University (R.B.Konchakov, D.I.Jerebyatov) has been working on virtual reconstruction, jointly with the Faculty of Arts of Saint Petersburg State University and the Institute of History of Material Culture of the Russian Academy of Sciences (E.V.Logdacheva, S.V.Schweberger et al., Siberian Federal University (M.V.Rumyantsev, A.A.Smolin, I.N.Rudov, N.O.Pikov), Ural Pedagogical University (A.V.Fishev) are going.

It can be observed that archaeologists also refer to 3D modeling in their scientific work. In the researches of A.S.Smirnov, A.V.Trononenko, Y.M.Baranova, S.N.Alekseychuka, D.S.Korobova, I.V.Jurbina, A.V.Smurgy, some aspects of the issue are also covered [29].

Much work has been done by the aforementioned researchers on the role of three-dimensional modeling in historical research.

These studies play an important role in the promotion of historical and cultural heritage and their scientific study. Expanding the scope of research in this area is also relevant in Uzbekistan.

It is important that the protection, preservation, research, propagation and promotion of the material and cultural heritage for the period 2019-2021 are set out in the Annex to the Decree of the President of the Republic of Uzbekistan dated December 19, 2018 "On Measures for the Perfection of the Activities in the Area of Safeguarding the Intangible Cultural Heritage". According to this innovative technologies of 50 most important archeological monuments in the Republic by November 2020 will be included in the Road Map to radically improve their rational use and planned to create a 3D model [30].

A number of major scientific centers of the world are working on the issues of using modern information technologies in the field of history and archaeology, the wide use of innovative technologies. When thinking about this, it is necessary to briefly dwell on the activities of the History and Computing Association.

The History and Computing Association was formed at a conference at Westfield College, University of London in March 1986, and officially began its work in 1987 during the second conference.

The issue of "modeling" in historical research was discussed in detail at the 1996 Association of History and Computing Conference [31].

The History and Computer Association is one of the professional associations in the humanities among the CIS countries. The Association was established in 1992. The history of its formation and development is connected with the formation of a new direction of "historical informatics" in Europe. It should be noted that the International Association of History and Computing (ANS) was established in 1986.



The aim of the association is to coordinate the work of historians from different countries on the use of computer technologies and techniques in their research and teaching.

In the activities of the Association “History and Computer”, such issues as “historical information”, modeling of historical processes, the use of GIS technologies in historical and archaeological research are of paramount importance [32]. Today the association covers more than 200 research centers and universities in Russia, Belarus, Ukraine, Kazakhstan, Kyrgyzstan and Latvia.

Three-dimensional (3D) modeling technology is now widely used in the creation of virtual museums. Although virtual museums are located on the Internet, they are based on real museum exhibits and have great scientific and educational value. 3D galleries of exhibits can be used to promote these museums around the world.

The virtual museum has a number of advantages. You do not have to visit Washington, London, Paris, Ankara, St. Petersburg or Moscow to get acquainted with museum exhibits. With the use of the Internet, you can observe a huge world of museums, which includes interesting tours, collections of colorful exhibits, useful and interesting information.

In some of the virtual museums, today only if the electronic exhibits of museum exhibits have been placed in the form of pictures, a number of museums have created 3D projects that allow them to perform virtual travel.

“Virtual Tours” – are different from real museums, it gives students a virtual tour of museum funds [33].

There are a number of important aspects of creating three-dimensional models of museum exhibits. In particular, these exhibit models are not subject to environmental impacts, they can be used at any time and are economically easy to learn and observe.

Also, the use of such technologies in museums can save time on reconstruction. This can be particularly useful in local lore and school museums, where the fund of reconstructing museum exhibits is relatively small [34].

When creating more accurate three-dimensional models of museum exhibits, it is advisable to use their original or at least qualitative images. The creation of the virtual model of the museum exhibits from various angles is now used by software such as 3D Software Object Models, Photo Modeler, 3D Sculptor, 3D Photo Builder Professional, Real 2 Virtual 3D.

There are many projects to introduce three-dimensional modeling technologies in museums, and the Smithsonian Institution (USA) is an important part of this research. This project includes three-dimensional models of 137 million museum exhibits [35]. On the project's web site, visitors can observe the exhibits of the museum from various angles and get acquainted with their comments.

It is noteworthy that the focus is on overseas implementation of modern technologies in science and education, and contests are organized to identify important innovations.

In London, for example, there is an annual Current Archaeology Awards event, where regular winners (archeologist of the year, book of the year, project of the year) are awarded.



All projects that participated in and won the competition “Archeological Innovation in the Last 50 Years’, organized in 2017, were directly related to modern information technology [36]. Among the winners of the 2017 award is the Laurence Show, a project that she named LIDAR. The project has identified archaeological sites for the Bronze and Early Iron Age with the use of laser mapping technology and the findings of that period.

It should be noted that LiDAR (Light Detection and Ranging) technology can be used to create topographic maps of airborne technology and to obtain aerial photographs of archaeological sites. The earth-based LiDAR technology is able to provide accurate three-dimensional reconstruction of ancient structures.

Other projects also covered three-dimensional modeling, modern methods of historical cycles (dendrochronology, radiocarbon, isotope analysis), mitochondrial DNA analysis in paleanthropology, archeological database.

**Conclusion:** Indeed, the development of computer technology has had a significant impact on the development of the modeling industry. Historians and archaeologists have started using new tools for analysis, database management, special programs for linguistic analysis of historical text, and geographical information systems (GAT or GIS). In general, today researchers of history and archaeology can effectively use modern information technologies as part of their scientific research.

Modern technologies play a significant role in the promotion of historical and cultural heritage and their scientific study. After all, innovation, new ideas and technologies are the most important factors that influence the development of science.

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## STRINGED INSTRUMENTS AND THEIR CLASSIFICATION

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**Annotation.** After the human mind invents the stringed instrument and develops it to a certain extent, its universal development is formed and developed on the basis of culture, spirituality and traditions of each nation.

**Key words:** Pythagoras, arganun, nuzha, navha.

**Аннотация.** После того, как человеческий разум изобретает струнный инструмент и в определенной степени развивает его, его универсальное развитие формируется и развивается на основе культуры, духовности и традиций каждого народа.

**Ключевые слова:** Пифагор, арганун, нужа, нава.

**Annotatsiya.** Inson ongi torli asbobni ixtiro qilib, uni ma'lum darajada rivojlantirgandan so'ng, uning universal rivojlanishi har bir millat madaniyati, ma'naviyati va an'analari asosida shakllanadi va rivojlanadi.

**Kalit so'zlar:** Pifagoralar, arganun, nuja, navha.

**Introduction.** Stringed instruments are a type of musical instrument that has been formed since ancient times and developed in the practice of different peoples within

the framework of their spirituality and tradition. It is difficult to give a definite account of the history of the origin of the stringed instrument. According to legends from the past, the first invented stringed instrument was called Barbat and was first invented by the great Greek scientist Pythagoras. In fact, the first made (created) instrument was simple and straightforward in every way and later developed. In this point, scientist I. Rajabov writes the following: "Musicians who lived in the period after Pythagoras improved barbat and made 2-3-4 stringed musical instruments based on it. Barbat, on the other hand, is said to have been the basis for the development of all stringed instruments in many sources". Many sources state that the barbat was an oud instrument and that it was the basis for the making of the oud instrument.

**Main body.** After the human mind invented stringed instrument and developed it to a certain extent, its universal development is formed and developed on the basis of culture, spirituality and traditions of each nation. Patterns of instruments emerge that are unique to each nation and are played through different means.

V. Belyaev writes: "Before the forms of stringed instruments were in the form of arch. That is, in the form of a wooden bend form".

Fisogurs is the Greek name for Pythagoras. He is the great philosopher-scientist who lived and worked in the 12<sup>th</sup> century BC. Legends about the creation of musical instruments are given in I. Rajabov's book "Maqomlar masalasiga doir (On the issue of melody)" and ideas about the combination of seven sounds in music are offered in the story "Kaknus" in A. Navoi's book "Lison ut-tayr (Language of birds)".

It had a body and had one or more strings attached to it. Over time, this board body straightened and took the shape of a handle or musical instrument handle. At the same time, the heads, which act as resonators, are attached to the handle, primarily from living things (turtles, zihr) or plant fruits (pumpkins, coconuts, etc.). And the process of development led to the emergence of each nation's own musical instruments. The head of an instrument has developed over time due to the equipment it is made of and its size, the length of the handle, and the number and proportion of strings.

Among the peoples of Central Asia, a number of instruments such as tanbur, dutar and kobiz gijjak were created and widely used in practice. By the Middle Ages, each of the musical instruments had a great deal of attention among the people in terms of form, sound, and prestige.

The popularity of musical instruments among the people was also the basis for the study of philosophers and scholars of their time. At the forefront of research in this area, we can see the encyclopedic scholar Abu Nasr al-Farabi, who lived and worked in the 9<sup>th</sup> century.

According to Kurdish Zacks and Erich Horibostel, who gave scientific descriptions of the classical musical instruments of the Muslim world, oud, tanbur, rubab, qonun, arganun (organ), nay, trumpet, etc., based on the idea that musical instruments in music are the result and generalization of practical research, the science of instrumental (organology) was founded by Farabi. In his great book on music, for

the first time in the history of musicology, the scientific classification of musical words is described.

After Farabi, various information on musical instruments and instrumental performance was reflected in the work “Javomi ilm al-musiqa” by Ibn Sina (10<sup>th</sup> century), Abu Abdullah Khorezmi (10<sup>th</sup> century), Abdukadir Maroghi “Kitab ul-nagham” (11<sup>th</sup> century), Zaynullobiddin Husayn “Risola dar bayoni qonuni va amaliy musiqiy” (11<sup>th</sup> century), Abdurahman Jami “Risolai musiqiy” (12<sup>th</sup> century), Amuliy “Risolai musiqiy” (13<sup>th</sup> century), Darvesh Ali Changi ““Risolai musiqiy””.

In their treatises, these medieval scholars described ancient specimens of stringed instruments, such as nuzha, navha, chang, qonun, rubab, oud, rud, tanbur, dombira, and dutar. In the twentieth century, A. Fitrat in his book “Uzbek classical music and its educational significance” describes the Uzbek folk instruments. V. Belyaev and F. Karomatli describe the classification of instruments according to their characteristics along with their description.

The development of musical instruments is primarily related to the practice of performance. The perfection of the instruments, or vice versa, is characterized by their place in the criterion of performance. Therefore, the names and practical works of musicians and singers are also reflected in the literature samples created in the Middle Ages. In particular, following this tradition, Darvesh Ali Changi dedicates four chapters (IX, X) of the booklet to the creative activities of great people, musicians, music scholars and music lovers, composers and talented singers of his time. He provides the most relevant information about each representative. Famous musicians include Mavlon Miraki Changi, Darvesh Ahmadi Qonuni, Shah Quli Gijjaki, Alijon Gijjaki, Ustad Zaytuni Gijjaki, Ustad Amir Qulikhon Tanburi, Yusuf Mavdudi dutori, Hafiz Tanish, Hafizi Poyandan Qobuzi, Mavlon Qasim Ustad Qanuni such as masters of their profession and scholars who have mastered the art of playing music.

In the modern process, it is important to study and publish the works of singers and musicians. After all, in the monographs devoted to the work of musicians and singers, it has become a tradition to cite their lives, creative activities, teacher-student lessons, style and school of performance, creative work and examples from them. At present, monographs have been published on the works of unique teachers, outstanding representatives of the performing arts as Hojikhon Boltaev, Madrahim Yakubov (Sheroziy), Hoji Abdulaziz Abdurasulov (Mahmud Ahmedov), Tukhtasin Jalilov (Ikrom Akbarov), Yunus Rajabiy, Fakhriddin Sodikov (Ravshan Yunusov), Orifkhon Khotamov (S.Begmatov). Turgun Alimatov (R. Kasimov), Mukhtorjon Murtazoev (A. Zokirov).

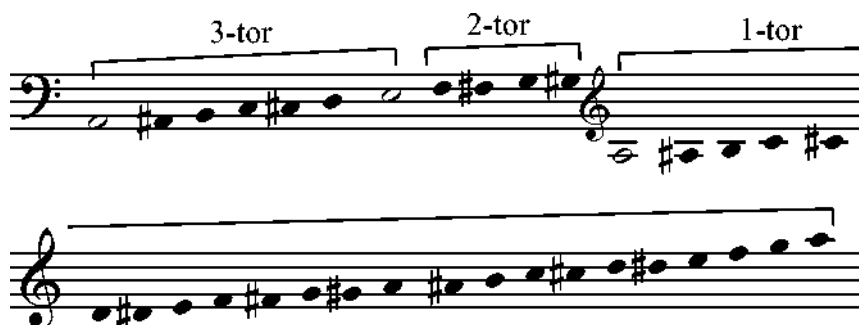
Admittedly, the study of the work of talented musicians and singers continues in a manner worthy of our time.

Rubab is one of the traditional Uzbek instruments that are played clicking. There are two types of rubab in music playing practice – Afghan rubab and Kashgar rubab. Afghan rubab is increasingly used in academic playing practice. The traditional rubab is an instrument known as the Kashgar rubab. In the early 20<sup>th</sup> century, it was



popularized in the practice of playing as an improved version of the rubab brought from Kashgar. In particular, Darvesh Ali Changi states in his treatise that rubab was widespread during the reign of Sultan Muhammad Khorezmshakh (1200-1220) and had 4 strings and 1 silver string. It was developed and improved over time, by the 20<sup>th</sup> century it was formed as a traditional Uzbek musical instrument. The rubab also consists of two parts, head and handle. Its bowl (bowl shaped head) is carved from whole wood (usually made from mulberry, apricot and walnut trees) and covered with a veil made of animal skin. The curtain on modern rubabs is drawn from the heart curtain of cattle and the skin of fish. On both sides of the place where the bowl is connected to the handle, there are arched decorative horns. They are carved together with the bowl. There are 5 ears at the beginning of the rubab handle. Special curtains made of copper from 21 to 23 are mounted chromatically on the handle.

The rubab covers a range of 3 octaves (range). Its curtains are chromatic:



The rubab has 5 strings, 1 from the gut and 4 from the steel string. Rows 1 and 2 are arranged in double order and are set between quartet and quintet as follows:



**Conclusion.** Rubab is played with the help of a special mediator. At the same time, Abbas Bahromov, Sulaymon Takhalov, Ari Bobokhonov, Kabul Usmanov, Kabul Aripov, Tohir Rajabiy, Husan Nabiev, Shavkat Mirzaev, Rifatilla Kasimov, and other talented rubab players are among the talented artists who have made a worthy contribution to the development of Uzbek rubab performance.

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**UDC 781**

## **LITTLE ABOUT THE HISTORY OF KHOREZM MUSIC**

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**Аннотация.** Мақолада XX аср бошларида Хоразмда маданият ва маърифат соҳасида кўпгина асарларни тўплаш, нашр қилиш, кейинги авлодларга етказиш борасида тадқиқот олиб борган Мулла Бекжон Раҳмон ўғли ҳамда Муҳаммад Юсуф Девонзодаларнинг ҳаёти ва ижоди, уларнинг ҳамкорликда яратган “Хоразм муסיкий тарихчаси” китоби ҳақида далиллар асосида сўз юритилади.

**Калит сўзлар.** Мулла Бекжон, Бегижон, Матюсуф Харратов, Девонзода, Чокар, маком, Хоразм муסיкий тарихчаси, Хива, Хоразм, Аҳмад Закий Валидий Тўғон, Александр Николаевич Самойлович.

**Аннотация.** Статья посвящена жизни и творчеству Мулла Бекджона Рахмон оглу и Мухаммада Юсуфа Девонзода, которые в начале XX века проводили исследования по сбору, публикации и передаче многих произведений в области культуры и просвещения в Хорезме.

**Ключевые слова.** Мулла Бекджон, Бегижон, Матюсуф Харратов, Девонзода, Чокар, маком, Музыкальная история Хорезма, Хива, Хорезм, Ахмад Закий Валидий Тогон, Александр Николаевич Самойлович.

**Annotation.** The article deals with the life and work of Mulla Bekjon Rahmon oglu and Muhammad Yusuf Devonzoda, who conducted research on the collection, publication and transmission of many works in the field of culture and enlightenment in Khorezm in the early 20th century.

**Keywords.** Mulla Bekjon, Begijon, Matyusuf Kharratov, Devonzoda, Chokar, maqom, Khorezm musical history, Khiva, Khorezm, Ahmad Zakiy Validiy Togon, Alexander Nikolaevich Samoilovich.

**Introduction.** The Resolution of the President of Uzbekistan dated November 17, 2017 "On further development of the Uzbek national art of maqom" highly praised the potential of our musical values and their role in world civilization. In particular, it emphasizes the following aspects: "This unique art, which for centuries has been shaped by the hard work and dedication of great poets and scientists, talented composers, hafiz and musicians, creative thinking, has gained great fame and won attention not only in our country and the East, but around the world." [1].

The most important issues of today are the in-depth study of the heritage of our ancestors on a scientific basis, the application of classical music traditions in modern practice and provide clear definition of their most important issue - their place in world spirituality.

By the end of the 19th and the beginning of the 20th centuries, culture in Khorezm reached at its great stage of development. The successful development of this process and its significant results in various fields, the rise of clergymen with strong faith and enlightenment, as well as the wide involvement of self-aware and nationally educated intellectuals in government work were ready to raise the culture and art in Khorezm.

**Literature review.** The book "Little about the History of Khorezm Music", which covers a brief history of Khorezm music until the twentieth century, is less studied source by experts in the research field. There is almost no information about the book in other sources. In 1998, Botir Matyokubov published the text of the book in the modern Cyrillic script. [2] In 2006, Hojiakbar Hamidov and Asadali Hakimjanov reprinted the pamphlet in the Cyrillic script [3], and in 2014, Botir Matyokubov republished the pamphlet in Latin script of the Uzbek language [4]. However, in these publications there are many errors in the translation of the words in the text from the Khorezm dialect into Uzbek.

**Research methodology.** In this article, we need to briefly dwell on the analytical and theoretical aspects of the book "Little about the History of Khorezm Music", the life and work of its authors - Mulla Bekjon Rahmon oglu and Muhammad Yusuf Devonzoda. In substantiating our research, we relied on both old and modern sources of the book. We have focused on scientific hypotheses that may come in handy in explaining the topic. We widely used the most popular form of research - the method of oral conversation, the views of the Artist of Uzbekistan, Professor Otanazar Matyokubov [5, 6] and Professor Rustam Abdullayev.

**Analysis and results.** The pamphlet "Little about the History of Khorezm Music" is one of the centuries-old literary heritage by Mulla Bekjon Rahmon oglu and Muhammad Yusuf Devonzoda. The work is of great importance on the study of the history of Khorezmian music and plays an important role in the study of the historical

foundations of oasis art. The book was originally written in the Arabic alphabet (old Uzbek script) in Khorezmian dialect and published in Moscow in 1925 [7]. Unfortunately, during the Soviet period (XX century), the book "Little about the History of Khorezm Music" underwent certain changes and almost fell out of scientific and practical attention. It is noteworthy that it contains valuable information about the musicologists who worked in the field of Khorezm maqom, the tazkira of famous performers of that period, the structure of Khorezm Six semi-maqom and Dutor maqom, and its doyra methods.

The first chapter of the booklet is called "The first period of Khorezmian music". The authors begin the first period of Khorezmian music with the activities of Khorezmshahs who ruled in ancient Urgench. He narrates the legends about Yusufbek Dutari, who lived during the reign of Shah Jalaliddin and his father.

The second period is 1805-1864 - from the time of Muhammad Rahimkhan to the time of Muhammad Rahimkhan Soni. It is noted that during this period, efforts were made in the field of music prosper, especially the services of Muhammad Rahim Khan II in this regard.

The next part deals with the re-formation and enrichment of Shashmaqom, the services of such masters as Niyazjon Khoja, Mahdumjon Qazi, Muhammadjon Sandikchi, and the appreciation of their work by Muhammad Rahimkhan. The invention of the "Khorezm line" or the note, in which the merits of Pahlavonniyaz Mirzabashi are mentioned. Attention is paid to the status of makoms, their branches, the status of the Dutor, their structure.

The data about the biography of Niyazjon Khoja, Makhsumjon qazi, Pahlavonniyoz Mirzaboshi, Muhammad Rasul Mirzaboshi, Muhammad Rahimkhan soniy, Qanbar bobo, Muhammad Yaqub fozachi, Khudoibergan muhrkan, Qalandar Donmas, Rizo bahshi, Suyav bahshi as well as the information about the musicians as bulomon players (bulomon is a national musical instrument with stonger sound than trumpet), trumpet players (musician who plays the national trumpet called surnay), epic singers, bahshi (folk singers who sing with rubob) and dzyrchi singers (folk singers who sing with dombra) and musical instruments in Khorezm are provided at the end of the book.

Mulla Bekjon, one of the authors of the book "Little about the History of Khorezm Music" was born in 1887 in Khiva. His father, Rahmonbergan Mahram Islamkhoja, was in charge of building a hospital, post office, telegraph, a number of madrassas and minarets in Khiva.

In 1913-1918, Mullah Bekjan was sent by Islam Khojato study at the Istanbul Seminary. There he was acquainted with religious and secular science sources. After the dissolution of the Khiva Khanate in 1920, on April 27, at the First Congress of the Khorezm People's Soviet Republic, Mulla Bekjan was elected as the Minister of Public Education for the first time. In turn, he also worked as a culture supervisor. At that time he worked as an editor of such newspapers as "Kizil Khorezm" (Red Khorezm), "Khorezm Khabarlari" (Khorezm News), "Maorif" (Education), "Yoshlar ovozi" (Voice of Youth), "Ishchilar ovozi" (Voice of Employees), "Yardam" (Help), "Qopqon" (Trap), and as the first editor-in-chief of the newspaper "Inqilob Quyoshi" (The Sun of Independence). Mulla Bekjon Rahmon oglu was one of the first Uzbek intellectuals of

his time to see the world and study in Turkey in the early years of the 20th century. He was a very literate, educated man, fluent in Russian and even fluent in German. Working with his contemporaries the Russian orientalist and ethnographer-scientist A.N. Samoylovich and providing him with original oriental works, he could publish most of the folk works and written literature sources by translating into Russian in Saint Petersburg the great scholar Fitrat, praised him, saying shortly, "I am weak in front of him." [9] Because Mulla Bekjan studied with Fitrat at a university in Turkey (with a difference of one or two courses) and knew him well. This is probably why Fitrat mentions Mulla Bekjan with respect in all written sources. He even created a play called "Begijon" (dedicated to Mulla Bekjan and called Begijon in Bukhara dialect). Unfortunately, the text of the work has not survived.

Mulla Bekjan was also well versed in musicology. In 1923, he was in charge of establishing the first music school in Khiva. Mulla Bekjan was also responsible for the curriculum and textbooks for the newly established school. Therefore, he began to create textbooks and manuals for schools.

Another great merit of Mulla Bekjan is that after the end of the khanate, he established a folk museum in the building of Toshhovli, which he managed and collected a lot of national treasures that could be plundered, and later he established it as the State Museum. Mulla Bekjan's activities were denounced as 'race discrimination activity' during the Soviet era. In 1929, unfortunately, his life ended very tragically because he was the right word, extremely progressive. Ahmad Zaki Validiy Toghon wrote the followings about Mulla Bekjan in his book "Memories": "Mulla Bekjan devoted himself to the development of modern culture in Khiva. If Russia had not interfered, they would have done a great service to the young Khiva government." [10]

In short, in the early years of the twentieth century, a young scholar of Khorezm, from Uzbek origin, Mulla Bekjan, as the first Uzbek musicologist, public figure, took a permanent place in the history of Uzbek music art with the selfless personality of his time.

Another co-author of the book is Muhammad Yusuf Devonzoda - Matyusuf Kharratov (1889-1952) Chokar, a poet, composer, calligrapher, musicologist, famous musician, master-musician Chokar. He was born in 1891 in the village of Sheikhs in Khiva. Muhammad Yusuf Khan was invited to the Palace of Muhammad Rahimhon Sani because he became famous after writing the ghazals and learned calligraphy from his father. He learned to play the tanbur musical instrument and the ways of the maqoms from Muhammad Rasul Mirzaboshi, the eldest son of Kamil Khorezmi, and the songs from famous singer Muhammad Yaqub Fozach. Under the influence of such a creative music environment, he made a serious effort to master the science of music and acquired the ability to perform the seven Khorezm maqoms on the basis of "Little about the History of Khorezm Music"

In 1920, as the Secretary of the Ministry of Education of the Khorezm People's Councils, he was in charge of organization of educational boards in the districts of the region. In 1923 he founded a music school in Khiva. He was the current principle director of that school.

In 1928 he was invited to work at the Institute of Music and Choreography in Samarkand. Matyusuf Kharratov taught Doni Zokirov, Mukhtor Ashrafi, Tolibjon



Sodikov, Mutavakkil (Mutal) Burhanov and the most advanced artists of those times. In addition to teaching, he was also involved in the collection and recording of folk music.

The Institute of Art History of the Academy of Sciences of Uzbekistan keeps the archive of Matyusuf Kharratov, number 1571-1-5. This archive contains a letter-shaped copy of the Dutor makoms, 20 cm wide and 13.30 m long, transcribed on paper. The manuscript is wrapped in reeds, resembling the orders of an ancient khan. In addition, fragments of Dutor makoms are found on 5 more rings (4m 50 cm long). The full series of "Rahoviy", "Sadri Iraq", "Okhyor" and "Choki Giribon" belonging to the Dutar makoms have been scripted in it.

In 1931, N.N.Mironov recorded a number of songs from M.Kharratov and published them in the collection "Songs of Khiva". In the same year he wrote a pamphlet entitled "An Experiment in the Arrangement and Improvement of the Note", in which he provided valuable insights into how to study and improve the "Khorezm tanbur line" [11].

In 1932-1935, M.Kharratov worked as a musician at the Alisher Navoi Opera and Ballet Theater. In 1936, despite being over forty years old, he tried to study the composition at the Tashkent State Conservatory. Independently trained in music literacy and solfeggio.

In 1937 he took part in the Festival 'Decade of Arts and Literature of Uzbekistan' in Moscow as a musician and composer. In 1937 he managed to record the notes of 47 Khorezmian songs. These notes are included in the first volume of "Uzbek Folk songs", published in 1939

In 1944 he was awarded with the Honor title of "Honored Artist of the Republic of Uzbekistan" for his contribution to the development of culture and the work of educating young musicians.

**Conclusion.** In conclusion, we can say that the book "Small Musical History of Khorezm" by Mulla Bekjon Rahmon oglu and Muhammad Yusuf Devonzoda is one of the works on the status of makom studies, based on modern requirements. The book contains vivid information about the ways of makom music in Khorezm, its historical stages, and the peculiar local styles of it suitable to the music preference of people in the oasis.

We hope that our article entitled "Little about the History of Khorezm Music" will serve as one of the steps in the study of the book and the work of its authors.

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**UDC: 10+371.021**

## **MILITARY CULTURE AND ITS NATIONAL AND HISTORICAL BASES**

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**Аннотация:** Ушбу мақолада **ҳарбий маданият**, унинг моҳияти, ҳарбий хизматчиларни тарбиялашда Ватан ҳарбий маданиятининг ва анъаналарининг роли, Ўзбекистон халқи ва Қурулди Қучларининг жанговар анъаналари, Ватанини, халқини, миллатини севиш, ор-номус ва дўстларига садоқат каби сифатлар аجدодларимизнинг асосий маънавий хислатлари эканлиги ҳақидаги маълумотлар ёритилган.

**Таянч сўзлар:** ҳарбий маданият, миллий армия, ҳарбий анъана, ҳарбий санъат, инсонпарварлик, шахсий таркиб.

**Аннотация:** В данной статье представлена информация о сущности и роли военной культуры в Вооруженных силах. Анализирована традиции в обучении военнослужащих военных традициях узбекского народа и Вооруженных сил Узбекистана. Показана важность любви к Родине, народу, нации, верности своим предкам военнослужащих.

**Ключевые слова:** военная культура, национальная армия, военная традиция, боевые искусства, гуманитарные науки и личный состав.

**Annotation:** This article provides information on the essence and role of military culture in the Armed Forces. Traditions in training military personnel in military traditions of the Uzbek people and the Armed Forces of Uzbekistan are analyzed. The importance of love for the Motherland, people, nation, loyalty to their ancestors of servicemen is shown.

**Ключевые слова:** военная культура, национальная армия, военная традиция, боевые искусства, гуманитарные науки и личный состав.

**Introduction:** We all know very well that patriotism is the spiritual foundation of every country. Spiritual courage was an incomparable force that called upon our

ancestors to bravely fight the enemy even in the most troubled and dangerous times, to raise the torch of enlightenment high and resist ignorance. It is no secret that in some parts of the world today there are huge spiritual losses, centuries-old values are crumbling, national thinking and way of life are changing. These terrible actions instill panic and horror in that they are aimed at the renunciation of a person, in particular young people, from their homeland and people, depriving them of a sense of patriotism, and turning them into indifferent people.

At a time when our country is developing and consolidating, it is important to create and constantly improve values that will contribute to the spiritual, moral and cultural development of all peoples and ethnic groups living in our country. This process requires a combination of national and universal values, scientific and political research into the problems of patriotism and national pride, state and socio-ethnic interests, civic responsibility and personal responsibility.

In this regard, "In the Concept of increasing the efficiency of spiritual and educational work in the Armed Forces of the Republic of Uzbekistan", adopted on August 4, 2018, No. PK-3898, special attention is paid to the following:

- educating them based on pride and respect for our national culture and values, dedication and commitment, honesty and conscientiousness, independent thinking or a healthy lifestyle;
- to enhance the aesthetic education of servicemen, to increase their interest in various spheres of culture and art. [1]

In order to further increase the effectiveness of spiritual and educational work in the Armed Forces of the Republic of Uzbekistan

- raising the spiritual level and intellectual potential of servicemen, as well as creating a unified system aimed at shaping a worldview based on our rich culture, historical values and traditions;
- instilling in the minds of servicemen a sense of defending the Motherland as a sacred duty, pride in the national army, responsibility for protecting state security;
- systematic and continuous communication to servicemen of the essence and content of the ongoing socio-economic reforms, adopted legislative acts, state programs, the formation of their conscious attitude and an active life position towards the processes of globalization in the world and in the region, increasing devotion to duty, responsibility and dedication;
- study and analysis of the historical roots of the national heritage, on the basis of a broad propaganda of the life of the activities of great ancestors and courageous contemporaries, strengthening the conviction of the military personnel "The people of Uzbekistan will never depend on anyone";
- instilling in military personnel the traditions of mercy and kindness by deeply explaining the true essence and content of the Islamic religion, the formation of humanism and tolerance, their education based on respect for national culture and values, devotion and dedication, honesty and decency, independent thinking and a healthy lifestyle;
- Strengthening the aesthetic education of servicemen, increasing their interest in various branches of culture and art, and for this purpose the introduction on a

systematic basis of the wide use of the possibilities of literature, cinema, theater, and fine arts. [2]

**Literature Review:** This methodological idea demonstrates that the military personnel of the Armed Forces of independent Uzbekistan understand the importance of national and spiritual values, including military traditions, in military culture and are important for scientific research. Raising the culture of the servicemen of our national army is directly related to our national and spiritual values.

Therefore, it is advisable to reflect on the culture, values and military traditions that underlie the culture of a society. Traditions arise and manifest themselves in different scales and associations, at different levels of social life. They can be the spiritual and cultural component of the entire nation, ethnic group, social group (specialized, age). The survival of traditions is determined by their constant replenishment, the constant development of subsequent generations, the demonstration of the broad role of traditions in society and the improvement of people's historical knowledge. In this sense, traditions can be transferred from the past to the future, actively developed and updated in a timely manner. [3]

The content of traditions includes various historical, social, educational, psychological, professional and cultural components. These components are interrelated, but each of them, taken separately, represents one aspect - the traditions of the military culture of the homeland, which have become part of the culture of the entire society.

Military traditions are strong, historically united, social relationships with forms of generations, ethical rules and norms of soldiers, their spiritual values, ethics and traditions, teaching military issues to the Armed Forces. [4]

Military traditions have emerged in the military through hundreds of years of hard work on the battlefield. It's no secret that traditions have changed, some have changed or disappeared. That is why it is important to revive the good traditions of the Armed Forces of Uzbekistan.

**Research Methodology:** The armed forces are part of any state. Any army with a specific combat history creates its own traditions. Tradition is an important element of troop training, reflected in military oaths, rules and guidelines, and in many cases determines the warrior's actions on the battlefield and in peacetime.

Combat traditions encourage the military personnel of the Armed Forces of Uzbekistan to fulfill their military duties in an exemplary, conscientious and conscientious manner to serve their people and homeland.

Important martial traditions may include:

- patriotism, service to the country;
- commitment to the military oath;
- commitment to the military flag;
- firm belief in victory over any enemy of our country;
- always ready to defend the Motherland;
- military friendship, friendship;
- personal example of an officer, etc.

The purpose of studying military traditions, as well as military culture, is to familiarize the younger generation with intellectual property, scientific knowledge that

reflects traditions, the way of life of our people and our military, as well as the historical future. - education of the young generation in the spirit of national self-sacrifice, self-awareness, the formation of a national ideology based on oriental values - feelings of the Motherland, pride in the Motherland.

Military culture is a combination of the way of life, values and norms of servicemen, language, rituals, symbols, material, artistic culture, art. [5]

Military culture is a product of historical development, and it has always been and remains in the study and expansion of the spiritual experience of the military. Social media sources of military culture have a long history. From time immemorial, military traditions began to take shape.

**Analysis and Results:** The concept of "military culture" appeared quite recently, at the end of the 19th century. Today this concept can be divided into several ways. Some see it only in a narrow sense, in a spiritual sense, and in the broadest sense - material and spiritual values, as well as military activity, the values of the military security of countries. Military culture cannot be limited by spiritual values and is associated with the formation of the Armed Forces.

Military culture cannot be imagined without the Armed Forces. Defense of the Motherland is the defense of trust, traditions, customs and culture of the people. Our Armed Forces are the most important source of culture. Because one of the main tasks of the Armed Forces of Uzbekistan is to educate people on the basis of commitment to their homeland and their military duty, to form a perfect person.

The relevance of teaching from a scientific point of view is based on the following:

First, according to the concept of defending the homeland with national and spiritual values, it is characterized by the reflection of the culture of perception of defense policy based on spiritual and educational values, and its study is important for the development of protective consciousness in society.

Secondly, the formation of the national army in Uzbekistan and its military reforms are associated with the formation and development of the defense consciousness and culture of citizens, especially young people, as one of the priorities of state policy. This requires the protection of the Motherland in the system of national values inherent in our people, the reflection of patriotic traditions in the political culture of society, a comprehensive study of the mechanisms for protecting consciousness and culture, as well as the rationalization of scientific and political views.

Thirdly, the emergence of new ideas and approaches to a defensive culture based on basic concepts and principles of national independence makes social science an important task for a deeper study of the role and role of national and spiritual values in military culture.

Fourth, the importance and role of national and spiritual values in military culture in the system of national values and the problems of their relationship have not yet been studied militarily.

Fifth, the processes associated with the consolidation of national statehood are inextricably linked with the formation of a defensive consciousness and a sense of military patriotism in society.



Sixth, today there is growing tension in the world, military, political, religious extremist and terrorist gangs violating Islamic values in pursuit of their political goals, and their efforts to introduce national values into the hearts and minds of military personnel. Today it is necessary to activate, improve and introduce new methods and mechanisms of propaganda, introduction into the educational process.

Military culture is more understandable than military culture, and military culture includes military-related elements. In English, the concept of military culture is often represented by the word "military culture" without alternatives. Simultaneously, the terms "soldier" and "military personnel" are commonly referred to as "soldier" and "professional soldier". It is appropriate to balance the culture of the army with the concept of military culture. The concepts of military and military culture are used synonymously and are limited to the broader military culture in society, since recently it has been associated not only with the military, but also with the military. [6]

**Conclusion/Recommendations:** In terms of history, our country has a long history, like the history of statehood. Since ancient times, our ancestors pursued discipline in the army and excellence in the management system. The sacred "Avesto" contains information about the emergence of temporary military-political associations, the division of military and military leaders into a social stratum, which characterizes permanent military alliances in the movement of pastoralists and peasants, defending their former places or occupying new oases.

One Arab historian writes: "The Turks are horse cavalry. They are very skilled in combat. Although our cavalry could not see anything in front of them, they knew that their enemy was coming from behind. The Turkish cavalry considers us a hunter, a lion. They don't sleep all day. In this book, Fuzoil at Turk, the Arab historian notes that the Turks combined the etiquette of the Basra people, the wisdom of the Greeks, and the military art of the Chinese.

The experience of Khorezmshah and Amir Temur in the formation and management of the army is recognized throughout the world. While the Khorezmshahs introduced general military obligations of the population, the structure of attacking and defensive forces during hostilities, the army of Amir Temur has always been a symbol of the army. He followed the order of tens, hundreds and thousands. The command and control of Amir Temur's army was studied by the great French leader Napoleon Bonaparte.

The fact that the founder of the Russian Empire (1722-1917) Peter I (the great Peter), like Amir Temur, taught his civil servants to the 12th grade also indicates that he learned from the charter of Amir Temur.

Based on the above, we can conclude that the military culture represents everything that humanity has created in the military, material and spiritual spheres, and restores the ties between generations and generations.

Therefore, military culture plays an important role in the social culture of Uzbekistan from a military point of view. The role of military culture in the independence of the country and the nation is also invaluable. There is a philosophical and cultural concept of military culture, and military culture enhances the role of every citizen in society and the country in national life and historical development, in organizing the armed defense of the state. Also, a correct interpretation of the cultural

and philosophical concepts of military culture will lead to the expansion of culture in society and the acquisition of new knowledge about military culture. Military culture makes a great contribution to the work of all government agencies, public organizations and media centers.

They educate the military and the minds of the people in a patriotic spirit. The study of military culture in different historical periods, its focus on improving people's lives, its influence on political and administrative decisions, shows how important military culture is in society, and provides information about the history of the country, its origin, patriotism and pride. In the modern era of modernization, this will serve to strengthen the military culture community.

He explores the problems of military culture, helps to better understand the history of the Motherland, reveals the history, spirituality, enlightenment and patriotism of statehood. The emergence of a glorious and deep sense of national pride is associated with the knowledge, appreciation and enrichment of the precious culture inherited by our ancestors. It is important for us to have a unique culture and spirituality created by our people so that such noble feelings and creative ideas can be found in our minds and hearts.

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UDK 37.036

## CLUSTER - AN IMPORTANT WAY TO IMPROVE AESTHETIC EDUCATION

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**Abstract.** The article analyses the aesthetic content of the cluster, the aesthetic forms and methods of its introduction into the education system, the scientific and methodological guidelines for the implementation of aesthetic education in the education system based on the combination of form and content.

**Keywords:** cluster, upbringing, education, aesthetic upbringing, succession, continuity, value, personal maturity.

**Аннотация:** В статье анализируется эстетическое содержание кластера, эстетические формы и методы его внедрения в систему образования, исследуются научно-методические рекомендации по реализации эстетического воспитания в системе образования на основе сочетания формы и содержания.

**Ключевые слова:** кластер, воспитание, образование, эстетическое воспитание, последовательность, непрерывность, преемственность, ценность, совершенствование личности.

**Аннотация.** Мақолада кластернинг эстетик мазмуни, уни таълим таълим тизимида жорий этишнинг эстетик шакллари, усуллари таҳлил қилинган бўлиб, таълим тизимида эстетик тарбияни шакл ва мазмун уйғунлигига асосланган ҳолда амалга оширишга доир илмий-методик кўрсатмалар тадқиқ этилган.

**Калит сўзлар** – кластер, тарбия, таълим, эстетик тарбия, узвийлик, узлуксизлик, қадрият, шахс камолоти.

**Introduction.** Achieving the continuity of education and upbringing has always been an important basis for the spiritual development of the state. In particular, the radical improvement of the higher education system, the formation of target parameters for the training of highly educated specialists, the continuous improvement of the quality and level of professional skills of the trained personnel are becoming an actually social issue. At the present time, when the period of rapid development in Uzbekistan has begun, the form and content of education largely depends on the targeted and targeted orientation of education. In this regard, the President of Uzbekistan Shavkat Mirziyoyev mentioned the following statement that serves as a methodological basis: “As we think about solving the complex and important issues facing us in today's rapidly changing life, we are once again convinced that their solution lies in education, in shaping the worldview of young people on the basis of modern knowledge, high spirituality and enlightenment.” [1; pp.448].

Upbringing has an incomparable role in the development of society: a good upbringing makes a person a virtuous person. In addition, education reflects not only spiritual values, but also the needs of modern times. In particular, the process of aesthetic education is theoretically and practically based on the harmony of form and

content. The improvement of this process requires the introduction of a cluster system in education in general and education in particular.

Cluster is the common aspiration of several businesses or entrepreneurs in a region for a creative solution. In particular, in the economy - a voluntary association of several independent companies to produce a product; in education - a system of training modern teachers with the ability to design curricula, new educational programs and technologies, etc. In this sense, it would not be a mistake to apply such qualities as "unification", "cooperation", "connection", "generalization", "consistency" to the cluster. Typically, foreign and native researchers interpret the concept of "cluster" as "a group of enterprises united in a single industry, operating in a single geographical area in specific areas, interconnected and complementary". However, the cluster is important in the joint realization of the goal of forming a harmoniously developed person through various forms (moral and aesthetic), areas (pedagogical and psychological), directions (cultural and educational) of education. In particular, in the pedagogical strategy, the "educational cluster" helps to develop the skills of networking ideas, enriching the spiritual outlook of students, the joint organization of cultural events based on the educational content of the specialty.

**Literature review.** Art critic Abdullah Sher views aesthetic education as a "phenomenon that makes a person human." According to him, the purpose of aesthetic education is to form the attitude of a certain person to aesthetic values, in which to improve the skills of creative thinking, aesthetic observation. [2; pp. 357-358]. B. Husanov also studies aesthetic education as an integral part of spiritual education and emphasizes that it makes a huge contribution to the harmonious development of the spiritual and physical world of man. In particular, "in aesthetic education, a person's appearance, his behaviour in public, his physical strength are also of great importance. However, in all of them, the interest in art, literature and science, as well as the high level of sophistication and taste, show that a person has an aesthetic upbringing." [3; pp. 42]. In addition, V. V. Prozorsky concludes that the aesthetic factors of merging cultural landscape clusters form the ability to study and assimilate existence through the harmony of body and soul, truth and ideal essence [4; pp. 35-39]. A. E. Radeev emphasizes that the cluster approach is the most important approach in contemporary art theory and shows the historical and theoretical foundations, formation and underlying aspects of this approach. The author analyses his approach to the art of the XIX-XX centuries in two important directions of aesthetics - Kantian and Hegelian. It is also the result of this direction in the twentieth century: a) academic; b) philosophical; c) art-coaching directions are formed. Such a division, in turn, gave rise to a cluster approach to art. Art therefore argues that the cluster approach takes into account both general and specific aspects. [5; pp. 62-64].

**Research methodology.** The following are important competencies in the field of aesthetic education:

- preparation;
- organization;
- propaganda;
- mastery;
- control.



That is, in the process of globalization, the preparation for the spiritual and moral upbringing of young people, the organization of socially important initiatives, the promotion and mastery of advanced ideas among students and the development of healthy lifestyle skills should be aimed at one goal - personal development. The main condition of the educational cluster is also determined by this aspect. The educational cluster covers the following four-step process from the first year to the end of the student's studies. In the first stage, the student is explained, taught, supervised the content of education in accordance with the specialty. That is, the ethical, aesthetic and didactic sources of education, indicators of spiritual education and methods of education are explained in accordance with the pedagogical profession.

In the second stage, knowledge and skills in education are formed, organized and analysed. Through involvement in these educational cluster circles, students are formed a rational attitude to work, they develop skills of craftsmanship, entrepreneurship and practicality. However, entrepreneurship in the field of pedagogy is not "increasing the class fund at the expense of students' parents", but the pursuit of activities aimed at earning additional income and material benefits from their profession and specialization. In the third stage, the student is prepared for the organization, conduct and direct and indirect participation in the educational process. The preparation of students for professional activity is based on the ethical principle "Student is a teacher to student, student is a student to student." Because now, if the future educator is an example in communication, behaviour, knowledge and level, the student will hear it and want to learn from him, do what he teaches. To do this, the student and the learner need to do the whole process together and collaboratively. Nowadays, it is difficult to accomplish an idea and goal only with the student or teacher himself. The student and the teacher must understand that a real and practical result can be achieved by striving towards the goal with desire and desire. After all, this system works if the student and the teacher want or work on their own. Otherwise, the executor of the idea, which he says is novelty and innovation, will remain a student as always, and the weight will fall on him alone. As a result, there is a state of boredom, alienation, frustration, lack of interest in educational work.

The fourth stage focuses the student on educational practice, popularization of advanced initiatives, strengthening of educational heritage. One of the important rules for all subjects of the innovative cluster of pedagogical education is the organization of students' teaching and research activities in connection with the process of continuous pedagogical practice. Therefore, at this stage, "senior courses should be a model (core) for lower courses", the core course is nurtured with the help of knowledge and experience of the senior course, which is the core.

**Analysis and results.** At these stages of the educational cluster, it is possible to achieve the creation of an integral and continuous chain of education through education. Indeed, the education cluster serves to improve educational practices. This requires mutually beneficial cooperation aimed at a specific goal that enriches the moral content of education. This collaboration serves to transform students' teaching, production, and internship practices into an outdated method and a "student-active workday" that is free of caregivers.



O. V. Kurbanovich interprets the vocational education cluster as a determinant that develops the professional skills of future teachers. In addition, the education cluster will help the future teacher to become a humane person in modern conditions and to raise the priority of pedagogical activity: the cluster will lead to the development of modern pedagogical education based on systematic analysis by ensuring the humanization of education. [6; pp. 51-55]

It should be noted that the study of existing shortcomings in the education system and their analysis shows that the lack of coordination of pedagogical education, future planning, communication and integration between the stages of education, the fragmentation of educational activities in the region leads to a decline in quality. Overcoming these problems requires the introduction of a cluster system in the educational process. In particular, in the article "Innovative cluster of pedagogical education: need, necessity, result", the author G. Muhamedov puts forward a number of suggestions to identify the new system of pedagogical education in Tashkent region as a strategic priority and to organize concrete and effective work on the basis of this system. "The cluster system of pedagogical education development works in general areas related to education, creation of textbooks, increasing the scientific potential of teachers, integration of education and upbringing. At the same time, these general areas are privatized in such areas as the management and organization of education, ensuring continuity and integration between types and areas of education, the use of teaching methods and tools. [7; pp. 6].

Indeed, there is a chain of production, processing and conversion of raw materials into finished products and their sale in the manufacturing sector, and this sequence is also present in the system of pedagogical education in the form of human capital. This shows that it is theoretically possible to introduce a cluster model that is effective in production into the education system. Thus, the most important aspect of the educational cluster is determined by the factor of strengthening the interaction (communication) and cooperation (integration) between students. In fact, the slowest and most painful aspect of the educational process in educational institutions is that this factor does not work. However, without cooperation, there will be no competition and development. Therefore, the participation and coverage of students in educational work is low. The existing ones are mostly for 1 or 2 courses. The instruction, the assignment also belongs to them. They are also the organizer, participant and consumer of the event. The effect of upper courses on primary courses is not good enough. This system, formed over the years, artificially alienated and excluded senior courses from the educational process. This situation left the senior courses on the "path of rudeness" that could not be deeply ingrained in "education" or upbringing. Unfortunately, this had a negative impact on the quality of trained personnel and the level of specialization.

In the educational cluster, these and other large and small, unstable, chaotic problems related to the educational process are "brought together" and educational work is carried out based on their tactical and strategic essence, content and purpose. Then the work of explaining, teaching, and supervising education will be integrated into a holistic system. Problems and solutions will be concentrated "under one hand" and forms of education will be managed through a single system. This leads to the

practice of topical work, which is more important for the education of the student than the day-to-day work (activities).

**Conclusion/recommendations.** The cluster will create conditions for a modern system for effective education through the deepening of science and education integration, the introduction of new innovative technologies into practice. Indeed, in the cluster system, the effectiveness of educational work will increase, education will be targeted and directed under the concrete goal, and the continuity and succession of education will be ensured. In addition, within the educational cluster there will be a new and current object of scientific-theoretical and scientific-practical research on the organization of educational work in the forms of ethical, aesthetic, environmental, legal, economic, etc. This will lead to the formation of additional educational and research areas, the creation of a new generation of scientific and methodological developments, as well as the improvement of conditions for the promotion of advanced ideas and initiatives.

It should be noted that the discrepancy between the theory of education and educational practice in educational institutions, the narrow and limited strategic content of the educational system, the obsolescence of methods and mechanisms of education, in particular, the lack of scientifically based educational practice, the lack of ethical norms creating uniformity, formality, stagnation, and entrepreneurship in the organization, conduct, and implementation.

It is no longer possible to continue the process of education in this order, and the era of globalization will not be reconciled with this order. In this regard, the implementation of the Concept of development of pedagogical education in Tashkent region in 2019-2021 is worthwhile. Thus, the Concept states that the modern pedagogue should have the qualities of devotion, patriotism, honesty, perseverance, responsibility, initiative on the basis of universal values. Besides theses, the need for the teacher to devote his energy and enthusiasm not only to education, but also to the process of upbringing can be considered as an important social phenomenon, defined as a strategic direction of continuous pedagogical education.

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UDK 1.17.001.9 (58).323(584.4)

## EDUCATIONAL IMPORTANCE OF THE MORAL PHILOSOPHY OF AMIR TEMUR

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**Abstract:** the article attempts to examine the views of different historians and philosophers on Amir Temur, and his views on philosophy of life, on the moral foundations and virtues of the state administration, and their importance in the contemporary society.

**Keywords:** ethics, values, education, justice, tuzuks (statutes), administration, expostulation, national ethics, ethical idea

**Аннотация:** в статье предпринята попытка изучить взгляды различных историков и философов на Амира Тимура, его взгляды на философию жизни, на моральные основы и достоинства государственного управления и их значение в современном обществе.

**Ключевые слова:** этика, ценности, образование, справедливость, тузуки (законы), администрация, агитация, национальная этика, этическая идея.

**Аннотация.** Мақолада Амир Темур шахси ҳақида тарихчи ва файласуфларнинг фикрлари, унинг ҳаёт фалсафасига доир ёндошувлар, давлатни бошқаришнинг ахлоқий асослари ва фазилатларининг бугунги авлодни тарбиялашдаги аҳамиятига доир қарашлар илмий таҳлил қилинган.

**Калит сўзлар** - ахлоқ, қадрият, тарбия, адолат, тузуклар, бошқариш, панднома, миллий ахлоқ, ахлоқий ғоя.

**Introduction.** One of the main tasks of the national moral philosophy is to study the activities of Amir Temur, who has a worthy place in the history of world philosophical thought. In particular, its moral principles, such as justice, patriotism, humanism and liberalism, are important in the development of world science, spirituality and culture. Every time I read "Temur's Statutes" about the personality of the First President of Uzbekistan Islam Karimov Amir Temur and his Statutes, it is as if I have found some spiritual strength. In my work, I have repeatedly referred to this book and convinced myself of the vitality of the wise ideas that are still nourishing for the spirituality of man, which will never become obsolete" [1; pp.45] .This is, on the one hand, a sense of respect for the person of Amir Temur, and, on the other hand, an assessment of the educational and moral significance of the Statutes.

Amir Temur's philosophy of morality is based on the harmony of man - society - culture and spirituality. The need for scientific research on these issues is determined by the following aspects:

first, to study and analyze the moral foundations of human and society, people and state development;

second, scientific substantiation of the reflection of the priority moral ideas in "Temur's rules";

third, to change the way of thinking and worldview, to strengthen the theoretical foundations of the moral heritage of Amir Temur to bring up young people as determined, courageous and patriotic;

fourth, to study that the exemplary life and activity of Sahibkiran are of a pragmatic basis for strengthening the development of New Uzbekistan.

The study of the characters who have passed the test of the character and periods of the lives of historical figures, the study of the activities of famous historical figures, has been important in every period. Thanks to independence, a serious study of the life experiences and philosophical views of Amir Temur, mentioned in the history of our country as a just ruler and a skilful commander, began, and foreign scholars had the opportunity to get acquainted with scientific, educational and pedagogical research on our ancestor Sahibkiran. In particular, the study of his expostulation "Temur's statutes" in terms of historical reality, the scientific study of its moral content is important in the development of the science of national moral philosophy.

**Literature review.** Amir Temur's personality, activity and philosophical views have been studied in detail by European historians and philosophers, and many studies have been written on this subject. The most important of them is the work of the Ambassador of the King of Castile Ruy Gonzalez de Clavijo "Diary of a trip to Samarkand, the palace of Amir Temur" (1403-1406), which is an important historical source and was published several times in Europe. Later, this work became popular and was translated into other languages of the world. Many orientalist refer to this work when studying the history of Amir Temur and the Temurid state. The diaries consist of two parts, the first of which contains information about the experiences of the ambassadors to Samarkand, the nature of different regions, the lives of their peoples. In the second part, the author describes the meetings in Kesh and Samarkand at the Temur Palace. De Clavijo provides wonderful and unique information about the country, the palace, the people and their life, as well as the personal virtues of Timur [2; pp.27].

Eastern historian philosophers have left important scientific sources about Amir Temur's rule of the state, his communication with the people of the kingdom, the procedures he introduced, his commanding skills and moral views. In particular, the information contained in the work of the historian Ibn Arabshah "The history of the great al-Maqdur fi Taymur (miracles of destiny in the history of Timur)" has served as an important scientific source for historians of the world. In this work, IbnArabshah provides valuable information about the moral philosophy of Timur: he acknowledges that Timur had a keen mind and far-sightedness in deeds. As for his morals and manners, "He did not like vain talk and jokes, never indulged in air and lust, and loved truth and truthfulness even when it was to his detriment... it was impossible to speak of plunder ... Timur was a man of mature intellect, great intellect, high happiness, good fortune, consistent will and determination. ... In the end, he cleverly distinguished truth

from falsehood, and with his genius he distinguished the true admonisher from the laganbardar.”[3; pp.37].

In addition, the Armenian historian Thomas Metsopsky, the French Temurologist John Paul Roux, the American orientalist Beatrice Forbes Manz and John Woods also conducted scientific analysis of the life of Amir Temur, his creative potential, and the moral ideas put forward in his treaties. ”[4; pp.15] .Especially, the French scholar Professor Lucien Karen devoted a major part of his time to Timurid studies and created many works on the subject. "Amir Temur tried to resolve the issue peacefully before using any force," he said. ... The great emir always pursued a peace-loving and enlightening policy. ... It is not surprising that the supremacy of his soul over his body, his ability to raise his will to such heights, is the greatest of Amir Temur's victories,” he said. [p.42].

**Research methodology.** During the years of independence, the image of Amir Temur, which Uzbek scientists began to seriously study, has been studied to a certain extent by world scientists, and serious research has been conducted on his activities in the military, cultural and urban planning. In the former Soviet Union, academician Ibrahim Muminov, with his fair views, stressed the need for an objective approach to the life and work of Amir Temur, a clear and accurate assessment of the historical truth. [6; pp.9] .However, after his pamphlet "The place and role of Amir Temur in the history of Central Asia" in the Uzbek press for a long time there were no opinions that reveal the positive aspects of the image of Amir Temur.

After the independence of Uzbekistan, Amir Temur was interpreted in our country and abroad as "The Great Savior", "Builder of the Country", "Brave Commander", "Talented Army Leader". A number of books and pamphlets have been written on his qualities, creativity, courage, patriotism, generation, family and methods of governing the state. Also, "Temur's Statutes" were republished, and events of national and global significance were held on the spirituality and enlightenment of the personality and activity of Amir Temur. In particular, 1996 was declared the Year of Amir Temur in our country, and the 660<sup>th</sup> anniversary of the great Sahibkiran was widely celebrated around the world.

**Analysis and results.** Philosophical literature suggests that during the reign of Amir Temur he was well aware of the role of the principles of justice, awareness of everything and vigilance in the internal order [7; pp.89]. Historian A. A. Tulaganov in his research "The role and place of Amir Temur in the development of Uzbek statehood (on the example of "Temur's statutes")" Amir Temur focused on the principles, measures of governing the state and the role of established state councils in the history of statehood [8; pp.24].

It should be noted that "Temur's Statutes" is an important expostulation that illuminates the moral philosophy of Amir Temur. Therefore, the ideas and teachings expressed in it serve to strengthen the theoretical and practical knowledge of the science of ethics. To do this:

- a) It is necessary to objectively cover the philosophical and moral content of "Temur's Statutes" on the basis of historical sources;
- b) It is expedient to make a scientific analysis of the importance and priorities of the ethical principles stated in the "Regulations" in the field of governance;



c) It is necessary to theoretically substantiate the moral essence of Amir Temur's motto "Power is in justice", to study his attitude to justice and fairness in comparison with activity of historical figures;

g) It is necessary to analyze the life philosophy of the owner using factual data.

These aspects, in turn, serve to determine the scientific novelty of the educational significance of Amir Temur's philosophy of ethics. Including:

Clarification of priorities for strengthening, popularization and assimilation of national ethical views based on new information;

- Analysis of the pragmatic basis of public administration and the improvement of universal moral principles through the development of a moral classification of "Temur's Statutes";

- To reveal the moral essence of the doctrine of "Temur's rules" on the basis of modern approaches, based on the spiritual needs of the era of globalization;

- Scientific coverage of the ideological foundations of the principles of patriotism, peace and generosity in the moral philosophy of Amir Temur.

It is known that "Temur's Statutes" are among the most popular expostulation of socio-political and moral educational content. In "Statutes", which begins with a call to his children and grandchildren, Sahibkiran divides the affairs of the kingdom into several rules and writes a manual on the management of the kingdom (dasturul-amal) and shows that they use these rules as a guide in managing their affairs [9 ; pp.627].

Researcher S. Sultanov pointed out that the factor of success of Sahibkiran Amir Temur was that he possessed an extremely rare intellectual potential [10; pp.127]. It should be noted that "Statutes" also embodied the moral views of Amir Temur. Amir Temur says that after regulating the rules of religious and Sharia affairs, he began to create the rules of the royal enterprise, to strengthen the ranks (status) of the royal affairs by putting them in laws and rules, and relied on the following two moral rules:

The first is to strengthen the rules of the kingdom by respecting the religion of Islam and its moral values, and by expressing a love for the morals and etiquette of the Prophet Muhammad (god bless him). As a result, the rank of Timur's kingdom rose, and internal and external forces were unable to harm the affairs of the kingdom.

Second, vigilance and awareness immunity were formed by inspiring the army and the civilian, by awakening hope. As a result, the level of reconciliation between the friend and the enemy was raised, mercy and kindness were provided to their request, and special attention was paid to each person who came to them for help.

Temurid scholar Poyon Ravshanov in his work "Amir Temur's dynasty" notes that Amir Temur studied discipline and management from a young age [11; pp.52]. "At the age of fourteen, Temurbek understood loyalty and betrayal in his impeccable life experience," "At the age of sixteen, his father Taragai took over all the work because he was old," "When he was eighteen, he had forty young men with him." indicates that he is a person. Zero. The fact that Amir Temur marched against the Mongols for the fourth time in 1376 (at the age of forty) and defeated the Mongol khan Qamariddin with an army of two hundred men and four thousand men proved that his knowledge, experience, skill and potential were high.

**Conclusion / recommendations.** Amir Temur rightly believes that the fate of the country, the condition of the citizen depends in many ways on the system of

governance, the functioning of its city, district, regional and other agencies, the lineage of officials serving in institutions and agencies, honesty, business acumen and had reasonably realized. Therefore, in the opinion of Amir Temur, the ministers in charge of the executive bodies (offices) of the government were required to have the following four qualities:

the first is - originality and purebredity;

the second is - intelligence;

the third is - to be aware of the condition of the sipohu raiyat (common people) and to treat them well;

the fourth is - patience and peace.

These rules are also very important for the moral essence of the modern state of Uzbekistan. This is because the main criteria in assessing the activities of government agencies and officials are the rule of law, how the rights and freedoms of citizens are protected, the quality and transparency of public services. It is no coincidence, then, that the most important priority is to consistently implement the noble idea that "human interests take precedence over all else." Because these very important tasks will be the basis for making significant changes in the main directions and priorities of deepening economic reforms in our country. To this end, it is expedient to implement the priority requirement that "the people should serve our people, not government agencies" through the introduction of new effective methods and mechanisms for open dialogue with citizens. In this regard, the President of Uzbekistan Shavkat Mirziyoyev said: In this regard, the great master Amir Temur said: "Let justice be our companion and program in everything!" It is true that his profound words "should be a vital belief for each of us" [12; pp.17].

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UDC: 94(575.1)

## THE ROLE OF THE AMUDARYA WATERWAY AND THE SURKHAN OASIS CROSSINGS IN TRADE RELATIONS OF THE EMIRATE OF BUKHARA

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**Annotation:** The article highlights information about the penetration of the Amu Darya flotilla into Termez, the role of flotilla and local ships in transporting commercial cargo on the Amu Darya. In addition, transformation of the Bukhara-Afghanistan border into the Russian-Afghan border, the establishment of control of the Russian Empire at the crossings and customs points along the Amu Darya has been discovered. Moreover, the author studied the quantities of various goods imported through the customs of Pattakesar and Chuchkaguzar crossings in the oasis on the basis of historical and archival materials, and tried to reveal the changes in the development of trade relations through a table.

**Keywords:** Emirate of Bukhara, Eastern Bukhara, Surkhan oasis, Afghanistan, Amu Darya, Termez, waterway, Amu Darya flotilla, trade, ship, boat, steamboat, transportation, crossings, Pattakesar, Chuchkaguzar, customs points.

**Аннотация:** Эта статья посвящается роли водного пути Амударьи и переправы в торговых отношениях Бухарского эмирата со странами Востока. В статье освещены сведения о проникновении Амударьинской флотилии в Термез, роли флотилии и местных судов в транспортировке коммерческих грузов по Амударье.

Кроме того, обнаружено превращение бухарско-афганской границы в российско-афганскую границу, установление контроля Российской империи на пропускных и таможенных пунктах вдоль реки Амударья, на основе исторических и архивных материалов автор изучил количество различных товаров, вывезённых, ввезённых через таможню и переправ Паттакесар и Чучкагузар в оазисе, а также попытался выявить изменения в развитии тенденции торговых отношений через таблицу.

**Ключевые слова:** Бухарский эмират, Восточная Бухара, Сурханский оазис, Афганистан, Амударья, Термез, водный путь, Амударьинская флотилия, торговля, судно, лодка, пароход, перевозка груза, переправы, Паттакесар, Чучкагузар, таможенные пункты.

**Аннотация:** Ушбу мақола Бухоро амирлигининг Шарқ давлатлари билан олиб борган савдо алоқаларида Амударё сув йўли ва кечувларининг тутган ўрнига бағишланган. Мақолада Термизга Амударё флотилиясининг кириб келиши, флотилия ҳамда маҳаллий кема-қайиқларнинг Амударё соҳилларида тижорат юкларини ташишдаги роли ёритилган.

Бундан ташқари, мақолада Бухоро – Афғонистон чегарасининг Россия – Афғонистон чегарасига айлантирилиши, Амударё бўйлаб кечув ва божхона пунктларида Россия империяси назоратининг ўрнатилиши ҳамда муаллиф томонидан воҳадаги Паттакесар ва Чўчкагузар кечувларидаги божхоналар орқали олиб кетилган, олиб келинган турли товарлар миқдорлари тарихий ҳамда архив материаллар асосида ўрганилиб, савдо алоқаларининг ривожланиш тенденциясидаги ўзгаришлар жадвал орқали очиқ беришга ҳаракат қилинган.

**Калит сўзлар:** Бухоро амирлиги, Шарқий Бухоро, Сурхон воҳаси, Афғонистон, Амударё, Термиз, сув йўли, Амударё флотилияси, савдо-сотик, кема, қайик, пароход, юк ташиш, кечувлар, Паттакесар, Чўчкагузар, божхона пунктлари.

**Introduction:** Looking back at the history of the Surkhan oasis, we see that trade routes played an important role in its socio-economic life. This is due to the fact that the Great Silk Road passed through Central Asia, including the Surkhan oasis. In particular, its strategic location has been praised for being one of the main links between the west and the east. As the President of the Republic of Uzbekistan Sh. Mirziyoyev noted: “Surkhandarya region is of special importance in the development of our country with its economic potential, important geographical location, natural resources” [1].

As a result of the construction of trade routes of the Surkhan oasis – the ancient caravan routes, the Amu Darya waterway, as well as the penetration of the Amu Darya flotilla into Termez, the establishment of Russian trade, transport and insurance agencies, the study of the state of trade with the countries of the East plays an important role in illuminating the unexplored pages of our history. The transformation of the Bukhara-Afghanistan border into the Russian-Afghan border, establishment of the control of the Russian Empire at the crossings and customs points along the Amu Darya, the subordination of the trade of the Emirate of Bukhara to the Russian Empire, the issues of the advantage of the great imperialist policy of the Russian ruling government on transit trade routes through Afghanistan, Iran, and India through the Surkhan oasis is of significance to study.

**Literature Review:** Information on the trade relations of the Emirate of Bukhara through the roads of the Surkhan oasis, the Amu Darya waterway and its crossings in the late XIX - early XX centuries is reflected in the following documents of the National State Archive of Uzbekistan: Fund I-1 - Court of the Governor-General of Turkestan; Fund I-2 - Diplomatic Officer under the Governor-General of Turkestan; Fund I-3 - Russian political agency in Bukhara; Fund I-126 – Kushbegi Archive of the Emirate of Bukhara (Kushbegi–Prime Minister of the Emirate of Bukhara).

In addition to archival documents, works, statistical collections, periodicals of Russian scientists, tourists, military and local historians who lived at the period which is being discovered including N.Maev, S.Mazov, M.V.Gruliev, R.Yu.Rojevitsa, Counselor Petrov, Pokotilo, Col. Galkin, Col. Matveev, Col. Fedorov, Cap. Vasilev, Cap. Gintyllo, Cap. Bykov, Poruch. Karaulshchikov, A.F. Gubarevich-Radobylsky, D.N.Logofet, V.I. Masalsky, N.A. Bentselevich, A.G. Ananov and I.A. Remez as well as the research of Soviet and independence period scholars, served as an important source, and much of the information in them was included in the scope of scientific research for the first time.



Information on trade routes of the Surkhan oasis, domestic and foreign trade relations can be found in E. Kabulov's monograph "Economy of the Surkhan oasis" [2] and scientific articles [3,4]. It is also covered in the researches of such scientists as E.Rtveladze [5,6], R.Khalikova [7], F.Ochildiev [8], who conducted research on the history of trade relations and trade system of the oasis.

**Research Methodology:** The article studies the history of trade relations of the Surkhan oasis in the late XIX - early XX centuries based on the principles of generally accepted historical methods - historical, comparative and logical analysis, consistency, objectivity.

**Analysis And Results:** As it is known, domestic trade routes from ancient times were divided into two according to their structure and characteristics: land caravan routes and waterways. In the XIX and XX centuries, most of the land trade routes connecting the principalities of the Surkhan oasis with the center of the Bukhara Emirate passed through the plains, and a small part through the sand. Russian authorities who focused on to the trade with the Eastern countries paid special attention to the study of the territory of the oasis, the land and water routes that passed through it, and repeatedly sent embassies and espionage expeditions.

The Russian military, who were conducting surveillance in the oasis, kept the Russian government informed of the Surkhan oasis's trade relations with Afghanistan and India. According to the report, Russian products were rare in the Surkhan oasis, but British goods were also imported from Afghanistan and India via Kabul, along with local products. Reports stated that in order to squeeze British goods, it was necessary to improve water and land routes, and to quickly install weaving and production equipment in the emirate's territories [9]. Because British products were sold much cheaper than Russian products, traders brought more British products to the oasis than Russian goods.

In addition, in the second half of the XIX century in Russia increased demand for cotton, which was an important raw material for the industrial needs of Central Asia. The reason for the above factors was the increasing focus on expanding and accelerating trade routes. First of all, they tried to use the waterways as much as possible. First, looting on waterways was less than on land roads. Second, shipping goods by water was relatively inexpensive. For the above reasons, the Russian Empire paid close attention to waterways in the early years after its conquest of Central Asia.

The agreement signed with the Emirate of Bukhara in 1873 also paid special attention to the use of Amu Darya water. Russian steamships and other floating vessels were allowed to sail freely on the Amu Darya, and Russian merchants were allowed to build their own piers and warehouses [10, pp. 9-10].

The Russian military and administration were well acquainted with land routes as well as waterways, paying particular attention to crossings through the Surkhan oasis in order to make the Russian Empire to achieve great strategic goals – to penetrate into the interior of Central Asia, to conquer the markets of Afghanistan and India. Because some of the goods imported from Russia were transported by river from Termez to Afghanistan. Main crossings of the Amu Darya waterway in the Surkhan oasis - Pattakesar, Old Termez, Yorgah (Shurab), Chuchkaguzar, Karakamar - played an important role in foreign trade [11], Khotinrabot, Burguttepa, Ayritom, Maymuntukay, Sassikkol and Baldir crossings were of local



significance [12, p.49]. These crossings did not lose their significance from the XVI century until the formation of the Amu Darya flotilla.

The Russian Empire even before coming to the territory of the Surkhan oasis, that is, in 1874-1878, conducted in-depth research in the middle and lower reaches of the Amu Darya River [13]. The Amu Darya crossings were carefully studied by the Russian government. According to their research, 11 crossings were recorded from the Vakhsh River to Karki. The first crossings include Kabodiyon, Pattakesar, Shurab, and Chuchkaguzar, which mainly connect the Emirate of Bukhara with Northern Afghanistan. Secondary crossings were the Kelif and Karki crossings, located on a transit route that connects all Afghan cities, including Kabul [14].

Realizing the important strategic role of the Surkhandarya region in trade relations with the East, the Russian government took all measures to take control of the trade system in the region. Historical sources prove that even before Bukhara became a vassal of the Russian Empire, Russian traders were in active contact with Afghanistan and India through the Amu Darya crossings through the oasis. After the Russian government established its protectorate over the Emirate of Bukhara, it took measures to ensure the supremacy of Russia's interests in trade relations with Eastern countries. Article 7 of the treaty signed between the Emir of Bukhara Muzaffarkhan and the Governor-General of Turkestan Kaufman on September 23, 1873, gave Russian traders the right to move goods from the territory of Bukhara to neighboring countries duty-free [15]. The law on the inclusion of the Emirate of Bukhara in the Russian customs system was adopted on July 6, 1894 and officially came into force on November 15 this year. In early 1895, the customs of Kerki, Kelif, Chuchkaguzar, Pattakesar and Ayvoj began to operate. On May 1, 1895, customs on the Panj River began to operate. Control of trade on the Russian-Afghan border came into full force on July 1, 1895 [16].

At the Amu Darya-Panj crossing, 40 percent of Afghan goods passed through Kerki customs. The Pattakesar crossing (after Kerki customs) played an important role in trade with Eastern countries, especially Northern Afghanistan (Charviloyat, Andkhoy, Maymana). Pattakesar customs was located on the Mazar-i-Sharif-Tashkurgan trade route, with a total cargo turnover of 715,000 rubles. In 1891-1892, 118,000 poods of raisins, 27.5 thousand poods of livestock, 41.4 thousand poods of cotton, 12.4 thousand poods of cotton seeds, 13,000 poods of various dyes were brought to Bukhara through the Pattakesar crossing. thousand poods of sugar, 0.5 thousand poods of candles, 2.2 thousand poods of ceramics, 2.6 thousand poods of kerosene, 7.4 thousand poods of metal, 25.7 thousand poods of fabric and 2.2 thousand poods of other products were exported to Afghanistan [17, p.37].

As mentioned above, according to the unified customs system of Central Asia, a third level customs was established in Pattakesar, which was an important Amu Darya crossing in the Surkhan oasis, and a customs part was established in Chuchkaguzar. Goods worth 145532 rubles in 1896, 60521 rubles in 1900, 38770 rubles in 1904 were exported to Afghanistan through the customs of Pattakesar and Chuchkaguzar, while goods costing 439749 rubles in 1896, 167080 rubles in 1900, 549135 rubles in 1904 were imported, respectively [18].

### Types and quantities of goods exported and imported through customs at Pattakesar and Chuchkaguzar crossings <sup>\*1</sup>

Years	1896		1900		1904		1906	1907	1908	1909	1910
Names of goods	Pattakesar	Chuchkaguzar	Pattakesar	Chuchkaguzar	Pattakesar	Chuchkaguzar	Pattakesar				
Exported goods (in poods)											
Fabric	466	2252	568	146	-	37	14	139	36	681	7086
Sugar cubes	4	315	5	2	3224	-	39	-	3	3	20
Sugar	-	81	-	-	664	-	10	-	-	-	-
Matches	-	-	-	1	23	15	-	3	-	-	-
Metal goods	-	260	177	177	1686	440	1684	2088	2590	3276	4401
Spun yarn	21	131	-	-	-	2	-	23	-	19	88
Perfume	-	-	-	-	-	-	5	2	3	11	148
Kerosene	-	5	-	-	-	15	-	-	-	102	60
Porcelain dishes	-	149	2	6	18	-	-	-	-	193	319
Writing paper	-	-	1	-	10	-	-	160	97	121	72
Oily candles	-	27	17	-	98	8	81	5	94	304	115
Imported goods (in poods)											
Karakul leather	9	52	76	5	290	168	2	46	29	345	107
Wool	1115	2615	1521	1274	894	3393	1779	1460	605	2834	2489
Unprocessed leather	16	1526	490	864	-	131	715	1475	74	1745	3177
Processed leather	17	25	-	-	-	-	-	-	-	-	-
Dry fruits	573	1488	3183	772	1726	634	5110	9395	5160	11294	9218
Sesame and flax	445	1437	86	153	54	275	54	917	2276	3012	15240

<sup>\*1</sup> Note: The data in this table are based on archival materials and data of the head of the Turkestan customs district A.F.Gubarevich-Radobylsky in the collection "Materials for the study of growing cotton".

<i>Cotton</i>	-	-	-	1831	2576	4400	-	-	-	4278	300 90
<i>Wool fabrics</i>	-	-	161	124	-	42	-	-	-	-	121
<i>Woolen carpets</i>	49	16	80	304	-	46	1	12	10	-	-
<i>Cattle (number)</i>	5200 0	56414	-	2303 1	7596 0	1373	4369 3	340 83	4365 9	1074 84	-

From the data in the table above, it can be concluded that the volume of Russian goods exported through Bukhara, especially manufactured goods - finished fabrics, metal products, kerosene, perfumery and candles, was growing year by year, imported raw materials and almost all agricultural products. the weight of its products increased. It can also be seen that the Russian Empire, which controlled the Emirate's trade during this period, tried to enter the Afghan market through its finished industrial products, increasing the import of more necessary raw materials.

In the late XIX and early XX centuries, the Emirate of Bukhara, the Khiva Khanate, Turkmen and Afghan boats operated on the Amu Darya. Year by year, the number of cargo ships sailing along the Amu Darya River increased. In the sources of this period we can observe that the number of ships and boats in the Amu Darya varies.

For example, archival sources state that at the end of the XIX century, about 2,000 boats belonging to the population of the Khiva khanate from Kungrad to Pitnak sailed on the Amu Darya [10, p.17]. Other archival documents and sources state that there were about 600 boats with a carrying capacity of 800 to 1,500 poods across the Amu Darya [19, 20, 21]. I.A. Remez, on the other hand, noted that there were about 500 boats along the Amu Darya, typically 600-800 poods, some up to 3,000 poods, carrying a total of 500,000 poods [17, p.7].

At the beginning of the XX century, about 1500 ships and boats, partly part of the Emirate of Bukhara and mostly part of the Khiva Khanate, sailed on the Amu Darya, carrying a total of up to 1 million poods [12, p.75]. There were 420 Khiva boats and 80 Bukhara boats in the trade relations between the Bukhara Emirate and the Khiva Khanate [22]. Along the upper reaches of the Amu Darya, more than 1,000 boats sailed along the Vakhsh and Panj rivers [23].

Boats belonging to oasis traders also sailed on the Amu Darya. Historical sources prove that Termez was one of the largest shipbuilding centers on the Amu Darya in ancient and medieval times [5, 6, 24, 25, 26, 27, 28]. A Russian military officer, Captain Gintillo, said there were about 10 shipbuilders in Sherabad, who could build a boat with a payload capacity of 600 poods in 40 days, charging 200-235 rubles each [29]. In the construction of local ships, mainly hard and water-resistant trees were used. In particular, willow (black and white willow), poplar ("patta"), torangil – wild poplar, elm, mulberry, spruce, silverberry, gujum trees (a tree with dense leaves) were the main raw materials in shipping. [10, p.17; 14, 20, 29, 30, 31, 32].

As a result of the import of timber from the coniferous forests of Siberia to Termez in the early XX century, Russian artisans began to build light and durable boats from it. These ships were later called "Russian ships" by the locals [33]. As a result of the

proliferation of such light boats, local willow boats were gradually being squeezed out of consumption.

Along the Surkhandarya river, agricultural products were transported from Denau to Pattakesar in primitive rafts and small boats, and in the section of the river from Kakaydi to the Amu Darya, boats carrying more than 200 poods were also sailed. [34]. In the lower reaches of the Kakaydi, the carrying capacity of boats crossing the Surkhandarya river was 120 poods [35].

Cargo sent through Afghanistan was transported by boat to Termez, from where some of the cargo was unloaded and delivered to Bukhara on the Sherabad-Baysun-Denau route. Boats belonging to merchants from Bukhara sailed along the Amu Darya above Termez. The main road from Kelif was the caravan route from the Surkhan oasis to Bukhara along the river [36].

There were 4 boats at the Pattakesar crossing, which were important in the trade relations between the Emirate of Bukhara and Afghanistan, 2 of which belonged to Bukhara and 2 to Afghanistan. Their annual income was 3,000 rubles, of which 1,500 rubles was the income of Sherabad's bek (a person in power over principality) [37].

Merchants traded along the great caravan route through Sherabad through the Chuchkaguzar to Balkh and Mazar-i-Sharif, and from Afghanistan to the principalities of Sherabad and Kelif [38]. There were 6 boats at the Chuchkaguzar crossing, three of which belonged to Bukhara and three to Afghanistan. These boats were charged for passing goods and passengers as follows: 1 coin for camel and horse cargo, half a coin for donkey cargo, and 16 kopeks for each passenger [39].

Waterways played an important role in connecting the territories of the Eastern Bukhara principalities with the western ones. The boats carried mainly agricultural products such as grain and cotton along the river. It was not convenient at all times of the year for boats to carry cargo along the Amu Darya, especially in November, December, January, and February. In favorable weather conditions, a boat loaded from the Saray to Termez (210 versts) sailed for three days along the current, usually up to 12 days against the upstream, and 8 days without load [12, p.90]. Boats belonging to Bukhara traveled 614 versts of water to transport cattle from the village of Saray to Chardzhou. Boats sailed from Termez to Jilikul for 15-20 days, and in summer for 12-20 days. From Khorezm to Termez, ships traveled a distance of 10 days to sail by water [5, p.250].

Due to the increase in the volume of cargo transported, more than 1,000 [40] domestic ships and boats moved between the Saray and Chardzhou, and more than 1,500 [22] between the Saray and Petro-Alexandrovsk throughout the year (except for two winter months). The number of ships and boats had been growing year by year, but this still did not fully meet the transportation needs along the Amu Darya.

Russian trading companies have opened offices in Chardzhou, Kerki, Termez and Saray along the Amu Darya, and the opening of trade warehouses and shops stimulated the development of shipping. In 1876-1879, the steamship named "Samarkand" belonging to the Aral flotilla was launched on the Amu Darya [10, p.27].

After the formation of the Amu Darya flotilla in 1887, large ships and steamships began to sail. Although a flotilla was set up for military purposes, it also had a positive effect on the development of trade. In this regard, the Governor-General of Turkestan

stated: “The establishment of the Amu Darya flotilla means our complete and inalienable sovereignty over the Amu Darya to everyone” [41].

The opening of the Amu Darya flotilla was also important for the Emirate of Bukhara and Russia. The cost of cargo transported by water was 3-4 times cheaper than on land. The rapprochement of the principalities played an important role in the development of economic relations between them. The waterway played an important role in connecting the Eastern Bukhara principalities with the western regions [42].

Due to Russian Empire growing interest in Central Asia, the Amu Darya flotilla carried up to 600,000 poods a year, albeit at a low rate, mainly for military purposes. Expenditures for the fleet stood at an average deficit of 300,000 rubles [17, C.7]. Expenditures reached 2,700 rubles, income received did not exceed 2,200 rubles [21].

Due to the inconvenience of navigation on the Amu Darya, the voyage was carried out during the day. No matter how inconvenient the navigation on the Amu Darya, the work went on as usual. The reason is that the annual freight turnover between Termez and Chardzhou alone was 250,000 poods [43, p.25]. When the weather was favorable, the Chardzhou-Termez steamship ran twice a month, carrying between 10,000 and 20,000 poods [43, p. 8]. The steamships traveled the distance from Chardzhou to Termez in 7 days in summer and 11 days in winter [44, 45].

The Amu Darya flotilla was beginning to become the empire's strategic base in Central Asia against Afghanistan and Britain. In 1897, 222 versts from Karki, on the upper reaches of the Amu Darya, Termez city began to be built. As a result, the function of the flotilla also increased. Earlier, in 1895, customs posts were set up on the border of Bukhara and Afghanistan, and the flotilla was responsible for providing them with military-strategic goods. The number of flotilla steamships also increased since the construction of Termez city began. Before the construction of Termez city, the flotilla had 4 steamships, 5 or 6 barges, but later in 1887-1899 the flotilla expanded significantly. The flotilla was responsible for providing border posts and bringing construction materials to Termez. The proliferation of military personnel and their families at the border also made it necessary to transport passengers and supplies to the flotilla [46]. After the Russian goods in Eastern Bukhara and Northern Afghanistan faced strong competition from the British side, at the request of trade and industry, the Amu Darya flotilla began to carry cargo from 1904, both partially private and commercial.

With the start of construction of the Central Asian and Tashkent-Orenburg railways, the importance of the Amu Darya flotilla freight service increased: “In connection with the Central Asian railway, the Amu Darya waterway was a natural access route to Europe, Russia, on the one hand, from Afghanistan, southeastern and river banks of Bukhara, Khiva and the Amu Darya to the Chardzhou stations, on the other hand, the waterway served to transport Russian products from Chardzhou to the lands on the banks of the Amu Darya, which bordered contemporary Uzbekistan [47].

The establishment of a colonial system of government in Central Asia had an impact not only on economic life but also on the development of trade. From that period on, transit trade relations and trade routes with foreign countries through Central Asia began to serve the interests of the great imperialist policy of the Russian ruling government. Trade with Afghanistan, Iran, Kashgar, and India was directly subordinated to the interests of the



Empire. The transformation of the Bukhara-Afghanistan border into the Russian-Afghan border, the establishment of the control of the Russian Empire at the crossings and customs points along the Amu Darya also led to the direct trade routes serving its interests. The introduction of a single customs system in 1894 effectively ended the trade independence of the Emirate of Bukhara in the Surkhan oasis, and by the end of the XIX century trade routes through the oasis to neighboring countries were completely controlled by the Russian Empire [48].

**Conclusion.** Thus, the following conclusions were drawn on the article “The role of the Amu Darya waterway and crossings in trade relations of the Emirate of Bukhara”:

1. The Surkhan oasis became an important strategic and transit region of the Bukhara Emirate in its political relations, trade and economic relations with the East. At the same time, its strategic position was further enhanced by the fact that the territory of the oasis was a region where the interests of the Russian Empire and the British colonialists collided.

2. The Amu Darya waterways and crossings have been thoroughly studied by Russian researchers, and in order to control the trade through the Amu Darya, the Russian Empire established customs at river crossings and border crossings.

3. Establishment of the Amu Darya flotilla, the transformation of the Bukhara-Afghanistan border into the Russian-Afghan border, the establishment of Russian Empire control at checkpoints and customs points along the Amu Darya and the transit trade routes through Afghanistan, Iran, and India through the Surkhan oasis served the interests of the great imperial policy of the Russian ruling circles, which led to the subordination of the Emirate's trade to the Russian Empire.

4. In the trade relations of the oasis with neighboring principalities and Eastern states, agricultural, livestock, and handicraft products grown by the local population accounted for the main part.

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**ACTUAL PROBLEMS OF NATURAL SCIENCES****UDC: 546.56: 546.131: 661.725.844.1: 547.583.44****SYNTHESIS AND ANALYSIS OF COORDINATION COMPOUNDS OF  
NICKEL (II) ACETATE WITH MONOETHANOLAMINE AND  
P-NITROBENZOIC ACID**

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Annotatsiya: Aromatik karbon kislota xosilalardan p-nitrobenzoy kislotaning  $Ni^{2+}$  bilan kompleks birikmasi sintezi o'rganildi. Xona sharoitida kompleks birikmaning sinteziga tasir qiluvchi omillar aniqlandi. Jumladan, reaksiyaning vaqtga bog'liqligi, harorat ta'siri, konsentratsiyaga bog'liqligi amalda tadqiq qilindi. Sintez qilingan kompleks birikma IQ-Furye-spektrometriya, element analiz, mass-spektrometriya, TG-DSK va rentgen strukturaviy taxlil usullari yordamida o'rganilib, uning kimyoviy tuzilishi aniqlandi, shuningdek bu yangi kompleks birikma termik va kimyoviy barqaror ekanligi isbotlandi.



Kalit so'zlar: p-nitrobenzoy kislota, nikel (II) asetat, monoetanolamin, kompleks birikma, metal kompleks, rentgen strukturaviy analiz, element analiz, antimikrob, monokristall.

Аннотация: Из состава ароматических карбонных кислот изучен синтез комплексного соединения p-нитробензойной кислоты с  $Ni^{2+}$ . Определены факторы, воздействующие синтезу комплексных соединений при комнатных условиях. В частности, на практике исследованы: зависимость реакции от времени, воздействие температуры, зависимость от концентрации. При помощи способов ИК-Фурье-спектрометрия, анализ элемента, масс-спектрометрия, TG-DSK и рентгеновского структурного анализа изучилось синтезированное комплексное соединение, определен его химический состав, а также была доказана термическая и химическая устойчивость этого нового комплексного соединения.

Ключевые слова: p-нитробензойная кислота, никель (II) ацетат, моноэтаноламин, комплексное соединение, комплекс металла, рентгеновский структурный анализ, анализ элемента, антимикроб, монокристалл.

Abstract: This article clarifies the synthesis of a complex combination of p-nitrobenzoic acid with  $Ni^{2+}$  from aromatic carbonic acid derivatives. Moreover, factors influencing the synthesis of the complex compound under room conditions were identified. In particular, the time dependence of the reaction, the effect of temperature, the concentration dependence were studied in practice. The synthesized complex was studied using IR-Fourier spectrometry, elemental analysis, mass spectrometry, TG-DSK and X-ray structural analysis, its chemical structure was determined, and this new complex was proved to be thermally and chemically stable.

Keywords: p-nitrobenzoic acid, nickel (II) acetate, monoethanolamine, complex compound, metal complex, X-ray structural analysis, element analysis, antimicrobial, monocystal.

Introduction: One of the pressing issues was to provide the population with a variety of food products, nearly at all stages of human development. In this process, one of the key factors is the rational protection of plants from harmful organisms (pests, diseases and weeds). Protection of plants from pests is very crucial in the cultivation of grain products, potatoes, fruits, vegetables and other crops, as well as, breeding livestock in our country. The main reason for this is that the conditions of Uzbekistan (hot climate, its geographical location and soil conditions) are very favorable for the growth of pests. They find plenty of food and a comfortable place to live in fields, which in turn causes more damage to crops. It should be noted that in Uzbekistan one of the main pests in cotton fields is spider mites (Tetranychidae) gives up to 18-20 generations, while caradrina 4-6, bollworm 3-4, plant lice 16-17 and in potato growing areas Colorado worm 3-4 generations. Therefore, in our conditions, the development and effective use of specific methods of pest control is one of the most important measures to increase productivity [1].

In this regard, in the fight against plant pests include simple monocycles of benzoic acid - all types of isomers of nitro-, amino- and hydroxybenzoic acids (primary ligand), and as auxiliary ligands to obtain mono, di and tri ethanolamines with similar bioactivity. It is advisable to use complex compounds that form them with biometals



such as Cu, Co, Mn, Mo and Ni. Because these newly synthesized complexes have antimicrobial and stimulant properties [2].

This work is also devoted to the synthesis and study antimicrobial and stimulating properties of a complex compound of nickel (II) acetate with monoethanolamine and p-nitrobenzoic acid.

**The aim of the work is** to develop a method for the synthesis of a complex of Ni (II) acetate with p-nitrobenzoic acid and monoethanolamine, as well as, to study the composition and structure of the synthesized complex by modern physicochemical methods.

**Literature Review:** Research on the synthesis of complexes of carbonic acids with biometals, their spatial structure, "bioactivity-structure" relationship has led to research by leading research centers and universities around the world, including the Delhi Institute of Pharmaceutical Sciences and Research (India), Institute of Inorganic Chemistry in the University of Aachen (Germany), Institute of General and Inorganic Chemistry, Moscow State University (Russia), University of Tokyo (Japan), Royal Institute of London (UK), Institute of Engineering (China), Jagiellonian University (Poland), General and Inorganic Institute of Chemistry (Uzbekistan).

World research on the structure of complexes of carbonic acids with biometals and their biological activity has yielded a number of scientific results, including: synthesis of chelated complexes of metals, their spatial structure and charge density (Institute of Inorganic Chemistry, University of Aachen, Germany); mixed ligand coordination compounds in the presence of carboxylates were synthesized (Institute of General and Inorganic Chemistry, Moscow State University, Russia); complexes based on biometals were synthesized, molecular and crystalline structures as well as bioactivity were determined (Royal Institute of London, UK); polymer-type coordination compounds of carbonic acids were obtained (Engineering Institute, China); complexes of metals with phenoxyacetic acid derivatives were obtained and their types of mutual coordination were determined (Jagiellonian University, Poland); micronutrients, urea, carbonic acids and monoethanolamine-based plant growth stimulants (Institute of General and Inorganic Chemistry, Uzbekistan).

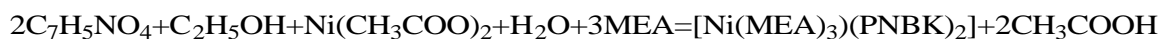
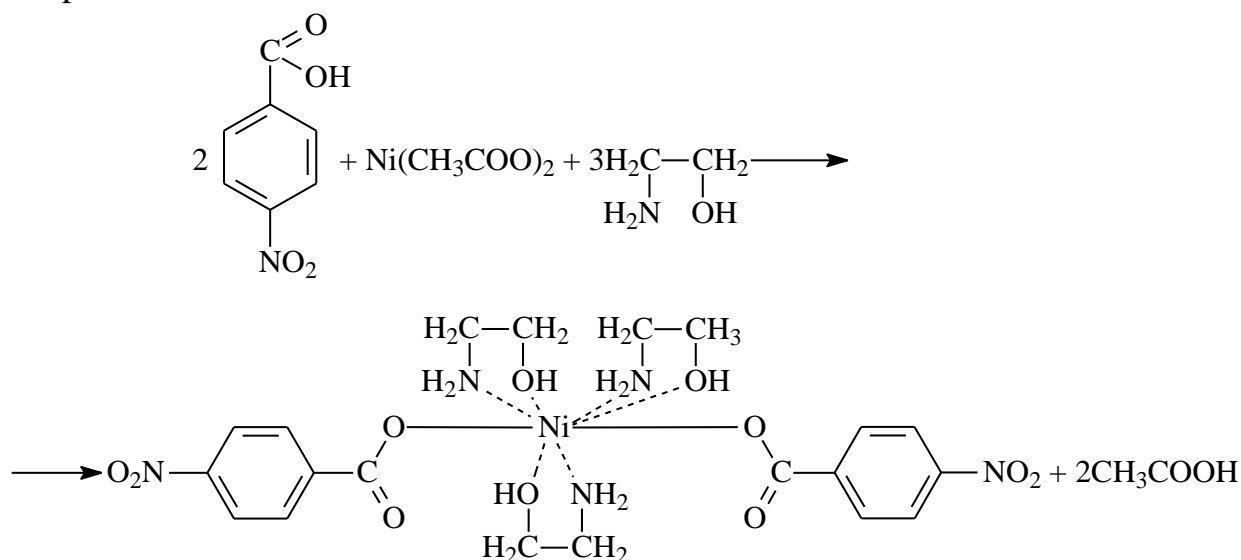
For the synthesis and physicochemical analysis of complex compounds of 3d metals and p-nitrobenzoic acid in solutions in the world, the scientific works were dedicated by Imanakunov B.I., Sulaymonkulov K.S., Tsivadze G.V., Tsintsadze G.V., Kharitonov Yu.A., B.Kol, M.Kholt, Hamilton V.S., Kozlova I.A., Savinkin Ye.V., Kuzmin N.E., Palkin K.K., Penland R.B., Rau T.F., Dursun A.K. and others.

A number of biologically active coordination compounds used in medicine and other sectors of the economy have been synthesized by leading scientists of our state, such as Parpiev N.A., Khodjaev O.F., Khakimov H.H., Ibragimov B.T., Sharipov K.T., Azizov T.A., Azizov M.A., Kadirova Sh.K., Kadirova Z.Ch. and by their students. The technology of obtaining complex compounds of various salts of metals with organic ligands has been developed, the processes of formation of coordination compounds in solutions and solid phases have been studied. Physicochemical properties of synthesized compounds were analyzed. Although there are many experimental materials for the study of complexes of metal salts with substances containing the nitro group and carboxyl group, the synthesis of ligand metal complexes of nickel (II) acetate

with p-nitrobenzoic acid from these 3d-metal salts has not been studied in solution. There is also no information about the structure of the coordination node of this class of connections [2].

**Research Methodology:** The complex was synthesized according to the following method: 0.002 mol of p-nitrobenzoic acid was dissolved in 20 ml of hot ethanol and it was placed in a round three-mouth- bottom-flask and fixed on a tripod on magnetic stirrer. A thermometer is attached to the left mouth of the flask, a return cooler is attached to the center mouth, and a drip funnel is attached to the right mouth. The reaction temperature was controlled using a thermometer (optimal reaction temperature  $t = 45-50^{\circ}\text{C}$ ). The time to start the reaction was clearly set. A solution of 0.001 mol of nickel (II) acetate in 30 ml of water was then added to a 5 ml solution of ligand in a flask every 5 minutes using a dropper funnel.

Two hours after the start of the reaction, a 1:30 alcohol solution of monoethanolamine was added to the mixture. The mixture was stirred at  $45-50^{\circ}\text{C}$  in a MS-H280-Pro brand magnetic stirrer for 3 hours. The reaction mixture was then left to crystallize at room temperature. After 7–8 days, the green complex precipitate formed was separated, washed in ethanol, and dried in the open air. Reaction of mixed ligand complex:



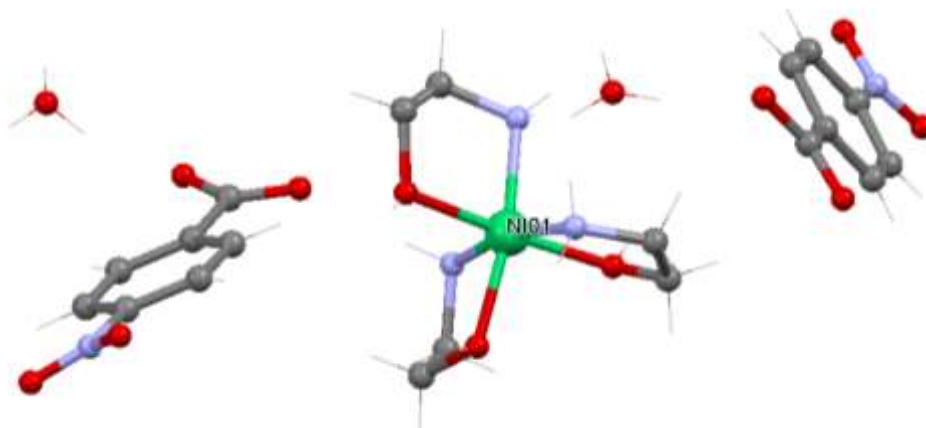
Product yield 68 %.  $t_{\text{liquid.}} = 178-180^{\circ}\text{C}$ .

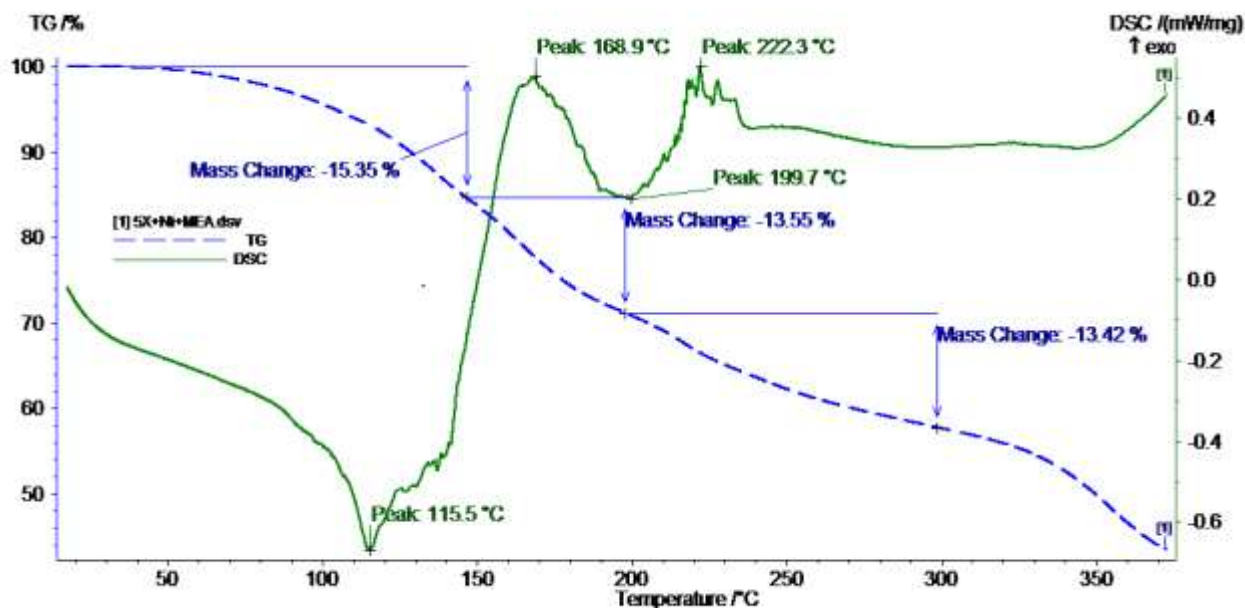
**Analysis And Results:** The amount of metal in the synthesized complex was determined on the Novaa 300 apparatus of Analytic Jena (Germany), and the analysis of carbon, hydrogen and nitrogen elements was determined on the “EA 1108” apparatus of Carlo-Erba (Italy) (Table 1). The IR spectra of the compound were obtained, in the area of  $400-4000\text{ cm}^{-1}$  by IRAffinity-1S spectrophotometer of the firm Shimadzu (Japan) samples were prepared with KBr tablets with a diameter of 7 mm. X-ray structural analysis was obtained on an Xcalibur Roxford Diffraction automatic diffractometer at a temperature of 293 K (Cu K $\alpha$  radiation,  $k = 1.54184\text{ \AA}$ , xscan mode, graphite monochromator).

**Table 1**
**Results of elemental analysis of a complex of nickel (II) acetate with monoethanolamine and p-nitrobenzoic acid**

Compound	Ni %		C, %		H, %		N, %	
	Found	Calculated	Found	Calculated	Found	Calculated	Found	Calculated
[Ni(MEA) <sub>3</sub> ](PNBK) <sub>2</sub> ]	10,28	11,67	41,81	42,54	5,05	5,16	12,2	12,6

The structure of the obtained compound was analyzed by X-ray and it was determined that it has the following structure (Figure 1).

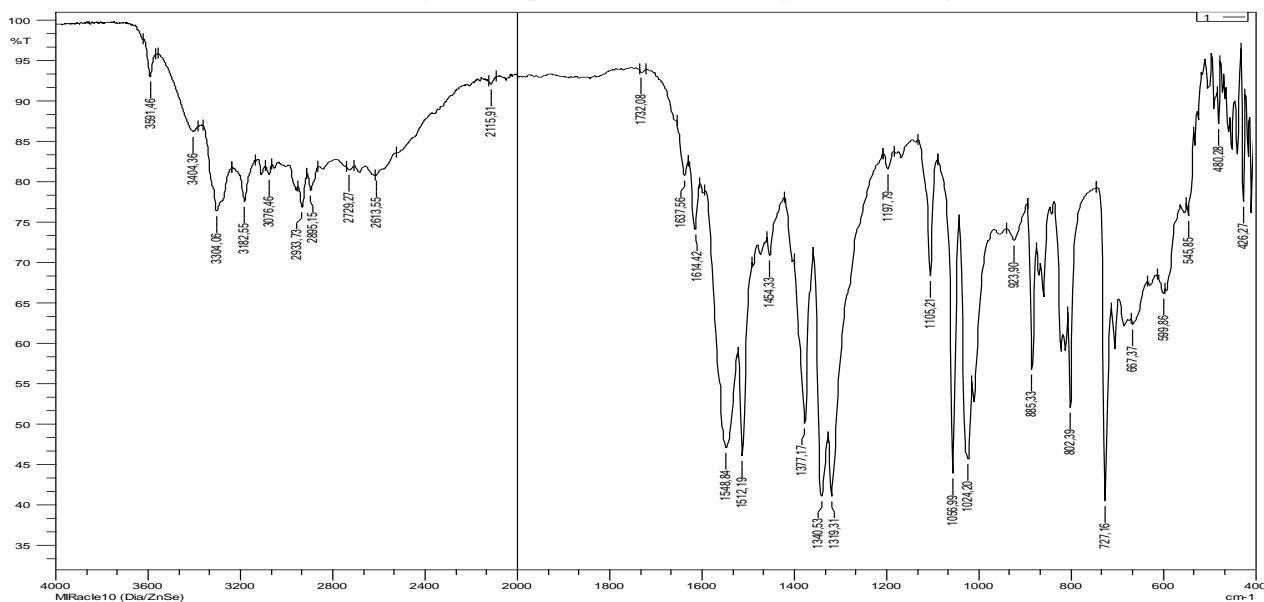




**Figure 2. TG-DSK analysis of the synthesized complex compound**

**Conclusion:** The  $[\text{Ni}((\text{PNBK})_2(\text{MEA})_3)]$  complex consists of Ni (II), PNKB, and MEAs, and a mixed ligand compound with a 1: 2: 3 content. The complex molecule contains OH- and  $\text{NH}_2$ -groups that can act as donors in hydrogen bonds. When the hydroxyl group only participates as a donor in the internal hydrogen bond, the two hydrogen atoms of nitrogen in the MEA form intermolecular hydrogen bonds with the oxygen atoms, leading to the formation of *x*-axis-oriented columns. Oxygen atoms of the nitro group do not participate in the formation of hydrogen bonds. The relatively large distance between the centroids of the parallel aromatic nuclei indicates that there is no significant stacking effect of 4,781 Å. Therefore, only a pair of hydrogen bonds of the amino and hydroxyl groups of MEA are involved in the formation of the crystal structure. It also forms columns oriented along the *x*-axis.

The structure of the obtained compound was analyzed by IR and it was determined that the following absorption areas were present (Figure 3).



**Figure 3. IR spectra of the synthesized complex compound****References:**

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UDK 581.4:582.929+581.522

## SENOPOPULATIONS OF SCUTELLARIA COMOSA JUZ (LAMIACEAE) IN THE FERGANA REGION

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**Annotatsiya:** Tabiiy sharoitlarda *Scutellaria comosa* senopopulyatsiyasining ontomorfogenez va ontogenetik tuzilmasi oʻrganib chiqilgan. Uning tarqalgan joylariga ekologofitosenotik tavsifnoma berilgan. *Scutellaria comosa*ning ontogenezi oddiy, toʻliq emas, chunki senil tuplar mavjud emas. *Scutellaria comosa* populyatsiyalarining chap tomonlama, markazlashgan va oʻng tomonlama spektrlari aniqlangan. Ularning turli ekologik-senotik sharoitlardagi turli-tumanligi oʻsimliklar rivojlanish surʼatining oʻzgarishi va urugʻ mahsuldorligi davriyligi bilan belgilanadi.

**Kalit soʻzlar:** morfogenez, senopopulyatsiya, senotik, ontogenetik spektr, senil, ex situ, immatur, virginil, generativ, ontogenez.

**Аннотация:** В природных условиях изучен онтоморфогенез и онтогенетическая структура ценопопуляций *Scutellaria comosa*. Дана краткая экологофитоценотическая характеристика его местообитаний. Онтогенез *Scutellaria comosa* простой, неполный, отсутствуют сенильные особи. Выявлены левосторонний, центрированный и правосторонний онтогенетические спектры ценопопуляций. Их разнообразие в разных эколого-ценотических условиях определяется изменением темпов развития особей и периодичностью семенного возобновления.

**Ключевые слова:** морфогенез, ценопопуляция, ценотик, онтогенетический спектр, сенил, ex situ, имматур, генератив, онтогенез.

**Abstract:** Ontomorphogenesis and the ontogenetic structure of cenopopulations of *Scutellaria comosa* have been studied under natural conditions. A brief ecological and phytocenotic characteristic of its habitats is given. Ontogenesis of *Scutellaria comosa* is simple, incomplete, senile individuals are absent. Left-sided, centered, and right-sided ontogenetic spectra of coenopopulations were revealed. Their diversity in different ecological and coenotic conditions is determined by the change in the rate of development of individuals and the frequency of seed renewal.

**Key words:** morphogenesis, coenopopulation, coenotics, ontogenetic spectrum, senyl, ex situ, immature, generative, ontogenesis.

**Introduction:** In recent years, there has been a negative impact of transformation of plants in hillside regions on the characteristics of the organism and population of senopopulations. Species of the genus *Scutellaria*, distributed in the Fergana Valley,

are no exception. The scientific results obtained by assessing the current state of senopopulations of *Scutellaria* species distributed in the Fergana Valley allow to identify some patterns associated with changes in vegetation. Therefore, one of the most pressing issues today is the assessment of the current state of senopopulations of *Scutellaria* species in the Fergana Valley, the development of measures for their protection and the creation of a living collection in ex-situ conditions. All over the world, we can see that there is a lot of research on new species, chemical composition, morphology, and ontogeny of species among the research on the species over the last 10 years. However, there is less research on the geography of the species, its natural resources, and the current state of its senopopulations.

New species for science are being introduced more than the flora of Turkey, Iran and China. The main reasons for this are the high diversity of species in these countries, as well as the use of modern methods. *Scutellaria ketenoglu* M. Cicek & Yaprak, *Scutellaria anatolica* M. Cicek & O. Ketenoglu [7] for science from Turkish flora in 2011, Feut Zhao and other scientists in 2017, *Scutellaria wuana* C.L. and Xiang & F. Zhao from Sichuan province of China [11], and in 2017, K. Safikhani and other scientists conducted a complex (phylogenetic, morphological, molecular, and systematic) analysis of the *Scutellaria multicaulis* Boiss species distributed in the Iranian flora. *Scutellaria arakensis* Jamzad & Safikhani, *Scutellaria multicaulis* Boiss. subsp. *multicaulis* var. *gandomanensis* introduced species such as Jamzad & Safikhani to science as a new species [9].

**Research methodology :** In the Fergana valley *S.comosa* are common in areas such as in the north-west of the Qurama mountain range, in the Chatkal mountain, in the north-east of the Fergana ridge, in the southern part of the Turkestan, Alay mountain ranges, in the foothills where they are collected [12]. The species is listed in the Central Asian Plant Definition and the International Plants Names Index ([www.ipni.org](http://www.ipni.org)) [6] and The Plant List ([www.theplantname.com](http://www.theplantname.com)) [10]. The life form of the species was described using I.G Serebryakov's ecological and morphological classification of life forms [22,23]. In the study of morphogenesis, insights into the phases of morphogenesis were approached. The study of the structure of adult plant bushes and branches is based on the concepts and ideas about woody plants, as well as architectural unity, developed by I.G.Serebryakov (1962), M.G.Mazurenko, A.P.Khokhryakova (1977) (Barthelemy, Caraglio, 2007) [23,18,2]. In the process of studying the development of plants, the concept of discrete description of ontogeny was adopted (Rabotnov, 1950, Uranov, 1975) [20,26].

1-5. Senopopulations were studied in the second decade of May, and 6-10 SPs in the second half of May. The ontogenetic spectrum was described on the basis of reports from 16–64 sites with a volume of 10 m<sup>2</sup>, regularly placed in 10 m wide transects. The number of plants analyzed in the studied populations ranged from 250 to 420 bushes. SP type is given according to the classification of A.A.Uranov and O.B.Smirnov (1969) and L.A.Zhivotovsky's classification of "delta-omega"[27]. Ecological density was determined by the number of plants per unit area (Odum, 1986) [19]. The absolute age of plants is determined by their annual rings [15,16]. The rate of recovery of the species was determined by the method proposed by A.R.Ishbirdin, the rate of aging of the senopopulation by N.V.Glotov.

**Discussion and results:** In recent years, we can see that the amount of research conducted by chemists working in our country to study the chemical composition of the species *Scutellaria* L. in the flora of Uzbekistan is growing. In particular, the research conducted by A.M. Karimov [17] and G.U. Siddikov is unique [25]. During their research, scientists have studied some species of *Scutellaria* L. distributed in the flora of Uzbekistan (*S. sordifrons* Juz., *S. phyllostachya* Juz., *S. comosa* Juz., *S. haematochlora* Juz., *S. immaculata* Nevski ex Juz., *S. ocellata* Juz.) were the first to isolate new flavonoids, glycosides, and aglycones. The biological activity of these substances, such as paracetamol and heliotrin alkaloids, has been shown to have anti-inflammatory and anti-toxic, sedative, and antihypertensive effects, as well as the technology of dyeing half-wool, wool, silk and other fabrics are proposed (Karimov (2017) [17] and G.U. Siddikov (2018) [25]).

To study the natural resources of the species that are the object of this research, to assess the current state of senopopulations and to develop recommendations for the preservation of gene pool in order to ensure future sustainability, to create maps of species distribution and vitality, to preserve natural populations of protected species Research work on "Biological characteristics and natural resources of *Scutellaria* L. (Lamiaceae) species distributed in the Fergana Valley" is being carried out in order to develop measures for their survival. Field research in the Fergana Valley, the study of samples stored in large collections, and a critical analysis of the data in the available literature revealed that the series includes 14 species in the Uzbek part of the Fergana Valley. However, that number is likely to change as field research continues. There are currently more than 350 species of the *Scutellaria* L. family on Earth (Paton, 1990) [8]. The genus is widespread in the foothills, foothills and mountainous regions of Eurasia, where species diversity is high compared to other regions, especially Iran-Turan, Central Asia and Afghanistan, where the Mediterranean is one of the centers of origin of the species. the eastern part of the sea is recognized as the second center (Safikhani, 2017) [9].

*Scutellaria comosa* ontogeny is simple, incomplete, there is no senile period. Before the generative period, the plant develops in the form of a bush, and only after the change of the growth system of the branches begins to form a semi-bush structure in the young generative period. Plant ontogeny is characterized by rapid growth of plants before the generative period, long duration of the middle-aged generative period and rapid death in the postgenerative period, which are the absence of senile plants [13].

The ontogenetic structure of the senopopulations studied during the study was different. The average ecological density in the 1st senopopulation (SP-1) located on rocks, boulders and large rocks was 9,6 m<sup>2</sup>. The mean value of the ontogenetic structure of SP-1 is in the left-spectrum of the two peaks, with the first maximum peak corresponding to the young generative stage and the second peak to the juvenile stage. The presence of up to 17,9% of juvenile plants in the senopopulation is associated with the growth of *S. comosa* among large boulders, which protects young plants from drying out, damage to grass, and livestock grazing. It also reduces the impact of various natural processes of plant elimination, which has a weak root and stem system. The high variability in the rate of development of plants in the young generative period (2 to 6 years) allowed them to accumulate in the SP and form at the maximum peak in the

ontogenetic spectrum. The share of plants in the population of the middle and old generative period is equal (12%). Plants in the post-generative period became extinct due to constant grazing of livestock. According to the Delta-omega classification, SP belongs to the young type ( $\Delta=0,26$ ;  $\omega=0,56$ ).

In SP-2, too, the left-handed ontogenetic spectrum was single-celled, and the peak (or peak) was found to correspond to virginil-aged plants (39,6%). Some of the plants growing in semi-rigid rock formations with a substrate of 70-80% fine and coarse gravel with a slope of 30 °, become virgin in the first year, because in the middle of summer the primary branch lies down and lateral buds in its plagiotropic part develop, leading to the formation of a bush. Sufficient development of the root system in plants and the prolongation of the virginil period for 2-3 years ensures their accumulation in the senopopulation [14]. However, as a result of burying in the substrate and the natural extinction of virgin plants, the share of plants in the young generative period is reduced by half (21,1%). The ecological density is much higher and is 20,5 m<sup>2</sup>. Mature senopopulation according to the Delta-omega classification ( $\Delta = 0,31$ ;  $\omega = 0,65$ ).

The cone between the SP-3 high hills was studied. The ecological density of *S. comosa* bushes is also high here – 20,2 m<sup>2</sup>. Plants are unevenly formed in groups on the slopes of watercourses. The ontogenetic spectrum of SP is right-sided, with a maximum of 38,8% of older generative plants. The absence of juvenile and immature plants, as well as the low proportion of virginil plants (1,8%) is due to the weakening of their root system and their washing away during spring floods. When plants have a strong root system, they are attached to the substrate and do not suffer from mechanical death. In such a habitat, the life expectancy of plants is up to 24 years. Plants live for 3-4 years in the young generative period, 5-8 years in the middle generative period, and 3-6 years in the old generative period. Prolongation of life expectancy leads to the accumulation of old generative plants in the SP, associated with the strong formation of perennial stems, which gradually die in the inactive substrate. Despite the fact that the life expectancy of plants in the subsenyl period is extended to three years, their number is significantly reduced due to the weakness of the stem and root systems (8,5%), so the aging SP is considered ( $\Delta = 0,57$ ;  $\omega = 0,81$ ).

SP-4 is located in the Kyzyltag-Ala rocky-gravelly rock formations along the Aksu River. SP-4 is located downstream. Plant density was very low in SP-4 and SP-5 and was 3,0 and 6,2 m<sup>2</sup>.

SP-5 Sokh district Sokh river basin is located on the slopes of Demursat mountain. In both SP, the concentrated spectrum is formed with a maximum in middle-aged generative plants. (In SP 4 and 5 – 41,7 and 65,5%, respectively). Low proportion (or indicators) in the SP of juvenile (0,7-0,8%) and immature (1,0-1,2%) plants in the short-term virginil (9,1-14,9%) ) and young generative (13,6-26,1%), as well as the burial and washing of plants due to river flooding is determined by changes in the substrate. According to the Delta-omega classification, both SP are mature: for SP-4:  $4 \Delta = 0,45$  va  $\omega = 0,83$ ; for SP-5 :  $5 \Delta = 0,41$  va  $\omega = 0,86$ .



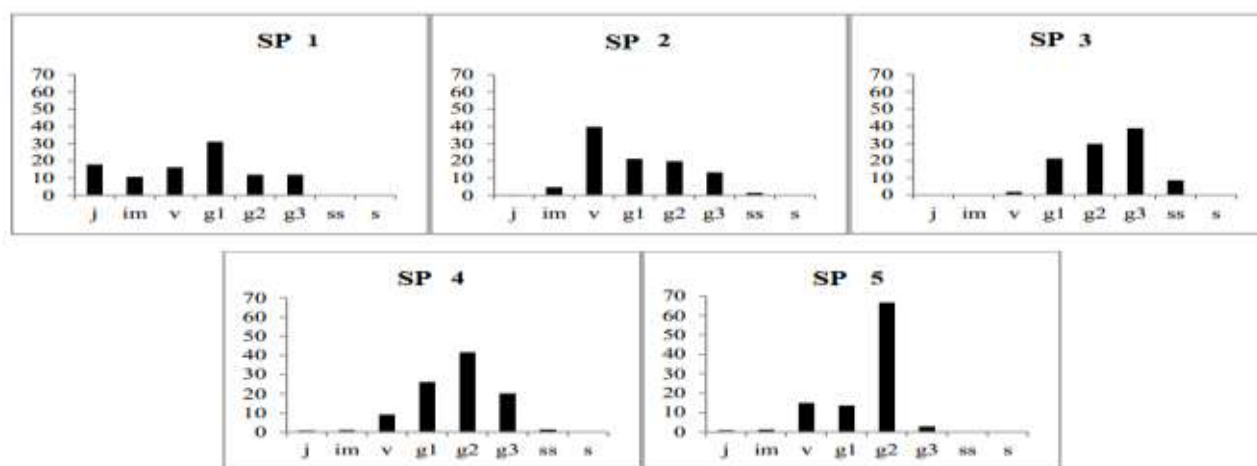
## Conclusions

**Table 1**

№ SP	Ontogenetic state							Demographic indicators			SP type according to Delta-Omega classification
	j	im	v	g <sub>1</sub>	g <sub>2</sub>	g <sub>3</sub>	ss	R <sub>ekol</sub>	$\Delta$	$\omega$	
1	17,9	10,7	16,3	31,1	12	12	0	9,6	0,26	0,56	Young
2	0,2	4,7	39,6	21,1	19,7	13,3	1,4	20,5	0,31	0,65	Maturing
3	0	0	1,8	21,2	29,7	38,8	8,5	20,2	0,57	0,81	maturing
4	0,7	1	9,1	26,1	41,6	20,2	1,3	3	0,45	0,83	Mature
5	0,8	1,2	14,9	13,6	66,6	2,9	0	6,2	0,41	0,86	Mature

Left – sided ontogenetic spectrum of *Scutellaria comosa*

**Picture 1**



The study of the ontogenesis of *Scutellaria comosa* spread in the Fergana Valley revealed similarities and differences in plant morphogenesis in different ecologo-senotic conditions. Thus, the studied cenopulations of the *Scutellaria comosa* Juz. were normal, incomplete and in different living conditions formed two types of spectrum: the centralized and the left-sided type. The peaks of the left-sided ontogenetic spectrum at different ages are determined by the moisture level of the substrate. And the centralized spectrum was formed due to the high rate of vegetative reproduction in the stony substrate of the plant community.

For the regions under study, the instability of precipitation in the summer period affects the number of juvenile and immature plants in the senopopoly. The formation of several types of ontogenetic spectra is associated with changes in the process of plant development in different ecological-senotic conditions.

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UDC: 624.131.

## SOME RESULTS OF ENGINEERING AND GEOLOGICAL STUDIES ON DESIGNING SITES FOR MUNICIPAL SOLID WASTE LANDFILLS IN THE KHOREZM REGION OF THE REPUBLIC OF UZBEKISTAN

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**Annotation.** On the basis of the engineering surveys carried out in the territory of Khorezm region, the necessary data was obtained on the engineering and geological conditions of the sites for the design of two municipal solid waste landfills and the protection of the environment against natural and man-made disasters.

**Keywords:** solid household waste, engineering geology, hydrogeology, exploration, research, soil, sourcing, sand, salinity, properties.

**Аннотация:** На основе выполненных инженерных изысканий на территории в Хорезмской области получены необходимые данные об инженерно-геологических условиях площадок для проектирования двух полигонов твёрдых бытовых отходов и защиты окружающей среды от неблагоприятных воздействий природного и техногенного характера.

**Ключевые слова:** твёрдые бытовые отходы, инженерная геология, гидрогеология, изыскания, исследования, грунты, сугленки, песок, засоление, свойства.

**Annotatsiya:** Xorazm viloyati hududida o'tkazilgan muhandislik izlanishlari asosida qattiq maishiy chiqindilar uchun ikkita axlatxonani loyihalashtirish va tabiiy va texnogen tabiatning salbiy ta'siridan atrof-muhitni muhofaza qilish joylari muhandislik-geologik sharoitlari to'g'risida zarur ma'lumotlar olindi.

**Kalit so'zlar:** qattiq maishiy chiqindilar, muhandislik geologiyasi, gidrogeologiya, razvedka, tadqiqotlar, tuproqlar, tuproqlar, qum, sho'rlanish, xususiyatlar.

**Introduction:** In the area of the two municipal solid waste (MSW) landfills being designed in the Khorezm region of the Republic of Uzbekistan in 2020, geological and engineering surveys were carried out in order to obtain basic data on geo-engineering, hydrogeological and ecological conditions. The aim of the research was to study the engineering, geological and hydrological conditions of the two planned test sites and adjacent areas up to a depth of 15-40 m. The surveys were carried out by conducting ground electrical exploration studies, driving 40 pits and drilling 16 wells with sampling for laboratory determination of the physical and mechanical properties of soils, conducting test pumps in order to study the filtration parameters of aquifers and

clarify the depths of groundwater, taking water samples for determination of the chemical composition of groundwater. An assessment of the ecological situation of the territory, the level of soil, groundwater and surface water pollution in the zone of influence of MSW landfills was also carried out.

**Literature review:** In geological and hydrogeological terms, the study area is well studied. One of the first works on the study of the geological and hydrogeological conditions of the lower reaches of the Amu Darya was the works of A.D. Arkhangelsky (1916, 1931) and B.M. Georgievsky (1937). A great contribution to the study of the geological structure, hydrogeological conditions, irrigation and drainage zoning, the study of oil and gas resources in the Amu Darya basin in 1940-1960 years contributed by such researchers as A.I. Smolko, P.P. Chuenko, A.A. Yamnov, M.K. Grave, M.M. Krylov, B.A. Berder, N.N. Khodzhibaev P.I. Belchuevsky, P.A. Bolshakova, V.P. Kaluzhnikova, R.P. Teush A.Kh. Taneeva, M.S. Federmeser, M.P. Epanchintseva, M.S. Grinberg, B. Tonevitsky, and others. In 1970-2020 F. Rakhimbaev, R. Kadyrov, L. P. Polkanova, I. A. Sherstnev and T. K. Kulakova, M.P. Epanchintseva, N.N. Romanov, Pechorin, Yu.A., Sologub A.R., Safronov L.V. Akhmedov N.D., Esenbaev G.R., Yakubova G.R., Alimov Sh.A. et. al.

Data on engineering and geological conditions for individual sites are available, but they are insufficient for the design of MSW fields.

**Analysis :** The survey area is confined to the junction zone of the Kyzylkum and Karakum aeolian plains with the alluvial valley of the Amu Darya river. The surface is a slightly undulating plain with absolute elevations at polygons from 95-100 m in the northwest to 125-130 m in the southeast.

The southern and southeastern parts represent a sandy-gravel surface, in some areas covered with hilly-ridge and dune sands. Salt marshes with small lakes and deflation basins are common in the inter-barnian depressions.

The largest part of the surface of the alluvial plain of the river Amu Darya has been developed for irrigation and is complicated by the channels of numerous irrigation canals, collectors, dry channels and areas of hilly sands.

The only natural surface watercourse is the Amu Darya River, which originates in the high mountainous regions of the Hindu Kush and is fed by glaciers and snow. The minimum average monthly discharge is observed in the autumn-winter period - from 100 to 400 m<sup>3</sup> / s, the maximum in June-July - from 2000 to 3000 m<sup>3</sup> / s. The annual runoff at the Tuyamuyun post is on average from 20 to 40 km<sup>3</sup>, at the Kipchak post within 15-20 km<sup>3</sup>. Mineralization of water at the Tuyamuyun post was 0.8-1.8 g / dm<sup>3</sup>, sulphate-chloride-sodium type.

The irrigation system of the region is based on several large canals: Tashsaka, Palvan, Shavat and Bayramsaka. Many lakes, ranging in size from a few square meters. km. up to 10-15 sq. km. formed due to the discharge of residual irrigation surface and wedging out groundwater, have increased mineralization. The largest lakes are: Shorkul, Tyura-kul, Donguz-Uldy, Bai-kul, etc.

The climate is sharply continental and arid. The average annual air temperature was 12.0-14.1 ° C. The lowest temperatures are typical for December, January and February, when the monthly average values are mostly negative or close to zero, the absolute maximum in July reaches 42 - 45 °C. The amount of precipitation varies

within the range of 32.9-221.1 mm / year with an average annual rate of 107.1 mm / year.

The evaporation rate of long-term mean values from the water surface (according to Ivanov) in the last two decades was 1881.07-1943.84 mm / year, which exceeds the amount of precipitation by 8-10 times. Evaporation from the surface of groundwater, depending on the depth of its occurrence (1.0-3.5 m), is respectively 800-50 mm / year (Alimov M.S. 1979).

The study area is mainly deflationary-accumulative relief developed in the southern part of the work area and is represented by an aeolian sandy plain sloping gently to the north with ridged and hilly relief forms, the relative excess of which is from 0.5 to 5.5 m. Gentle sandy plain developed on alluvial deposits.

At the junction of the aeolian and the alluvial plains, there is an alternation of lake-alluvial sediments, indicating that the formation of the aeolian sands began in the upper Pliocene-quaternary time and continues until the present time.

Neogene-quaternary sediments, which are fed by paleogenic clays and are a regional reservoir, have been studied.

By genesis, the upper pliocene sediments - lake-sea, are represented by the translying thickness of yellow-brown carbonated clay, shallow earthen sandstones and yellow medium and fine-grained sands, which form the surface of the aeolian plain.

Quaternary sediments are represented by alluvial, lake and echo sediments with a thickness of 30-40 m and thickness of gray, shallow, and quaternary, micide and quartz-field sands, light gray and yellowish-gray, light and heavy, lumpy and coarse layered with layers of fine-grained plastic clay and clay sand.

According to the accepted hydrogeological zoning, the territory of the research is part of the Amu Darya artesian basin of order I, Bukhara-Karshi artesian basin of order II.

At the polygons located within the aeolian massifs, the upper Pliocene sediments lie first from the surface and folded with fine-grained dust sands, 1,5-3,0 to 5,0 m thick, yellowish-gray in color. The lower section of a single Pliocene-Quaternary aquifer consists of sands and sandstones of the Pliocene.

**Discussion:** The purpose of engineering studies at the pre-project stage of construction of municipal solid waste landfills is to obtain necessary and sufficient materials on the natural and man-made conditions of the planned locations of the construction site to justify the choice of the location of MSW site, and its engineering protection from adverse environmental impacts.

The completed engineering surveys included the following types of work:

- route and reconnoitring engineering and geological surveys;
- sinking of engineering-geological and hydrogeological wells up to 15 m deep (Table 1);
- experimental filtration works in wells;
- sampling of soil and water samples;
- laboratory work to determine the physical and mechanical, strength and water-physical properties of soils and the chemical composition of groundwater;
- carrying out of regime observations.

Table №1

№ Well	Int. ust. fil., m	Stat. level, m	Dyna m. level, m	Loweri ng, m	Debit Q, l/s; m <sup>3</sup> /per day	Specific debit, q, l/s	C <sub>c</sub> , m/pe r day	Mineral ization of water, mg/ dm <sup>3</sup>
Kushkupir								
1 P	8,0-13,0	4,79	6,8	2,01	2,16/186,6	1,07	13,9	1340
2 P	8,0-13,0	4,4	12,16	7,76	1,86/160,7	0,24	4,8	2886
3 P	8,0-13,0	7,09	11,46	4,57	0,62/53,6	0,14	2,03	1400
4 P	8,0-13,0	5,18	10,73	5,55	0,68/58,7	0,12	1,95	1806
5 P	8,0-13,0	5,98	11,41	5,43	1,3/112,3	0,24	3,82	1276
6 P	8,0-13,0	5,63	11,78	6,15	0,65/56,2	0,1	1,8	1370
7 P	8,0-13,0	4,96	11,88	6,92	0,65/56,2	0,09	1,66	2480
8 P	8,0-13,0	4,81	11,6	6,79	1,62/140,0	0,24	4,13	1020
Bagat								
9 P	9,5-14,5	2,51	6,51	4,0	2,6/224,6	0,65	9,43	1380
10 P	9,5-14,5	1,34	8,92	7,58	1,08/93,3	0,14	2,68	1370
11 P	9,5-14,5	2,99	11,83	8,84	1,3/112,3	0,15	3,05	1244
12 P	9,5-14,5	4,49	11,18	6,69	0,65/56,2	0,1	1,69	1948
13 P	9,5-14,5	5,02	10,85	5,83	0,65/56,2	0,11	1,83	4690
14 P	9,5-14,5	3,26	12,01	8,75	0,76/65,7	0,09	1,79	3150
15 P	9,5-14,5	3,52	11,05	7,53	0,7/60,5	0,09	1,73	1420
16 P	9,5-14,5	6,71	10,43	3,72	0,65/56,2	0,17	2,35	6990



**Results:** Experimental filtration works were carried out in order to determine the filtration characteristics of water-bearing deposits, the depth of the groundwater table and their quality. The aquifers tested by hydrogeological wells are confined to sedimentary and terrigenous formations of the Amudarya complex. The water content of the sediments is insignificant, the flow rate of wells during testing did not exceed - 0.6-2.6 l/s, the specific flow rate was 0.1-1.07 dm<sup>3</sup>/s\*m. The main characteristic of the water permeability of rocks is the filtration coefficient, for which single pumping was performed. The calculation was carried out using analytical formulas, in accordance with the accepted boundary conditions. Filtration coefficients are 1.8-13.9 m/per day (Table 1). The main source of groundwater recharge is filtration losses from irrigation canals and irrigated lands. Their influence is manifested in an increase in the water level at the beginning of the growing season, April-May, and up to maximum marks in June-July, when there is a flood along the river Amu Darya.

The minimum levels are typical for the autumn-winter months, November-February. Seasonal amplitudes of level fluctuations are 0.8-1.3 m. The depth of the water level depends on the change in the relief forms of the territory of the two polygons from 1.5 to 8.5 m. The general direction of the groundwater flow in the Bagat ground is from south to north and north-west with a slope of 0.001-0.0009, at the Kushkupir site to the north and northeast.

At the Kushkupir landfill, the groundwater is weakly brackish with a dry residue of 1,020 to 2,886 mg/l, at the Bagat landfill, the waters are slightly brackish and brackish with a mineralization of 1,370 to 6,990 mg/l. sulphate-chloride sodium type. The variation of groundwater mineralization over the years depends to a large extent on the water quality of the year and the value of water supply for irrigation. Mineralization increases 1.5-2.0 times in the poor years and is of no interest in the use of water for drinking water.

All the groundwater at hydrogen pH is neutral and nonaggressive. The CO<sub>2</sub> content of aggressive carbon dioxide is mostly nonaggressive. Only No.9p wells at Bagat landfill and No.2p at Kushkujuk landfill CO<sub>2</sub> waters are mildly aggressive.

Within the two ranges, three types of soil have been isolated: sand, loam and clay sand, which form lake-alluvial upper pliocene-quaternary sediments.

Loams are most widespread in the north, outside the polygons on the territory of the alluvial plain of the river Amu Darya.

They are penetrated by practically all wells in the form of lenses and interlayers with a power from 0.2-0.5 to 1.0-2.0 m with sand band and clay sand. The loam of modern alluvial sediments of the channels and floodplains of the Amu Darya river is heterogeneous, with layers and lenses of sand and clay sand of power from 0.1 to 0.5 m, not resistant to depth and extension.

Loams of solid consistency, light, medium density, non-subsiding and slightly subsiding. According to the degree of salinity, the soil is characterized as non-saline and slightly saline with medium-soluble salts. Basic engineering and geological characteristics of the loam: soil density 1.91-1.97 g/cm<sup>3</sup>; dry soil density 1.55-1.59 g/cm<sup>3</sup>; soil particle density 2.66-2.69 g/cm<sup>3</sup>; porosity coefficient 0.684-0.805; porosity 40.6-42.5%; natural humidity 19.0-23.2%; moisture degree 0.85-0.93; plasticity number 8,2-12,2; granulometric composition: sandy (0.05-2.0 mm) -16.5-19.7%; dusty (0.05-0.001 mm) - 66-75%; clayey (less than 0.001 mm) - 14.5%; modulus of deformation at natural humidity -24.0-27.4 MPa and at water saturation - 12.8-14.8 Mpa.

*Sand* of neogene-quaternary lacustrine-alluvial and aeolian deposits is fine-grained, with a low degree of water saturation from the surface and up to water-saturated - at a depth of 2.0-15.0 m and more, yellow-gray and gray, with interlayers of sandy loam and loam with a thickness of 0.2 -0.5 m. The sands are dominated by particles of the sandy fraction up to 81-98%, the fine fraction - up to 67-78%.

The gypsum content (CaSO<sub>4</sub> x 2H<sub>2</sub>O) in the soil varies from 0.26 to 3.05%. Salinization processes were not widely developed in the study area due to the relatively deep bedding of slightly saline and brackish groundwater - 2.5-7.0 m and lithological structure, represented by lacustrine-alluvial and aeolian sands, which have low capillary uplift rates, not exceeding 0.7-1.0 m. In the process of rewinding aeolian sands, light silty fraction of salts was carried away by the wind to adjacent areas. In most of the research territory (90%), the sands in the aeration zone are not saline. The dry residue of water-soluble does not exceed 0.5-0.7% of the dry weight of the soil, sulphate sodium and sulphate-chloride-sodium type throughout the section. In the water saturation zone at a depth of 3.5-4.0 m, there are slightly saline soils with a dry residue of 0.5-1.02% of the dry soil weight.

The main engineering-geological characteristics of sands: soil density 1.91-1.97 g / cm<sup>3</sup>; dry soil density 1.85-2.04 g / cm<sup>3</sup>; the density of soil particles is 2.66 g / cm<sup>3</sup>; porosity coefficient 0.57-0.805; porosity 36.3-44.6%; natural humidity 20.8-25.5%; moisture degree 0.84-0.97; particle size distribution: sandy (0.05-2.0 mm) - 83.7-99.0%; silty (0.05-0.001 mm) - 13.8-15.6%; clayey (less than 0.001 mm) - 1.1-3.2%; Angle of natural slope (average) 32-38°

According to the results of laboratory and geophysical studies, the soils on the territory of the landfills are non-aggressive with low corrosive activity in relation to carbon steel.

The ecological and geological conditions of the study area were assessed according to four indicators: protection of aquifers from pollution; chemical composition of groundwater and soil (contamination by toxic components); the depth of the water level; the presence of sources of anthropogenic impact.

Based on data on the geological structure of the section and morphological features of the relief, lithological composition, thickness and filtration properties of the soils of the aeration zone on the territory of the landfills, the Neogene-Quaternary aquifers are assessed as not protected.

As a result of geoecological studies, soil samples and water samples from wells were taken for analyzes of atomic emission spectrometry with inductive plasma (AIS-ICP, ppm N/C) and a complete chemical analysis of water.

In all tested wells, the dry residue and total hardness in water exceed the standard values by 2-8 times. The content of sulfates, chlorine, nitrates exceeded the hygienic standard, which is associated with the natural processes of leaching of readily soluble salts from water-containing rocks.

Concentrations of 25 toxic elements were determined in water, and only for four of them (As, Co, Ni, Se) did the concentrations exceed the maximum permissible values: arsenic (As) varies from 2.0 to 7.3 MPC, cobalt (Co) from 1.2 to 1.9 MPC, selenium (Se) from 8.0 to 43 MPC and nickel (Ni) from 4.5 to 16.7 MPC.

The concentrations of 56 toxic elements were determined in the soils, and only for six of them (As, Cd, Cr, Hg, Pb, Se) did the concentrations exceed the maximum permissible values: arsenic (As) in the soil varies from 1.7 to 4.75 MPC, selenium (Se) from 1.26 to 2.5 MPC, cadmium (Cd) from 1.83 to 26.6, chromium (Cr) from 1.15 to 1.49, lead (Pb) from 1.59 up to 3.38, Mercury (Hg) from 1.25 to 3.52.

**Conclusion:** In conclusion, it should be noted that the performed engineering surveys solved the assigned tasks to obtain the necessary data on the engineering and geological conditions of the sites in the Khorezm region for the design of two municipal solid waste landfills and the protection of the environment from the adverse effects of natural and man-made disasters. The surface is a slightly undulating plain, in some areas it is covered with hilly ridge and dune eolian sands 5-10 m thick, underlain by lacustrine-alluvial sandstones and sands with interlayers of loam 25-30 m thick. Groundwater with a dry residue from 1020 to 6990 mg/l. sulphate-chloride sodium type occur at a depth of 1.3-7.1 m. The filtration coefficients of the aquifer are 1.8-13.9 m/day. The soils are not aggressive with low corrosive activity in relation to carbon steel and are not subsiding, mostly not saline or slightly saline in the water-saturated zone.

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UDC: 546.73.74.56

**COMPLEX COMPOUNDS OF COPPER (II) FORMIATE WITH  
ACETAMIDE AND NICOTINAMIDE**

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**Annotatsiya.** Maqolada mis formiatning atsetamid va nikotinamid bilan ilgari tavsiflanmagan kompleks birikmalari sintezi va tadqiqoti bo'yicha ma'lumotlar keltirilgan. IQ-spektroskopiya metodi yordamida komplekslarning tarkibidagi atsetamidning koordinatsiyasi kislorod atomi orqali, nikotinamidniki esa piridin halqasining azot atomi orqali amalga oshishi ko'rsatilgan. Formiat ionlari ham komplekslarning ichki koordinatsion sferasini hosil qilishda ishtirok etadi.

**Kalit so'zlar:** formiat, atsetamid, nikotinamid, kompleks, koordinatsiya, yutilish polosalari.

**Аннотация.** В статье представлены данные по синтезу и исследованию ранее не описанных комплексных соединений формиата меди с ацетамидом и никотиномидом. Методом ИК-спектроскопии показано, что в структуре комплексов координация ацетамида осуществляется через атом кислорода, а никотинамида – через атом азота пиридинового кольца. Формиат-ионы также участвуют в образовании внутренней координационной сферы комплексов.

**Ключевые слова:** формиат, ацетамид, никотинамид, комплекс, координация, полосы поглощения.

**Annotation.** The article presents data on the synthesis and study of previously non-described complex compounds of copper formate with acetamide and nicotinamide. It was shown by IR spectroscopy that in the structure of the complexes, the coordination of acetamide occurs through oxygen atom, and nicotinamide, through the nitrogen atom of the pyridine ring. Formate ions are also involved in the formation of the internal coordination sphere of the complexes.

**Key words:** formate, acetamide, nicotinamide, complex, coordination, absorption bands.

**Introduction.** Complexation in some cases leads to the appearance of new beneficial properties in the target products that are not observed in the original components. Therefore, the production of new substances with a wide range of applications in industry and agriculture is associated with complexation. In addition, the study of complex compounds is also advisable for solving problems of chemical science related to the nature of chemical bonds and structure.

Amides and thioamides of carboxylic acids contain donor oxygen and nitrogen atoms, which contribute to the formation of complex compounds. Many works have been devoted to the preparation and study of the structure of complex compounds of p-, d- and f-metals with amides, but most of them refer to homogeneous complexes.

In [1], the formation of a complex compound of the composition  $\text{Mn}(\text{HCOO})_2 \cdot 2\text{NH}(\text{CONH}_2)_2 \cdot \text{H}_2\text{O}$  was established and the biological activity of this compound was studied. The interaction of zinc formate with biuret at 25 ° C was studied in [2]. Work [3] is devoted to the preparation and study of the composition and structure of complex compounds of calcium acetate with acetamide and nitrocarbamide. The authors of [4] obtained complexes of magnesium nitrate with nitrocarbamide and nicotinamide by the mechanochemical method. Mixed amide zinc complex compounds were obtained and studied in [5]. The compounds were obtained mechanochemically, their individuality was proved by IR spectroscopic, differential thermal, and X-ray phase analysis. Complex compounds of copper with some benzoxazines were obtained and studied by physicochemical methods in [6].

There are no data in the literature on the preparation and study of complex compounds of copper formate with acetamide and nicotinamide. The aim of our work is to develop a method for the synthesis of complexes of copper formate with acetamide and nicotinamide.

**Research Methodology.** The starting material for the synthesis is copper (II) formate. It was obtained by dissolving basic copper (II) carbonate in an excess of formic acid solution. The following reagents were used in the work: copper hydroxycarbonate  $(\text{CuOH})_2\text{CO}_3$  of the “pure for analysis” grade, acetamide (“pure for analysis”), nicotinamide (“pure for analysis”), formic acid with a concentration of 84%.

The synthesis was carried out at room temperature by adding amides with stirring to a formate solution acidified with formic acid; the molar ratio of formate and amide was 1 : 3. When the resulting solution is kept in air, after a few days, transparent blue crystals are formed in the case of acetamide and dark blue in the case of nicotinamide. The crystals were separated from the solution, washed with a small amount of water, and dried at 80 °C.



The copper content in the composition of the obtained compounds was determined by the photometric method on a UV - 1800 photometer from “Shimadzu” [7]. Nitrogen, hydrogen and carbon were determined on an EA-1108 elemental analyzer “Karlo Erba” [8]. IR spectra were recorded in the range of 400 – 4000  $\text{cm}^{-1}$  on an IRTraser-100 spectrometer from “Shimadzu” [9]. Thermal analysis was carried out on a derivatograph of the F. Paulik-J. Paulik-L. Erdey system at a rate of 9 deg / min and a sample of 0,2 g at the sensitivity of the T-900, TG-200, DTA, DTG-1/10 galvanometers. The recording was carried out under atmospheric conditions, the holder was a platinum crucible with a diameter of 10 mm without a lid, the standard is  $\text{Al}_2\text{O}_3$  [10].

**Results and discussion.** According to the data of the analysis, the obtained compounds contain 2 mol of amide per mole of metal, and, in addition, they contain water. The determination results are shown in table 1.

Table 1. Results of elemental analysis of synthesized copper formate complexes

Content (found / calculated), wt. %							
<i><math>\text{Cu}(\text{HCO}_2)_2 \cdot 2\text{CH}_3\text{CONH}_2 \cdot 2\text{H}_2\text{O}</math></i>							
Cu		C		N		H	
Found	Calcul.	Found	Calcul.	Found	Calcul.	Found	Calcul.
20,47	20,65	23,27	23,40	8,92	9,10	4,89	5,20
<i><math>\text{Cu}(\text{HCO}_2)_2 \cdot 2\text{C}_5\text{H}_4\text{NCONH}_2 \cdot 2\text{H}_2\text{O}</math></i>							
Cu		C		N		H	
Found	Calcul.	Found	Calcul.	Found	Calcul.	Found	Calcul.
14,48	14,65	38,59	38,72	6,27	6,45	4,08	4,15

The IR spectrum of uncoordinated acetamide has characteristic absorption frequencies ( $\text{cm}^{-1}$ ) at:  $\nu(\text{NH}_2)$  – 3378,  $2\delta(\text{NH}_2)$  – 3199,  $\nu(\text{CO})$  – 1664;  $\delta(\text{NH}_2)$ ,  $\nu(\text{CO})$  – 1614;  $\nu(\text{CN})$  – 1395;  $\delta(\text{CH}_3)$  – 1352;  $\rho(\text{NH}_2)$  – 1148;  $\rho(\text{CH}_3)$  – 1047;  $\nu(\text{CC})$  – 1005;  $\delta(\text{OCN})$  – 575;  $\delta(\text{CCN})$  – 462.

The IR spectra of the synthesized complex compounds are shown in Fig. 1 and 2.

In the spectrum of the acetamide complex, there is a shift of the absorption bands including stretching vibrations of CO at 1709  $\text{cm}^{-1}$ , towards lower frequencies – 1695,10  $\text{cm}^{-1}$ . This shift of the absorption bands may be due to the weakening of the CO bond as a result of the participation of the carbonyl group in the coordination of the ligands to the central atom. This is also evidenced by an increase in the frequency of bending vibrations  $\delta(\text{CCN})$  – 462  $\text{cm}^{-1}$  of acetamide to 471,6  $\text{cm}^{-1}$  (by about 10  $\text{cm}^{-1}$ ). The absorption bands of stretching and bending vibrations of the  $-\text{NH}_2$  group in both complexes are overlapped by a wide absorption band of crystallization water vibrations, which complicates the determination of the behavior of this group in the complexes.

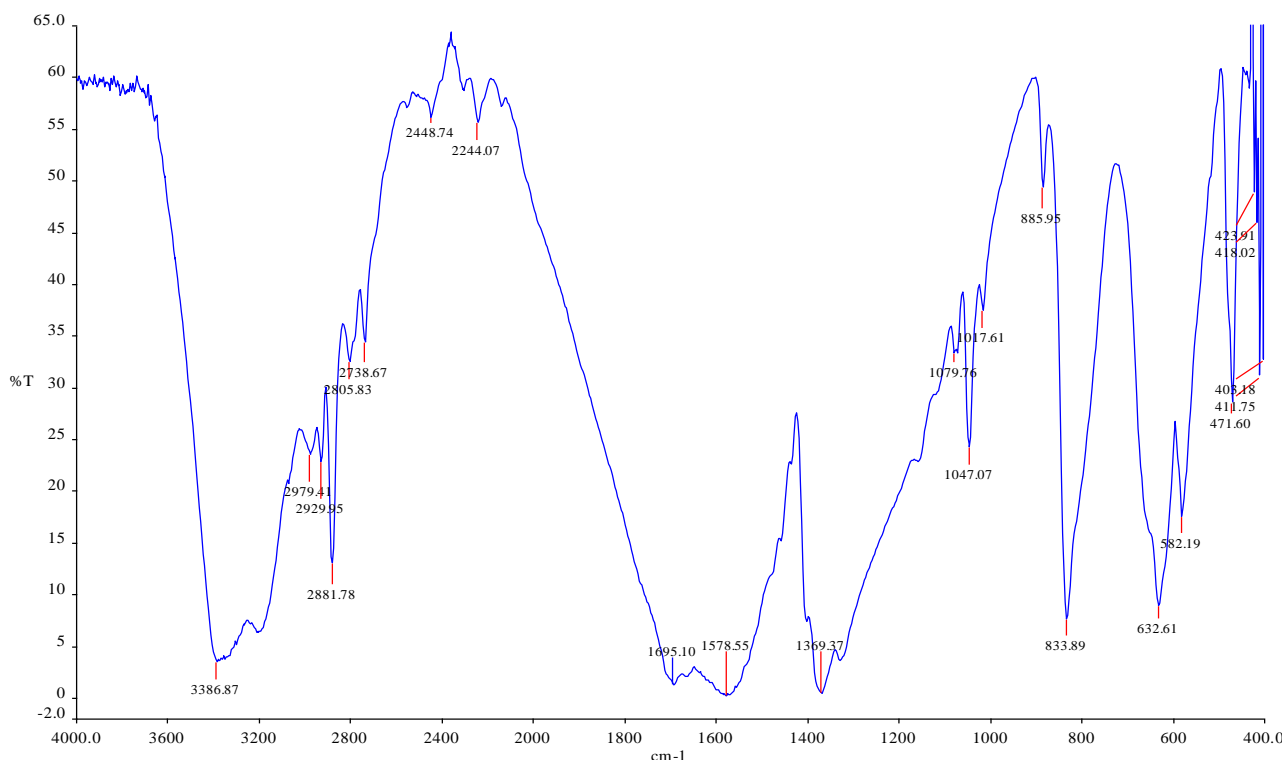


Figure: 1. IR spectrum of  $\text{Cu}(\text{HCO}_2)_2 \cdot 2\text{CH}_3\text{CONH}_2 \cdot 2\text{H}_2\text{O}$

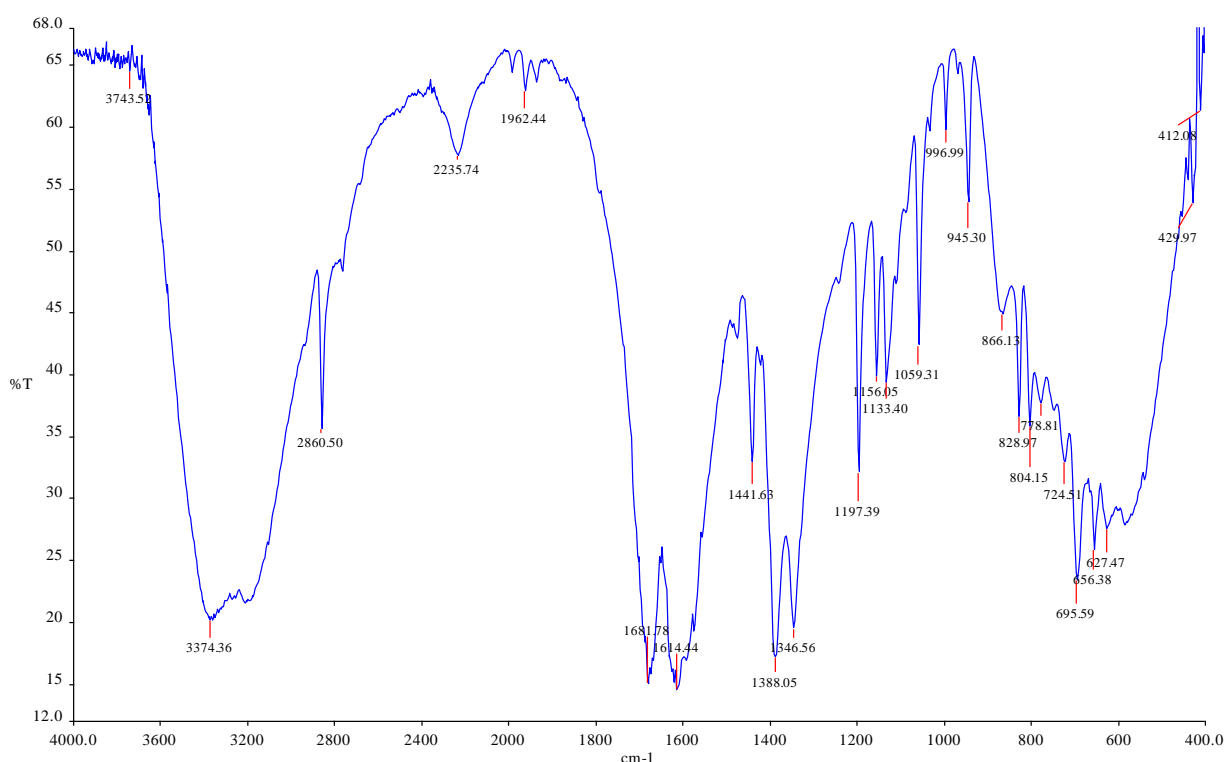


Figure: 2. IR spectrum of  $\text{Cu}(\text{HCO}_2)_2 \cdot 2\text{C}_5\text{H}_4\text{NCONH}_2 \cdot 2\text{H}_2\text{O}$

The absorption bands of the formate group in the IR spectrum of copper (II) formate are ( $\text{cm}^{-1}$ ):  $\nu(\text{CH}) - 2902$ ,  $\nu_{\text{as}}(\text{COO}^-) - 1586$ ,  $\nu_{\text{s}}(\text{COO}^-) - 1396$ ;  $\delta_{\text{as}}(\text{OCO}) - 789$ ,  $\delta_{\text{s}}(\text{OCO}) - 604$ . The bands of stretching vibrations of the formate group in the IR spectrum of the acetamide complex of copper are shifted to the low-frequency region:  $\nu_{\text{as}}(\text{COO}^-) - 1578,55 \text{ cm}^{-1}$ ,  $\nu_{\text{s}}(\text{COO}^-) - 1369,37 \text{ cm}^{-1}$ , which indicates the coordination

of the formate group to the complexing agent is monodentate ( $\nu_{as}(\text{COO}^-) - \nu_s(\text{COO}^-) = 209,18 \text{ cm}^{-1}$ ).

The IR absorption spectrum of a free molecule of nicotinamide contains the following characteristic maxima ( $\text{cm}^{-1}$ ):  $3366 - \nu(\text{NH}_2)$ ;  $3159 - \nu(\text{CH})$ ;  $1681 - \nu(\text{CO})$ ;  $1619 - \delta(\text{NH}_2)$ ;  $1593 - \nu_r$ ;  $1486, 1423 - \nu_r$  (pyridine ring),  $\delta(\text{CCN})$ ;  $1202 - \delta(\text{CCN})$ ;  $1154, 1124 - \nu(\text{NH}_2)$ ,  $\delta(\text{CCC})$ ;  $1091 - \delta(\text{CCN})$ ,  $\nu(\text{CO})$ ,  $\nu_r$ ;  $1029 - \nu_r$ ,  $\delta(\text{CCN})$ ;  $970 - \nu(\text{CC})$ ;  $829 - \nu(\text{CC})$ ;  $778, 703 - \delta(\text{CCN})$ ,  $\delta(\text{CO})$ .

In the spectrum of the nicotinamide copper (II) complex, for the stretching vibrations of the amide group and coordinated water correspond to the band at  $3374,36 \text{ cm}^{-1}$ ; for the stretching vibrations of the CO group –  $1681,78 \text{ cm}^{-1}$  and for the bending vibrations of the  $\text{NH}_2$  group –  $1614,44 \text{ cm}^{-1}$ . As you can see, the vibrations of these groups under the coordination of nicotinamide almost do not change, but the vibrations of the pyridine ring noticeably decrease by about  $33\text{--}45 \text{ cm}^{-1}$ : in the complex, they correspond to the bands at  $1441,63$  and  $996,99 \text{ cm}^{-1}$ . This indicates the coordination of the nicotinamide molecule to the central atom through the nitrogen heteroatom. The band of weak intensity, which appears at  $429,97 \text{ cm}^{-1}$ , can be attributed to the bond Cu–N.

The absorption band of asymmetric stretching vibrations of the formate group  $\nu_{as}(\text{COO}^-)$  is overlapped by the absorption band of the amide group, but the shift of the  $\nu_s(\text{COO}^-)$  band to the low-frequency region up to  $1346,56 \text{ cm}^{-1}$  indicates the coordination of formate.

Thermal decomposition of the synthesized complex compounds proceeds stepwise in the temperature range  $95 - 900 \text{ }^\circ\text{C}$ . First, ligands are cleaved, then copper formate decomposes. These processes are accompanied by endothermic and exothermic effects and constant weight loss in the specified temperature range.

The derivatogram of the acetamide complex shows five endothermic effects at  $100, 165, 200, 385$ , and  $645 \text{ }^\circ\text{C}$ , indicating dehydration and subsequent decomposition of the anhydrous complex. The exothermic effect at  $760 \text{ }^\circ\text{C}$  indicates complete combustion of the organic part of the compound. The end product of decomposition is copper (II) oxide. The total weight loss in the temperature range  $100 - 900 \text{ }^\circ\text{C}$  is  $72,52\%$ .

The heating curve of the nicotinamide complex has minima at  $115, 165, 225, 260, 350$  and  $650 \text{ }^\circ\text{C}$  and a maximum at  $840 \text{ }^\circ\text{C}$ . The observed endothermic effects correspond to the elimination and decomposition of pyridine, elimination of coordinated water and formate. The exothermic effect at  $840 \text{ }^\circ\text{C}$  corresponds to the combustion of the organic part of the compound. The total weight loss is  $79,8\%$ .

**Conclusion.** Thus, for the first time, complex compounds of copper formate with acetamide and nicotinamide as ligands were isolated from an aqueous solution. Based on the data of IR spectroscopic and differential thermal analysis, the individuality of the obtained compounds was established. Acetamide is coordinated through the oxygen atom of the carbonyl group, and nicotinamide through a nitrogen heteroatom. It was established that the formate groups are also included in the inner sphere of the complex, i.e. are also ligands.

Based on the above, it can be assumed that the synthesized compounds have the structure of a distorted octahedron and the formulas of the obtained complex

compounds should be presented in the form of  $[\text{Cu}(\text{HCO}_2)_2 \cdot (\text{CH}_3\text{CONH}_2)_2] \cdot 2\text{H}_2\text{O}$  and  $[\text{Cu}(\text{HCO}_2)_2 \cdot (\text{C}_5\text{H}_4\text{NCONH}_2)_2] \cdot 2\text{H}_2\text{O}$ .

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**ACTUAL PROBLEMS OF GEOGRAPHY****UDK 528.854.2/ 911.52****IDENTIFICATION LAND COVER CLASSES OF KHOREZM OASIS FOR FURTHER IMAGE CLASSIFICATION**

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**Annotatsiya:** Bugunga qadar yer yuzasidagi jarayonlar dinamikasi va yer yuzasi qoplami/landshaftlarni kartalashtirish ishlari bir butun geotizim sifatida, Xorazm vohasi misolida o'rganilmagan. Voha landshaftlarining dinamik o'zgarishi, kelajakdagi ehtimoliy muammolarni yer yuzasidagi jarayonlarni sinflashtirish orqali monitoring qilish qishloq xo'jaligi bilan bog'liq va boshqa antropogen jarayonlar natijasida yuzaga keladigan xavf-xatarlarni yumshatish uchun juda muhimdir. Yer yuzasidagi jarayonlarni sinflashtirish "FAO", "Anderson" va "Corine" kabi xalqaro sinflashtirish tizimlari asosida aniqlangan. Sinf/landshaftlarni tanlashda adabiyotlar, topografik kartalar, "Google Earth" dasturi suratlari, daladagi kuzatish ishlaridan foydalanilgan. Qishloq xo'jaligi bilan bog'liq yerlar hududdagi asosiy yerdan foydalanish sinflari sifatida namoyon bo'lgan.

**Kalit so'zlar:** Yer yuzasi qoplami, sinflar/landshaft turlari, sinflashtirish, voha ekotizimi.

**Аннотация:** Динамика изменения земельного покрова (ЗП) и её картографирование, охватывающее весь Хорезмский оазис, до сих пор не учитывались. Мониторинг динамических изменений и прогноз возможных будущих изменений ландшафтов оазиса с помощью методов классификации ЗП имеет важное значение для смягчения потенциальных угроз, связанных с сельскохозяйственной и другой антропогенной деятельностью. Классы ЗП пытались идентифицировать, анализируя подходы к классификации земного покрова, разработанные "FAO", "Anderson" и "Corine". Выбор классов был основан на справочных данных, топографических картах, изображениях "Google Earth" и полевых наблюдениях. Основные представленные классы ЗП были подклассами сельскохозяйственных территорий.

**Ключевые слова:** растительный покров, классы, классификация, экосистема оазиса.

**Abstract:** Land Cover (LC) change dynamics and LC mapping covering the entire Khorezm Oasis were not taken into consideration until now. Monitoring dynamic change and prediction of possible future alterations within landscapes of the oasis through LC classification techniques is essential for the mitigation of potential threats related to agricultural and other anthropogenic activities. LC classes tried to identify



by analyzing the Food and Agriculture Organization, Anderson, and Corine land cover classification approaches. The selection of classes was based on reference data, topographic maps, Google Earth images, and field observations. The main LC classes presented were subclasses of agricultural areas.

**Key words:** Land cover, classes, classification, oasis ecosystem.

**Introduction:** Land Cover (LC) classification, its applications have been widely investigated in several geographical ecosystem scales, agricultural studies, and others, through Landsat, MODIS, and other satellite images [1, 2, 3, 4, 5, 6]. Nowadays different image classification techniques have been applied in order to extract the LC classes like Anderson, FAO, Corine [7, 8].

Recently, oases areas have been investigating widely in land cover/use and ecosystem points of view, especially by different Chinese scientists [9, 10, 11]. Khorezm oasis has not been investigated at an ecosystem level as a unique geographical region and there are not any new maps showing the dynamic change of land use and land cover within the oasis.

Some investigations were performed based on solutions for such problems and deteriorations within the local scale made solid conclusions [12]. However, before indicating the safety level of landscapes individually and studying positive and negative manners of anthropogenic pressure and changes, an estimation of the spatial and temporal changes of LC is required, at the regional level. Therefore, it is essential to delineate the LC classes for identifying the changes.

**Literature review:** The Khorezm oasis, which is located in the territory of three countries; Uzbekistan, Turkmenistan, and the Autonomous Republic of Karakalpakstan, extending within the latitudinal range 41009'-43015' north and longitudinal range 58014'-61030' range and its area covers 28967 km<sup>2</sup> in the year 2014 (figure-1) [13]. The oasis has a border with the shrunk parts of the Aral Sea in the north part, with the Qizilqum and Qoraqum deserts in the east part and the south part respectively, and with the Ustyurt plateau in the west part. Indeed, the geographical location of the oasis has a direct influence on LC condition and also land use activities of the population. For example, sandy landforms spread around and some conditions within the oasis while arid landscape formations such as (semi) natural shrub lands and



lakes need to be altered for supplying agricultural demands in dry expected years.

Fig.1. Location of study area.

The geomorphological and lithological condition of the study area is composed of alluvial plain sediments and can be divided into old and new delta regions. The surface of the old delta region, including the Khorezm district of Uzbekistan republic and Dashoguz district of Turkmenistan republic, has been used in agriculture activities and it decreases to the south and southwestern direction until Zaunguz Qoraqum where alluvial deposits are overlain with eolian sands and carbonate sandstones [14]. As a result, salt flats, takyrs, shrub lands mixed with sandy areas spread around southwestern parts of the Doshoguz district. The new delta region was mainly located in the Karakalpakstan part of the oasis, the surface decreases to the northern direction until the Aral Sea. This area also serves as the main agricultural land. Northern parts are dynamic changeable and include a variety of semi-natural LC classes such as bare area, vast sand sheets, dune fields, shrublands, reeds, and various kinds of salt-affected soils of the area [15]. The oasis falls within the category of a sharply continental climate, with low and irregular precipitation (figure-2).

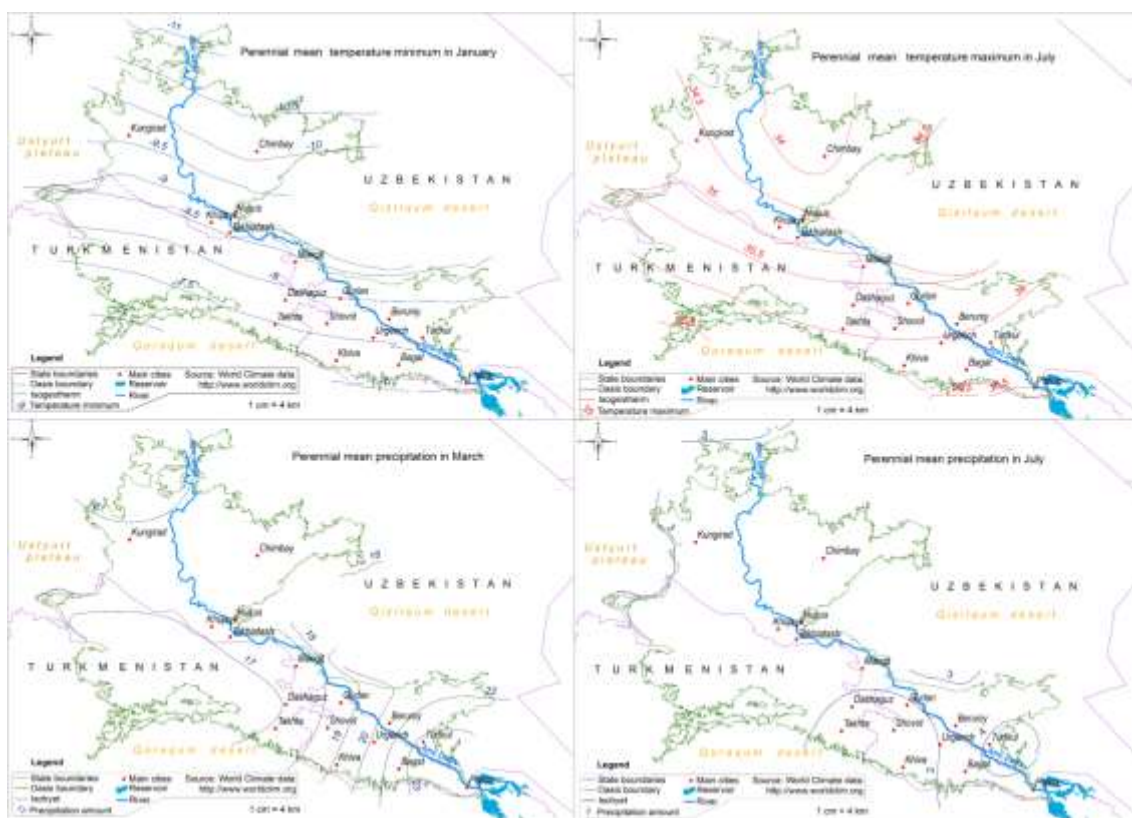


Fig.2. Temperature and precipitation condition in the oasis  
(Source: World Climate data).

Agro-meteorological conditions have a significant influence on crop production [12], as well as LC conditions and agricultural land use activities. One of the main reasons for LC change and land use is the Amudarya River and in the river alter its delta naturally when its surface changed by anthropogenic influences over time [16]. Even if the precipitation rate is higher at the beginning of spring and in the end of Autumn (figure-2) and has a positive influence for sub-desert vegetation cover and shrub lands, the mainland use activities, for example, crop production, require river

water [17] and drought seasons underground water in oasis arid climate [18]. The average level of the groundwater table is 1-3 meter and it changes within space and the time of the year. For example, it reaches maxima in July and August (1.2-1.15 m below surface) [17, 19] and near Amudarya River, the annual medium groundwater table is 1,5 m while it is 4-5 m in southern sandy areas in Khorezm district [20, 21]. As described, there are a lot of lakes and wetlands spread along with the lower parts of the oasis.

Weakening mutual relationship between LC/use and soil formations is a common situation due to anthropogenic pressure in oasis ecosystems. Human agricultural activities have changed the suitable natural cover for certain soil types, especially southern sandy and saline shrub lands on a local scale and as descending irrigational possibilities natural cover is restored. Major soil types are sandy, loamy, clayey and in certain conditions meadow, meadow-marshy, takyr, and solonchaks [22].

Two main vegetation cover which is, anthropogenic and natural, among oases are well known and the distribution of dominant plant species and characteristics of plant communities are related to various factors like groundwater depth [23], river water and its flood [24], population growth [11], and economic reforms [12]. According to Korovin [25], there are 3 species, 15 formations and 35 plant associations can be found. Later in 2002, Matvafaeva [26] indicated 79 families consisting of 554 types of plants spread within the oasis. By its life forms vegetation has following composition in percentage: perennial grasses 42.51%, annual grasses 22,15%, shrubs 14,97% and trees 8,38%. The spaces are in woody tugai forests mainly of Euphrates poplar (*Populus euphratica* Oliv.), turang'il (*P. pruinosa*), Russian olive (*Elaeagnus angustifolia* L.), *Salix* spp., in desert areas include saksovul or black saksovul (*Haloxylon ammodendron* Mey.) Bunge) and white saksovul (*H. persicum*), quyon suyak (*Ammodendron conollyi* Bunge), salt cedar (*Tamarix androssowii* Litv., Sched), red qandim (*Calligonum caput-medusae* Schrenk) and cherkez (*Salsola richteri* (Moq.) Karel. ex Litv.), herbs such as wormwood (*Artemisia* L.) and milkvetch (*Astragalus* L.), and others [27].

**Research methodology:** There some common classification schemes, such as Corine, Anderson, and FAO, and several classification schemes are being used according to the objectives of the investigation, the real conditions of study areas, and availabilities of related data and materials. However, the natural condition of each geographical area is different, and thus any scheme may not represent the situation as it is. So, field data was collected, and when the real situation does not fit the international classification scheme local subclasses were added.

**Analysis and results:** Identification land cover classes belong to many factors such as anthropogenic activities, climatic conditions, agricultural experiences, and political reforms. Thus, the following conditions need to be analyzed.

1. Land and water use conditions do not exist in a quick monitoring system based on space images. Therefore, and also undefined exploitations of the irrigation system [20], controlling below indicated situations almost impossible; - a limited amount of water planned to supply with agricultural products of local people does not reach the end parts of canals, especially in a drought year. Watering of gardens and tomarqas (small agricultural lands given to families by the government to cultivate) become



difficult so that conflicts appear. Due to a political decision [28] and an expanding over planned rice fields at top stream areas which may be the result of new and sometimes unregistered lands requiring remotely sensed investigation.

Underground water is the main source of drinking water in the oasis. There were drinking water-related problems occur such as increasing salt concentration and decreasing its level until 5 meters in southern down stream parts in a 2000 year drought, which affected 600,000 people and caused an economic loss of \$50 million [29]. However, farmers cultivated cash crops such as cotton and rice upstream parts of canals and at river coast areas the same year.

2. An environmental protection condition is not a required level and considered the last issue in the oasis area. For example, tugai (river coast forest including trees, shrubs, reeds, etc.) forest ecosystems were decreased from 89 000 sq.km (1959 year) to 3 000 sq.km. (2002 year). There is not any fresh data about a dynamic feature and a territorial change of the forests in the last years. Therefore, it is difficult to estimate an anthropogenic impact on the tugai flora and fauna species. The anthropogenic activities cause a dynamic change of the oasis area, an alteration, and the safety of inner landscapes too. However, a monitoring of presence, and shrinking lakes especially in drought years (2000, 2008, 2020), and identifying salt flats expanding, etc. are out of the consideration.

3. The local government protects the agricultural lands from constructions but as growing the population as illegal constructions. There is not any fresh data about the areas of an urban, a suburban, and a village.

The dynamic changes of land use and land cover within the oasis through the anthropogenic and natural factors causing the following difficulties in the life of society:

- Local people lose entire/or 50% harvest, improved health problems, and critical food supply issues, especially in the 2000 year drought [30] and some other years (2008, 2020) when there is a deficiency of irrigation water.

- Lifestyle of people living in the northern part of the oasis, which is mainly Karakalpaks (name of an ethnic group) getting worse with lacking of pure drinking water and irrigation water, improving health problems [30]. Agricultural activities require extra costs and become difficult. Our research [13] showed that the oasis decreased area was 3219 sq.km in 1998-2014 years in the Karakalpakstan Autonomic Republic. Same time, increased dust winds and decreased vegetation cover.

- People started moving from the north to the south where exists suitable agricultural lands/opportunities and main cities. It causes pseudo urbanization and unemployment [13].

- Natural ecosystems cannot be saved for a future generation.

- Agricultural land areas have been decreasing. Oasis has 3000-year irrigation history and as it was before, the oasis area has been used for supplying the food demands of more than 2.8 million inhabitants living in this territory at present. It is one of the main agricultural areas dedicated to cotton production and is famous for its rice quality within the country.

The result of the above situation and applied methodology following land cover classes can be offered for image classification (table-1).

Table-1

Oasis land cover classes in comparing with FAO classification

FAO land cover class (added some classes when it needed)		Land cover classes in Oasis, and explanation
<b><i>Natural and Semi-Natural Vegetation/Terrestrial</i></b>		
A12	1. Closed forest (Fragmented dense forest)	1. Composed of 2-7 meters dense trees and shrubs area and cover 60-70 percent of the surface. This forest results in twice flood its area in a year by Amudarya. It is seen as the old dense forest with less area.
	2. Open forest (Fragmented open forest with shrubs)	2. Percentage of 2-7 meters of trees and shrub lands are less than 60-70 and more than 10-20 %. This area is covered with shrubs with 2 meters height and flooded twice a year. It is seen as the old dense forest with less area.
	3. Open (Fragmented)	3. Shrubs less than 2 meters height and cover 10-20% to 60-70% of land surface with grasses.
	4. Open to absent (Fragmented)	4. Shrubs less than 2 meters in height and cover 10-20% to 60-70% of land surface without grasses.
	5. Open to absent (Continuous/fragmented)	5. Sparse grassland changes slowly to dry areas.
B16	6. Closed (Fragmented)	6. Shrubs less than 2 meters height and cover more than 60-70% of land surface in a desert an environment.
	7. Open (Continuous shrub/herbaceous)	7. Shrubs less than 2 meters height and cover 10-20% to 60-70% of land surface with grasses.
	8. Open to absent (Fragmented shrub/sand)	8. Shrubs less than 2 meters height and cover 10-20% to 60-70% land surface without grasses, dry lands come after it.
	9. Closed to open (Continuous)	9. Periodic vegetation covers around 60-70 % of the desert an environment.
	10. Open to absent (Fragmented herbaceous/sand)	10. Sparse grassland changes slowly to dry areas.
<b>Terrestrial Cultivated Areas and Managed Lands</b>		
A11	11. Permanent cultivation- Orchards	<i>Same</i>
	12. Agricultural lands not involved in certain period	<i>Same</i>



	13. Cotton plantation	<i>Same</i>
	14. Herbaceous/other plants	<i>Same</i>
<b>Aquatic or Regularly Flooded Cultivated Areas</b>		
A23	15. Rice	<i>Same</i>
<b>Artificial Surfaces and Associated Areas</b>		
B15	16. Cities	<i>Same</i>
	17. Roads	<i>Same</i>
	18. Villages	18.1 Dense villages 18.2 Scattered villages
	19. Airport	<i>Same</i>
<b>Bare Areas</b>		
B16	20. Sand dunes	<i>Same</i>
	21. Bare rocks	<i>Same</i> . Example is Sulton Uvays mountain
	22. Inner sandy areas	22. Sand areas inside the oasis
	23. Inner salty/dry areas	23. Desert region where combinations of salt flats, sandy areas, surface extraction, and transition activities may occur.
<b>Artificial Water bodies, Snow and Ice</b>		
B27	24. Dams	<i>Same</i> . Example is Tuyamuyin reservoir
	25. Lakes for fishing	<i>Same</i>
	26. Canals	<i>Same</i>
	27. Drainage and collectors	27. Streams have liner shape uses for decreasing the underground water table
<b>Natural Water bodies, Snow and Ice</b>		
B28	28. Lakes	28.1 Lakes with vegetation (reeds) 28.2 Lakes without vegetation (saline)
	29. River	<i>Same</i>
	30. River bottom	30. Area covered with sand and clay appeared during a low water table

As it is described in the methodology part some classes did not fit the international classification standards. For example, Tugai forests – formed along the Amu Darya river coast, can be defined as forested wetlands (6.1 in Anderson). However, some other tugai areas left from former creeks of the river cannot fit that class in the Anderson scheme. Class 30 in table-1 does not exist in the FAO classification scheme but when the algorithm runs it shows 0 values or will come, incorrect class. Amudarya may hide the river bottom in the summer when full water cycle. Thus, researchers also need to know which month remote sensing images are being tested.

**Conclusions:** Indicated land cover classes need to compare with the special accuracy of remote sensing images before applying any classification algorithms. FAO land cover classification schema was found as more applicable to the Khorezm oasis and all classes can cover the entire area. Natural and Semi-Natural Vegetation/Terrestrial class of FAO is more detailed. Therefore, high spectral and radiometric quality data such as Sentinel-2A images can offer for further classification activities. These land cover classes require testing and thus the research work was suggested to continue.

**Acknowledgment:** The author thanks for Erasmus Mundus action 2 TOSCA, gSMART, and EACEA projects, the University of Porto (UP), Lund University (LU), CEHI University of Malaga (UMA), ETC UMA for giving the chance of working with this research. Special thanks to Professor Ana Cláudia Moreira Teodoro (UP), Christoph Schröder (ETC-UMA), and Ali Mansourian (LU) for supervising this research work.

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**UDC: 528.831.1/551.438.5****COMPARISON ASTER, SRTM AND GOOGLE DEM WITH GROUND DATA IN A SMALL-SCALE AGRICULTURAL LAND**

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**Annotatsiya:** Ushbu tadqiqot ishining maqsadi bepul taqdim qilinayotgan rel'efning uch o'lchamli modellari ma'lumotlarining aniqligini tekshirish va ulardan dehqonchilikda foydalanish imkoniyatlarini aniqlashdan iborat. Bir yilida bug'doy va makkajoxori yetishtiriladigan 2100 metr kvadratdan iborat bo'lgan ekin dalasi yer yuzasining balandlik ma'lumotlari olindi. Deyarli tekis bo'lgan tajriba maydoni Xorazm viloyati Shovot tumanida joylashgan. Har bir rel'efning uch o'lchamli modellari ma'lumotlarining minimal, maksimal va o'rtacha xatolari va o'rtacha kvadrat xatosi qiymatlari hisoblab chiqildi va SRTM ma'lumotlari boshqalarga qaraganda ishonchliroq bo'ldi. U 0,37, -0,12 va 0,14 xatolarni va 0,13 metr RMSR qiymatini ko'rsatdi. Biroq, dalaning geomorfologik shakllari Google Earth ma'lumotlarida boshqa solishtirilgan ma'lumotlarga nisbatan yaxshiroq ekanligi aniqlandi.

**Kalit so'zlar:** ASTER, SRTM, Google DEM, dalada olingan ma'lumot, taqqoslash.

**Аннотация:** Целью этого исследования является сравнение данных DEM из открытых источников с наземными данными, чтобы оценить точность и определить возможность их использования в сельскохозяйственных целях. Оценка точности была проверена на наземных данных, взятых с сельскохозяйственного поля площадью 2100 м<sup>2</sup>, которое в течение года используется для выращивания пшеницы и кукурузы. Практически ровный экспериментальный участок расположен в Шовотском районе Хорезмской области Узбекистана. Были рассчитаны минимальная, максимальная и средняя ошибки, а также значения среднеквадратичной ошибки для каждой матрицы высот, и выяснилось, что данные SRTM более применимы, чем другие, и. Он показал погрешность 0,37, -0,12 и 0,14 соответственно и значение RMSR 0,13 метра. Однако полевую геоморфологию лучше описывать, среди прочего, данными Google Earth.

**Ключевые слова:** ASTER, SRTM, Google DEM, наземные данные, сравнение.

**Abstract:** The aim of this study is to compare open-source DEM data with ground data in order to assess the accuracy and identify their possibility of usage for agricultural activities. The accuracy assessment was checked through ground data taken from 2100 m sq. agricultural field that is being used for wheat and corn production within a year. An experimental area that is almost smooth, located in of Shovot district of Khorezm region, Uzbekistan. Minimum, maximum, and mean errors



and Root Mean Square Error values of each DEM data were calculated, and found out that SRTM data is more applicable than the others and. It showed 0.37, -0.12 and 0.14 errors respectively, and 0.13-meter RMSR value. However, field geomorphology better described with Google Earth data among the others.

**Key words:** ASTER, SRTM, Google DEM, ground data, comparison.

**Introduction:** Land surface elevation data is a key indicator of any geographical research works. Typically, we describe the geomorphological shape of the research area based on available geographic maps, literature. It gives a certain geographical imagination about the area. However, elevation based geomorphological measurements serve as the main indicator in soil erosion, landslide, and flood based risk management researches. Collecting high-quality regional elevation data also cost expensive. Today's innovative scientific technologies allow us to quickly determine the digital elevation information of the earth's surface. Free charged SRTM, ASTER, ALOS DSM, Google Earth DEM are one of the digital elevation sources that widely being used by researchers in different scientific directions. It is essential to know the error level of those sources before applying them in certain scientific works.

**Literature review:** Relief type, especially elevation plays the main role in prospective agricultural activities in arid regions where flood irrigation widely applied [1, 2]. People refer food irrigation before seeding for decreasing soil salinity by salt leaching, and this watering method apply after harvesting to cultivate the next crop on a local scale in the Khorezm region [3, 4]. Normally, an amount of water exceeds from 8000-18000 m<sup>3</sup>/ha [5, 6]. It causes time-consuming, water-wasting, and internal conflicts [7, 8].

There some detailed research works related to accuracy assessment of ASTER and SRTM data in large, medium, and local scale areas [9, 10, 11]. It is assumed that DEM can help to consider field surface and think about smoothing to decrease usage of irrigation water when it has proper accuracy, and is applicable in small-scaled fields too. Therefore, application ASTER, SRTM, and Google DEM require analyzing for agricultural purposes.

The aim of this work is to evaluate the accuracy of the DEM data and the suitability of open source DEM data for agricultural activities in small fields. The specific objectives are; get ground data, to compare with ASTER, SRTM, and Google Earth data, and to analyze accuracy.

**Study area.** The study area, with 2100-meter square, is located Gulistan farmers association in Shovot district, Khorezm region, Uzbekistan (Fig.-1). Geographical coordinates are 41° 41' 28.15" N and 60° 0' 12' 04.80". The field is used twice in a year for wheat and secondary production containing corn and others. The width is 35 meters and length is 60 meters of the field and surface decreases from the south-western to northeastern direction 90 to 89.45 meters. The area consisted of loam soil and the underground annual water table is 3-5 meters below. Although 0-30 centimeters parts

of soil are tillage layer and it till twice a year the field has not managed to smooth condition, sometimes with the reason of extra costs, sufficient irrigation water, and involving less paid-inexperienced tractor drivers.

*Figure-1. Study area-Gulistan farmers association, Shovot district, Khorezm, Uzbekistan (from Google Earth).*



**Research data and methodology:** The field lies on ASTGTM2\_N41E060, srtm\_49\_04 scenes, and Google Earth data was collected by adding the path option of the Google Earth program. Saved path elevation data assumed as taken through open-source TCX converter and total sampling points were 2691 in 2100-meter square. Using Google Earth data can give a detailed amount of sampling points to users. Ground data took from 37 points according to the geomorphological condition.

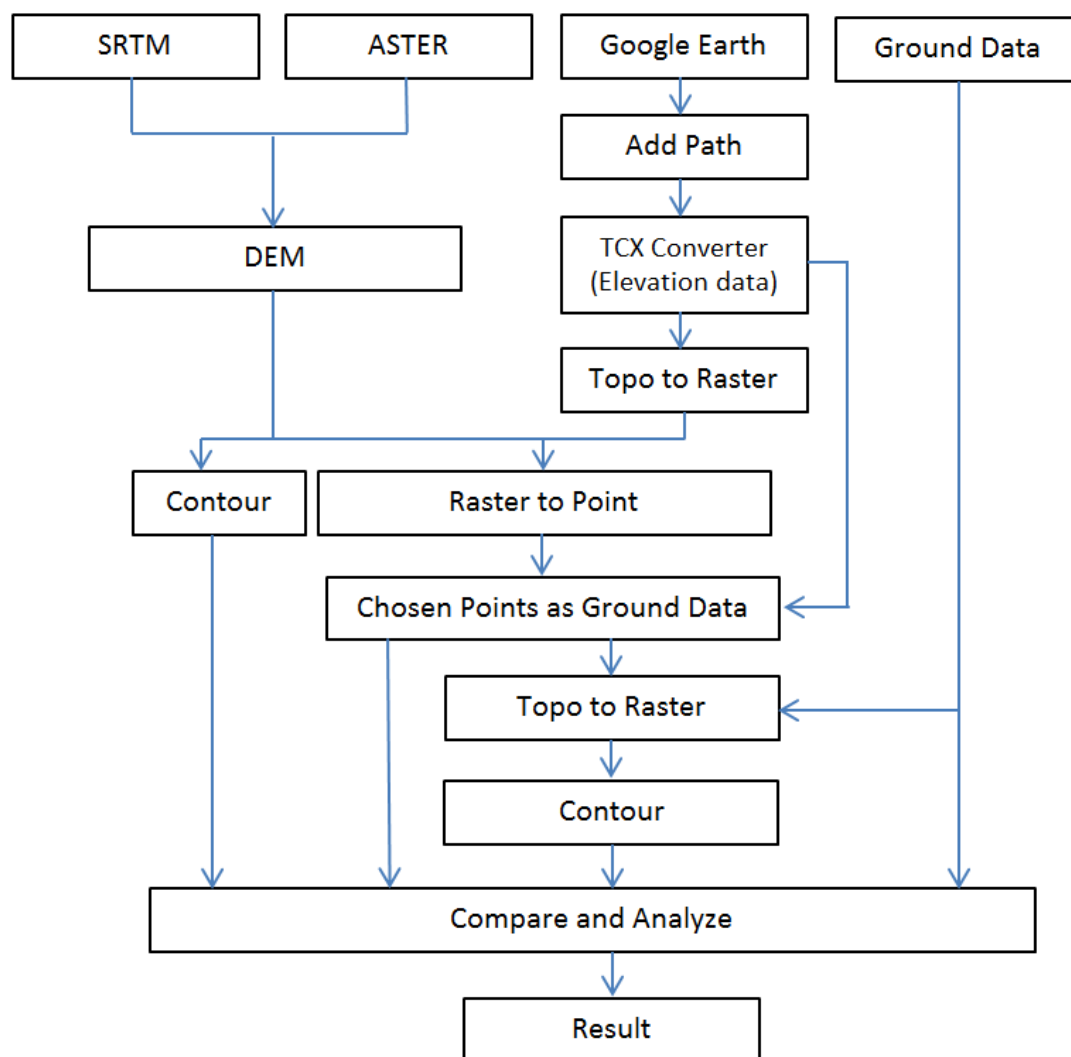


Figure-2. Flowchart of methodology.

The methodology applied in this work comprises simple steps as described in the following sections and represented in the flowchart presented in Fig. 2.

Collecting ground data by GPS is the best method for geomorphological analysis especially in small-scale areas. Field ground data compared and balanced with water surface after irrigating in this work. 37 points were the top and low parts that considered while water spreading along the surface. Firstly, SRTM and ASTER data converted to DEM, and then a counter map created with 10 centimeters. Google Earth and ground elevation points also converted raster with the same value. Next, SRTM and ASTER raster data required overlaying of two different topological objects and they converted to point. Because, SRTM points were around the field with an amount of 4, and 3 points from ASTER were inside and one point was outside while Google Earth 2687 and 37 ground points were in the area. Elevation data are taken from all raster-based on ground 37 points and compared with each other.

**Analysis and results:** SRTM based contour presented a 20 cm difference in comparison to a ground contour in the north part of the field and elevation decreased gradually to the northern direction. A contour map based on 37 SRTM points has a better surface structure than the first one (Fig.-3, a and b). The most contradictory

contour appeared in ASTER contour maps. The field surface decreases from south to north and in ASTER map showed a negative result.

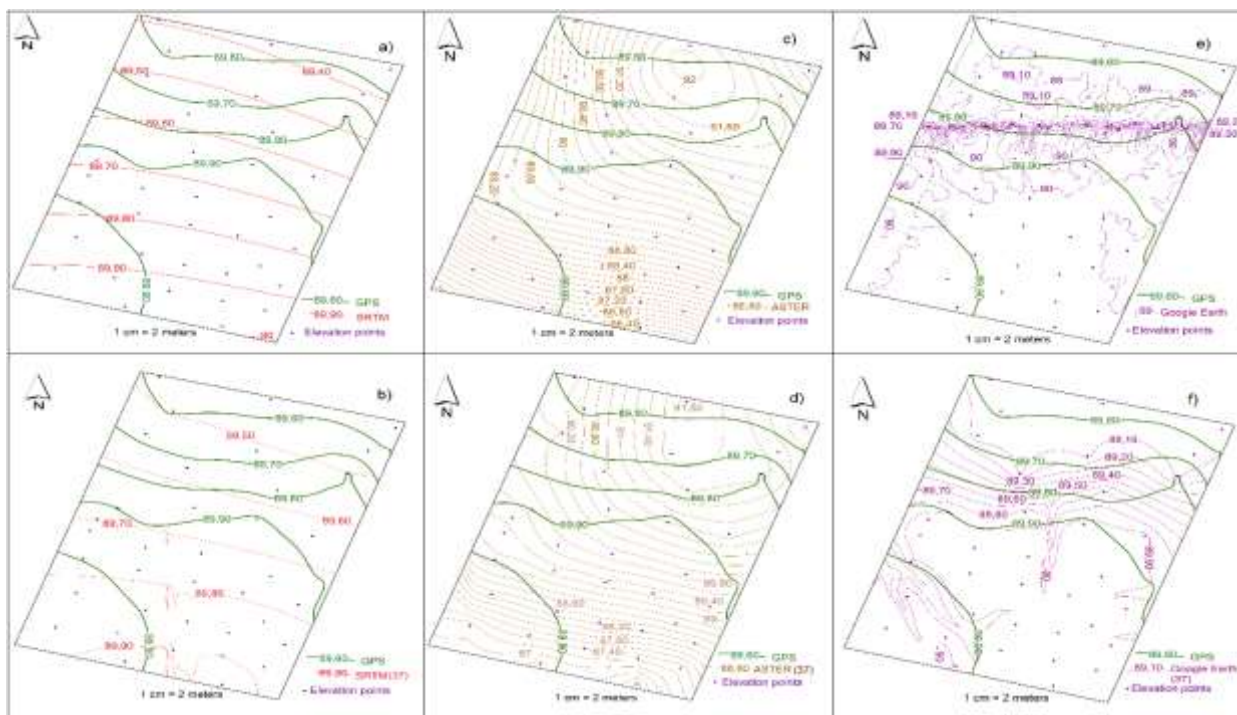


Figure-3. Contour maps of the study area. a, c, and e maps based on the original data, where b, d, and f created through 37 elevation points.

Elevation has also a 4 to 5 meters difference in the contour maps of ASTER which is not correct. The field surface with small changes described better in both Google Earth contour maps than the others. But elevation sharply decreased northern parts with 80 sm value and it is not correct in the ground. SRTM, ASTER, and Google Earth height compared with GPS height with the same 37-point locations mentioned above. The maximum, minimum and mean errors were less in SRTM data when 37 point raster was considered and they were respectively 0.37, -0.12, and 0.14 meters (Table-1).

Table-1.

DEM data	RMSE (m)	Elevation errors (m)		
		Maximum	Minimum	Mean
<b>SRTM</b>	0.13	0.37	-0.12	0.14
<b>ASTER</b>	1.31	3.67	-2.39	0.5
<b>Google Earth</b>	0.23	0.9	-0.2	0.11

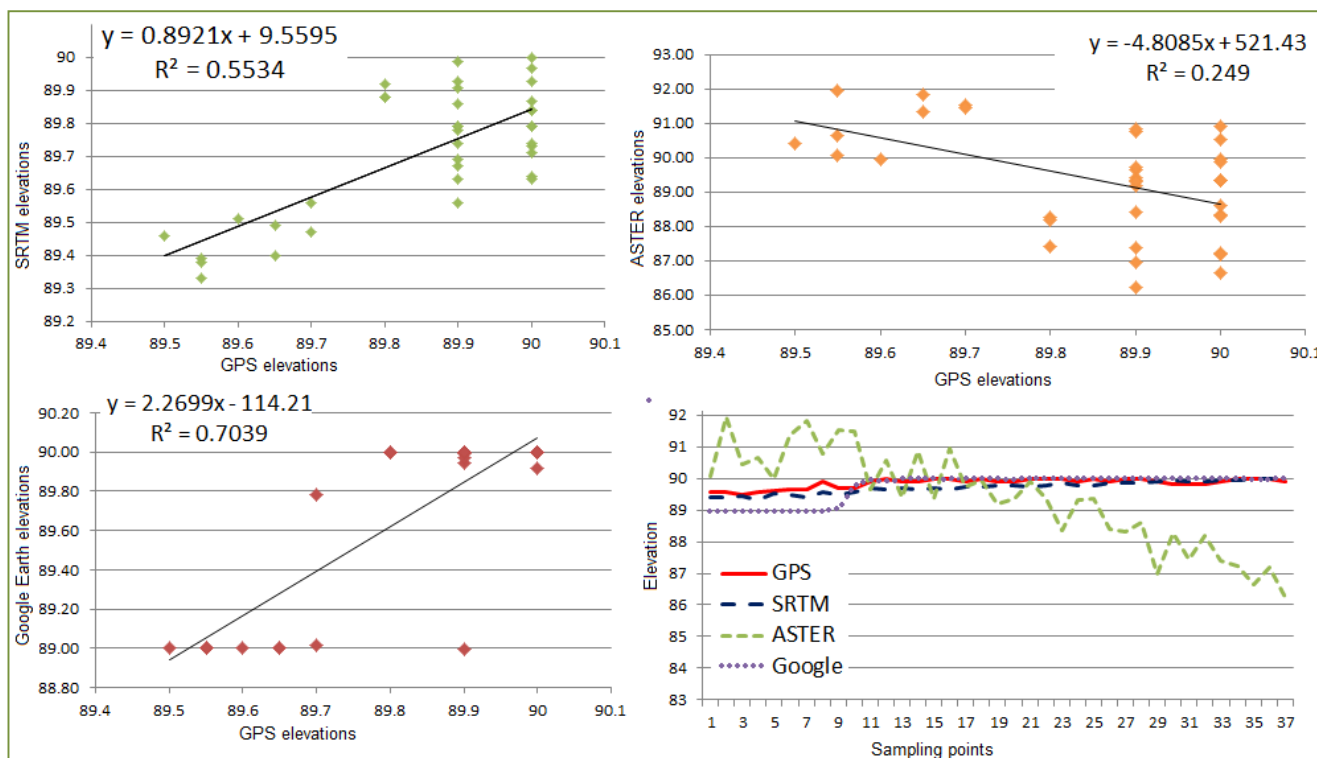
Elevation point errors less than they were in contour maps and it can be a result of interpolation while points converted to raster. For example, maximum, minimum, and mean errors in ASTER points were 1.31, 0.9, and -0.2 respectively. Assessment of DEM surface with 37 points in agricultural purpose may not be enough even in small scale area. In this case, Google Earth points can be useful and its RMS error was 0.23 meters.



The absolute differences were in height shown in Fig.4. The RMS error calculated for all three-elevation data and the lowest error presented in SRTM data with 0.13 meters value (Table-1). The levels of agreements ( $R^2$ ) with ground data were too low in SRTM (0.5534), ASTER (0.249), and Google Earth (0.7039) data (Fig.-4).

*Figure-4. Level of agreement among ground height with SRTM, ASTER, and Google Earth, absolute differences chart.*

Lower elevation points have a better correlation than the higher ones in SRTM. This result represented the opposite in Google Earth points, so upper elevation points have slightly more correlation than the lower ones. However, the absolute difference chart (Fig.-4, down in right) shows almost the same height in SRTM, Google Earth,



and ground data after the ninth sampling point. It may be the result of interpolation. But, when we overlook the field with eyes we can see the both Google Earth elevation contour represented surface morphology almost as same as it is on the ground, even they are better than GPS counter maps. But a sharp lowering in northern parts is negative and the difference in height has less accuracy than the GPS data. ASTER data showed a strong negative correlation with GPS points. ANOVA tests, performed on the linear regression data, showed this correlation has significant differences exist with GPS and ASTER data ( $p < 0.002$ ), and there do not exist statistically significant difference among SRTM and Google Earth data (respectively  $p = 1.32$  and  $p = 8.88E-11$ ). The field surface can change according to land tilling and agricultural purposes. Therefore, a 10-30 cm height difference can be ignored in our case.

**Conclusion:** The vertical accuracy of SRTM, ASTER, and Google Earth data was tested in this study for an example of the 2100-meter square agricultural field. As the field has less vertical variability the vertical accuracy of SRTM and ASTER data is less than the original requirements. Although the top 0-30-centimeter soil layer is changed twice there is still a vertical difference between the southern parts to northern



with 50-55 cm. Interestingly, SRTM data have only 4 elevation points outside from the field and the accuracy computed as significantly, where an average RMSE was 0.13 meters. Comparing to the other minimum and maximum errors were less and respectively -0.12 and 0.36 meters.

Google Earth data showed a better correlation coefficient (0.7039) than the others and well-described field surface morphology. Therefore, those two data can be used for field smoothing activities and to evaluate the safety of agricultural fields in erosion and water use points of view.

#### **Acknowledgement:**

The authors thank NASA for user data and on-line specialists of GIS & Remote sensing for a methodology creating Google DEM.

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UDK: 911.2

## ASSESSMENT NATURAL-RECLAMATION CONDITIONS OF THE CURRENT DELTA OF AMUDARYA FOR IRRIGATED AGRICULTURE

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**Аннотация:** Ушбу мақолада Амударё ҳозирги дельтаси чап қирғоғи суғориладиган ҳудудларнинг мелиоратив ҳолати таҳлил қилинган. Ишдаги асосий натижалар рельеф пластикаси усулида тузилган 1:100 000 масштаби табиий мелиоратив шароитни баҳолаш картаси асосида олиб борилган. Алоҳида кичик дельталарнинг ички тузилиши деҳқончилик учун баҳоланган.

**Калит сўзлар:** табиий-мелиоратив шароит, рельеф структураси, тупроқ қопламнинг структураси, кичик дельта, грунт сувларининг минераллашув даражаси, тупроқларнинг шўрланиш даражаси.

**Аннотация:** В данной статье оценено мелиоративное состояние левого берега современного дельтового района Амударьи для целей орошаемого земледелия. Основные результаты были получены при составлении физико-мелиоративно-рельефной карты масштаба 1: 100 000. Внутренний состав малых дельт рассматривался для нужд сельского хозяйства.

**Ключевые слова:** природно-мелиоративные условия, рельефная структура, структура почвенного покрова, малая дельта, уровень засоленности подземных вод, уровень засоленности почвы.

**Abstract:** The reclamation condition of the left bank of the recent delta region of the Amudarya was evaluated for irrigated agricultural purposes in this article. The main results were taken by the physical-reclamation-relief map with a scale of 1:100 000. The inner composition of the small deltas was viewed for agriculture.

**Key words:** natural reclamation conditions, relief structure, soil surface structure, small delta, groundwater salinity level, soil salinity level.

**Introduction:** In order to improve the reclamation of lands on the left bank of the current Amudarya delta, it is necessary, first of all, to scientifically substantiate the

reasons for the deterioration of existing natural reclamation conditions. To answer these questions, it is necessary to first study the relationship between reclamation measures and the relief structure, the structure of the soil cover, and groundwater.

The structural integrity of small deltas should be taken into account when assessing the natural reclamation conditions of lands for irrigated agriculture. The reason is that the natural-ameliorative conditions of the landscapes change in an orderly fashion from the upper part of the small deltas to the lower part. In other words, the structural integrity of small deltas requires consideration of changes in landscape natural reclamation conditions not only in space but also in time, i.e. if the geological age of the left bank of the current Amudarya delta, small deltas, and individual elements is clearly indicated.

**Literature review:** In the study and assessment of the natural-reclamation conditions of the present-day Amudarya delta A.M.Shulgin [12], A.A.Rafikov [4], A.K. Urazbaev [6], F.I. Xakimov [7], B. Jolibekov [2], K.J. Allanazarov [1], I.R.Turdimambetov [5], V.A. Rafikov [4] and others.

However, these studies do not specifically analyze the assessment of the natural-reclamation conditions of the left bank of the present-day delta of the Amudarya. At the same time, the natural reclamation conditions of the area caused by surface water flow, relief structure, and their interaction affecting the natural reclamation conditions of collector basins and small deltas have not been assessed on the basis of the relief plasticity method.

We know that the level of mineralization of river water also has a significant impact on the reclamation of lands. It should be noted that according to some experts (Chembarisov, Bakhritdinov, [9]; Chembarisov et al., [10]; Khojamuratova, [8]; Chembarisov, Khojamuratova, [11]), the level of mineralization of the Amudarya water is increasing from year to year due to irrigation works. For example, the current level of mineralization of the Amudarya water is 1.5-20 g/l. That is why the length of collector drainage systems and the amount of irrigated water should increase taking into account the increasing level of mineralization of river water.

**Research methodology:** In assessing the natural and reclamation conditions of the present-day Amudarya delta, regional analysis, cartographic, geographical comparison, field research, expeditionary, statistical, and typological methods were used to assess the agrotourism of natural complexes.

**Results and discussion:** A.M. Shulgin [8], A.A. Rafikov [3] divided the lands into the following groups of natural reclamation in the natural reclamation assessment: a) does not need irrigation; b) unsuitable for regular irrigation; c) in need and suitable for irrigation. On the left bank of the present-day delta of the Amudarya, lands that do not need irrigation to include swampy soils and swampy salt marshes around changing lakes. Such lands are mainly found in the vicinity of Lake Sudoche, in the lower reaches of ditches leading out of rice fields.

The following areas are not suitable for regular irrigation: sandy massifs (Saksaulsoy sands in the lower part of the Kungirov collector, sands around the town of Moynak); residual edges (Kizildjar, formerly part of Muynak peninsula); Karaumbet salt mass, and others. The lack of soil crust in these areas and the high salt content in the salt mass make the land unsuitable for regular irrigation.

Irrigated lands are ideal for planting different types of crops. Their degree of complexity depends on their location in small deltas and intermittent lowlands. Depending on these, they are divided into 4 groups. 1. Complicated; 2. Medium complex. 3. Strongly complex. 4. Ultra-complex.

Complicated areas are located in the following massifs along the Amudarya delta, ie the Amudarya delta (land on the left bank), the Kipchakdarya, Akbashli, and Raushan sub-deltas, the upper part of the Uldarya small delta. In these areas, grassland-tugai, meadow steppe, meadow-meadow, irrigated meadow, and irrigated marsh soils are common, with deep mineralization with weak mineralization (except for irrigated areas).

At the height of the Amudarya, mainly meadow- barren -tugai soils are prevalent, and the desertification process is intensified in these areas. In other words, the Amudarya is not used for irrigated agriculture.

The natural relief forms in the upper part of the Uldarya small delta have been almost altered due to the highly developed irrigated agriculture. In other words, the upper part of the Uldarya small delta is used for irrigated agriculture. In these areas, soil salinization occurs as a result of the rise of groundwater.

The upper structure of the upper delta of the Kipchakdarya and Akbarli is rather complex (non-irrigated). The presence of dry rivers and ravines in these areas is evidence of this. Dry rivers and ravines have been preserved for underdeveloped farming and their occurrence is linked to the history of the small deltas of the Kipchakdarya and Akbarli.

The depth of groundwater is 7-10 m, sometimes even deeper in the Amudarya delta, in the irrigated areas of the Uldarya small delta. In irrigated areas of the Uldarya small delta, the depth of groundwater is mainly 3-4 m. The depth of groundwater in the rice masses is 0.2-0.5 m in summer and 1-2 m deep in winter. In the small delta of Raushan, Akbashli, and Kipchakdarya the depth of groundwater is 7-10 m; rarely 5-7 m.

The level of mineralization of groundwater varies at the elevations of the Kipchakdarya, Akbashli, Raushan, and delta rivers, the upper Uldarya small delta 1–10 g/l (non-irrigated mass), 0–10 g/l in irrigated areas, in rice massifs 5-3 g/l. The chemical composition of groundwater is mainly hydro carbonate-sulfate.

The soils of the upper Amudarya delta and the upper part of the Uldarya small delta are mostly saline and rarely saline and moderately saline. The irrigated wetlands are washed away. The chemical composition of salts in the soil is hydro carbonate-chloride-sulfate.

The small deltas of Akboshli, Raushan, Kipchokdarya have mostly meadow-barren-tugai, meadow-desert soils, and rarely meadow barren soils. They are characterized by varying salinity, which is generally saline and weakly saline, but rarely moderately saline.

The soils of the Raushan small delta and the upper parts of the Uldarya small delta are widely used for cotton, rice, fodder, and melons. The reclamation state of these soils is practically satisfactory and is favorable for the development of irrigated agriculture. However, in some cases, there are also arrivals that have been abandoned by non-irrigated agriculture. That is why increasing productivity and improving the



reclamation of soils belonging to the more complex group requires the launch of auxiliary drainage systems.

The river bed of alluvial deposits dominates at the height of the Amudarya and the upper Uldarya small delta. That is why the mechanical composition of soils in these areas is high, and so the yield of agricultural crops is satisfactory.

The areas of medium complexity include the following massifs: the highlands of the middle part of the Uldarya delta, the lowlands of the lower part of the Kiyatjargan delta, the lowlands of the upper and middle parts of the Raushan subtropical delta, the highlands of the middle part of the Akboshli and Kipchakdarya small deltas.

In the middle part of the Uldarya small delta, the relief of river height has been changed as a result of the irrigation. However, in some parts of the delta, the original natural bigger relief forms are well preserved, meaning they include large river heights of the Uldarya small delta. The depth of groundwater in these areas of the Uldarya small delta is mainly 2-3m, rarely 1-2 meters. The depth of groundwater in rice fields is 0.3-0.5 m. The level of mineralization of groundwater is mainly 1-3 g/l and has a chemical composition of hydro carbonate-sulfate. The level of mineralization of groundwater in the marginal gray areas of rice massifs is mainly 5-10 g/l, rarely 10-20 g/l, the chemical composition is sulfate-chloride, and in some cases chloride-sulfate.

As we know, groups of alluvial deposits (river, layered-complex, lake) directly affect the mechanical composition of soils. That is why the mechanical composition of soils in this part of the Uldarya small delta is dominated mainly by sands. The reason for this is that these areas have more layers in the strata than in the river bed. The area is mainly occupied by irrigated-meadow soils with moderate salinity. In rare cases, it is strongly saline. The uncultivated sandy soils and abandoned soils are strong and highly saline. The chemical composition of salts in irrigated grassland soils is mainly chloride-sulphate, and rarely hydro carbonate-chloride sulphate. The soils in the rice fields are mostly washed, which is weak saline. The chemical composition of salts is mainly hydro carbonate-chloride-sulfate.

Irrigated parts and the parts where rice are cultivated are not provided with sufficient collector-drainage systems. At the same time, the amount of salts in irrigated soils is much higher due to the lack of quality washing. Therefore, in order to improve the reclamation of soils in the middle part of the Uldarya small delta, it is necessary to improve the quality of canals on the one hand and to launch additional collector-drainage systems on the other. Also, the area of abandoned lands in this array should be reduced as much as possible. At the heights of the Kiyatjargan small delta, it is necessary to apply the reclamation measures carried out in this part of the Uldarya small delta.

In the middle masses of the Akmolym and Kipchakdarya small deltas with moderate complexity, the grassland-prone, partially meadow-steppe soils are distributed with moderate to high salinity. The chemical composition of salts in the soil is sulfate-sodium chloride. The depth of the groundwater is mainly 4-5m, rarely 5-7m.

Land in these parts of the upper delta is not used for agriculture. However, their reclamation conditions are satisfactory and are suitable for irrigated agriculture. Due to the fact that these arrays do not have collector-drainage systems, it is necessary to pay special attention to the structural integrity of the Akbarli and Kipchakdarya small



deltas. In the use of desert lands located in these areas, first of all, it is necessary to make a qualitative leveling of the lands and launch the first collector-drainage systems. At the same time, it is necessary to constantly study water regimes and resources of artificial lakes in recent years and to study their impact on the environment. In other words, the emerging artificial lakes directly affect the reclamation of lands.

Areas with a high level of complexity include the following massifs: intermountain lowlands in the middle part of the Uldarya small delta and highlands in the lower part. The inter-river lowlands of the lower part of the Akbashli, Raushan and Kipchaktsarya small deltas.

The salinization process is intense in these areas due to the wide use of lowland and low elevations in the middle part of the Uldarya small delta. The level of soil salinization is also influenced by the mechanical composition of the soils, which is the mechanical distribution of irrigated-meadow soils in the soil. The mechanical composition of soils as affected by the stratigraphic and alluvial deposits of the alluvial deposits and partly by the lake groups.

In addition, the natural slope has a sufficient effect on soil salinity. The reason is that the groundwater is close to the surface, as in these massifs of the Uldarya small delta mainly predominates intermountain depressions. The depth of groundwater is mainly 1-2 m, partially 2-3 m. The sedimentary composition of groundwater is chloride sulphate. In non-irrigated areas, as well as in the lower part of the Uldarya delta, the level of mineralization of groundwater is 20-30 g / l, in some cases even higher, and the chemical composition is sulfate-chloride.

The salinity of irrigated meadow soils is associated with intermountain depressions in the lower part of the Uldarya sub-delta, which are mainly moderate to strongly saline. The chemical composition of salts is mainly chloride-sulfate-sodium and in some cases sulfate-chloride-sodium.

In the structure of the soil cover of the interstate lowlands of the lower part of the Akbashli, Raushan and Kipchakdarya small deltas, various types of meadow and typical saline soils, meadow-grass remnants-swamps and partially meadow-grass soils are distributed. The salinity of the soils is mainly moderate to strong and in some cases very strong salinity. In other words, the soils in the lower part of the Raushan sub-delta are weakly poorer than the soils in the lower part of the Akboshli and Kipchakdarya sub-deltas. The reason is that while the lower part of the Raushan sub-delta has partially irrigated meadow soils, the lower parts of the Akboshli and Kipchakdarya sub-deltas have almost no irrigated meadow soils. The chemical composition of the salts in the soil in this massif of the Raushan sub-delta is chloride-sulphate-sodium, while the chemical composition of the salts in the soil in the lower part of the Akboshli and Kipchakdarya sub-deltas is sulfate-sodium.

In the lower reaches of the Uldarya, Kiyatdjargan, Raushan, Akboshli and Kipchakdarya sub-deltas, in some cases, there are adjacent areas of sub-delta outlets, ie groundwater is very close to the ground at the junctions of such deltas. The depth of groundwater in these massifs is mainly 2-3 m, in some cases 3-4 m. The salinity of groundwater in the confluence of the Raushan, Kiyatdjargan and Uldarya small deltas is mainly 10-15 g / l, in the confluence of the Akboshli and Kipchakdarya small deltas the groundwater level is mainly 20-30 g / l and in some cases up to 50 g / l. The

chemical composition of groundwater in this part of the Raushan, Kiyatdjargan, Uldarya sub-deltas is mainly chloride-sulphate-sodium, while in the Akboshli and Kipchakdarya sub-deltas the chemical composition of groundwater is sodium-chloride.

It is expedient to reconsider irrigation and reclamation systems in order to radically improve the reclamation of the lower parts of the upper deltas, which have a strong level of complexity. If it is necessary to reconsider the engineering aspects of irrigation systems passing through the heights of the river, it is necessary to take into account the inter-river depressions in the design of land reclamation systems. If the reclamation systems have crossed the heights of the river, it is necessary to try to pass them through the inter-river lowlands. In other words, the engineering maps of the reclamation systems that have been carried out will need to be radically reconsidered, i.e. the reclamation systems will have to be strictly traversed from the inter-river depressions. Alternatively, it is advisable to use the lower part of the upper deltas after the upper and middle parts of these deltas for use in irrigated agriculture. The reason is that the reclamation condition of the lower parts of the upper small deltas is unsatisfactory in comparison with the upper and middle parts in any conditions. That is why it is advisable to use the relief plastic card and the soil maps based on this card for the use of the lower parts of the above small deltas in irrigated agriculture.

Areas of extremely strong complexity include the following massifs: Kiyatdjargan, Uldarya, Raushan, Akboshli, and Kipchakdarya, the central parts of the intertrianial lowlands of the lower deltas, the lower reaches of these small deltas, the adjoining areas of small deltas, the plains around Lake Sudoche, and the East Chink frontal plains. In almost all of these areas, the lake group of alluvial deposits predominates.

As the natural slope in these areas is almost non-existent and extremely flat, groundwater is extremely close to the surface as a result of the development of irrigated agriculture. Their depth is mostly 1-2 m, rarely 2-3 m. The level of mineralization of groundwater in cotton fields is mainly 5-10 g /l. Its chemical composition is mainly chloride-sulfate, in some cases sulfate-chloride. In gray soils, the level of mineralization of groundwater is very strong, they exceed 30-50 g/l, in some cases even 50 g/l. Its chemical composition is sodium chloride. In other words, the main reason for the high salinity of groundwater is that the relief is extremely flat, the natural flow of groundwater moves from the upper, middle and lower parts of the small deltas to these planes, the natural flow of groundwater is almost non-existent and the soil cover is very saline.

The structure of the soil cover is mainly dominated by strong and very strong, and in some cases moderately saline soils. The chemical composition of salts in the soil is mainly sulfate-chloride-sodium, and rarely chloride-sulfate-sodium.

In the irrigated soils on the left bank of the current delta of the Amudarya, their reclamation condition is currently deteriorating year by year, which in turn requires the reclamation workers to radically improve their reclamation condition. Much has been done to improve the reclamation of lands. Currently, the average length of collector ditches in the irrigated areas of the Republic of Karakalpakstan is 30 m / ha, while in areas with a very complex structure it is 37.4 m / ha. However, not all irrigated areas are adequately supplied with collectors. Currently, 194037 ha of irrigated land are

provided with collector ditches, while 123636 ha of irrigated land are not provided with collector ditches at all. In other words, there is a lack of collector-drainage systems in the irrigated areas of the Republic of Karakalpakstan. This, in turn, has a negative impact on the reclamation of lands.

**Conclusions:** Thus, in assessing the lands on the left bank of the current delta of the Amudarya for irrigated agriculture, the structural integrity of the small deltas must be taken into account first of all. The reason is that the degree of complexity of the soils (complex, medium complex, strong complex, super-strong complex) is related to the structure and shape of the small deltas, i.e. they vary in order from the top to the bottom of the small deltas.

1. The method of relief plastics was first used to assess the natural reclamation conditions of the left bank of the present-day delta of the Amudarya. The theoretical foundations of the method are geosystem teaching and methodology that surface water flow is a geographical factor. The method allowed to analyze the relationship of natural-geographical processes with the integrity and structure of the object.

2. Since the internal structure of irrigated and non-irrigated arrays is radically different from each other, taking into account the relationship of heights and lows in the optimization of these areas in the first place leads only to positive results.

3. In other words, the number of small deltas that make up the functional integrity of the reservoir-drainage basin, their structure, and their size play a special role. Therefore, in assessing the reclamation status of irrigated areas on the left bank of the present-day Amudarya delta, we paid special attention to the Kungrad collector-ditch system and studied the reclamation status of irrigated areas on the example of this collector-ditch basin.

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