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## ОСНОВНОЙ РАЗДЕЛ

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### ASSESSMENT OF YOUNG ENGLISH LANGUAGE LEARNERS

*Abstract: This article deals with some ways to assess young language learners' second language acquisition and academic progress. It opens with a discussion of procedures that are used in order to place young children in ESL programs; then deals with assessment instruments that are used with young English language learners; considers ways to decide whether or not a given assessment instrument is effective; and also discusses some new trends in the assessment of the language and academic attainment of young English language learners.*

*Keywords: Standardized tests, survey or questionnaire, split half test, open-ended task, assessment tool, test–retest procedure*

Standardized Tests used with Young English Language Learners. When students are newly admitted into schools, their parents or caregivers fill out a home language survey or a home language questionnaire. These evaluative instruments, used for preliminary screening, contain questions about a language or languages that children and their caregivers speak at home. Overall, this type of preliminary screening works fairly reliably for the identification of English language learners. However, there is evidence that due to immigrant parents' lack of English language proficiency, or concerns about their legal status in the United States, or reluctance to have their children identified as limited English proficient, language surveys and questionnaires are not always filled out correctly. [1]

If the survey or questionnaire does reveal that a child speaks a second language at home, the school must administer a federally mandated standardized language test to determine whether or not a child is proficient in English and whether or not she would benefit from placement in a second language program. Usually, the test is administered again at the end of the school year to measure the child's second language attainment and academic language development. Once standardized test demonstrates that a child has achieved a level of proficiency that enables him or her to function in the mainstream classroom, the student exits a second language program.

The question considered in this article is as follows: What features does the language test need to possess in order to be useful?

To answer the question above, let us compare a language test to another measurement device such as a thermometer, a scale, or a speedometer. While the thermometer measures temperature, the scale measures weight, and the speedometer measures speed, the language test is meant to measure a child's command of

language or demonstrate to the public the rate of academic progress of English language learners.

In order to be reliable, a measuring device needs to be well made, that is, it needs to be well calibrated and well constructed. The same holds true of a language test. What kind of a language test can be described as well made? Some of the criteria that determine reliability of assessment instruments meant for young second language learners are as follows:

- ❖ The language test has clear directions. It tells language learners what exactly they need to do in simple, clear, and unambiguous language.

- ❖ If the test has an open-ended task, it explicitly tells test takers the extent of the desired response.

- ❖ The test is made of tasks that are free of ambiguity and easy to interpret.

- ❖ The print and graphic materials are user-friendly; its pages do not look overcrowded; its graphics are clear, simple, and attractive.

- ❖ The language test is neither too short nor too long.

- ❖ The well-made assessment tool also has provisions for reliable scoring. By providing scoring rubrics and unambiguous scoring guidelines, it enables the test reader to interpret test results accurately and to assign correct scores to test takers.

- ❖ The test site staff and physical environment provide a supportive atmosphere. Learners' state of mind at the time they take a language test and the physical environment at the test site are all part of test reliability. If the learner is overly nervous or distracted at the time of testing, the test will fail to provide accurate results. [2]

We can find out whether a language test is reliable or not by performing some relatively simple procedures. One of the reliability evaluation procedures is known as a split half test. When this procedure is implemented, a group of students complete all even numbered tasks contained in a test and then do all odd numbered tasks. If both times students get the same (or almost the same) score, the test is reliable. Another method used to evaluate reliability of a language test is the so-called test–retest procedure. When this method is used, two different versions of the same test are taken by the same group of individuals within a short time period. If subjects of the test–retest procedure get a low score one time and a high score a second time, the test is clearly unreliable. Conversely, when each individual who participates in a test–retest experiment earns the scores that fall within the close range of each other, the test is pretty reliable.

Reliability is not all there is to a good language test. A good test is also valid. To understand the concept of validity, let us again consider a scale analogy. There are all kinds of scales out there. Some scales are used for weighing human bodies, others are for weighing huge containers, and still others are for weighing miniscule amounts of chemicals. It is not enough that these measuring tools should be well made and reliable. It is also important that they be able to provide the kind of information that one needs to collect. You would not get very far if you tried to weigh electronic particles with a bathroom scale no matter how well that bathroom

scale is designed. It is not enough that a measuring instrument be well made or reliable. For any measuring procedure, you need to be assured that the device you are using can provide the kind of data that you seek to obtain. Language tests used in schools are no exception. These assessment tools should also be appropriate for educators' intentions and have the capacity to provide the type of data which educators are interested in gathering. [3]

Unlike test reliability, test validity is not quantifiable. There is no simple number that can express the test's capability to provide users with the kind of information that they are seeking to obtain. The job of assessing test validity is performed by teams of capable experts. Qualified, experienced language educators alone can say whether tasks contained in a test can really measure language proficiency or language attainment of language learners.

One of the most commonly made recommendations is taking classroom teachers' appraisal into account when evaluating language development and academic attainment of language learners. "Whose judgment counts?" ask second language educators dismayed by the fact that their perspective is not taken into consideration in the evaluation of language learners. [4]

Creating a Comprehensive Assessment System for Young Children While it sometimes feels like we have made little progress, it is important to look at where we are today. There is far more integrity in our approach to assessment and how what we learn can be best used to support families and children whose home language is not English. Perhaps one of the most important realizations is that in order for children to make progress in educational settings, we must approach assessment from the position of strengths and that the students must be valued, which includes embracing their language and culture in our classrooms. [5] The National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS / SDE) have written a powerful position statement that addresses the need for appropriate and responsive assessment of children, curricula, and programs to assure that the needs of all young children are met. As the professional organization for early childhood, NAEYC has published several statements that guide the assessment practices for diverse groups of young children [6]. Whereas in the past there were relatively few screening tools, there are now choices, and many of them address needs of English learners (ELs).

Perhaps the greatest gain is the understanding of the importance of using a comprehensive assessment system that includes various tools and strategies to gain a holistic picture of a child. We understand the importance of observation as a primary tool for data collection, whether using standardized assessments or authentic assessments within an environment that includes play and learning centers; however, we also embrace the fact that we need to use research-based tools, goals, and benchmarks to assess progress and appropriate support for development and learning across domains. We collect work samples, use screeners and checklists, have conversations, document experiences with pictures and detailed data, and most importantly, we open ourselves up as learners in the process who examine our own

assumptions. Parents are welcomed into the process and seen as partners in making sense of our data. We never hesitate to have conversations with children to gain their perspectives. The assessment process is recursive – it never ends. [7]

Researchers also recommend that the context of student learning and students' educational backgrounds should be factored in during the assessment process. According to this scenario, language learners' home background, previous educational experiences, and the students' current classroom environment should be taken into consideration in the assessment process.

Given that classroom teachers observe their students speak, read, and write English on a daily basis and in a natural communication context, researchers and classroom practitioners argue that including classroom generated data in the evaluation of language learners can render language learners' assessment both more accurate and more valid.

It is important that teacher-made assessment instruments be reliable and valid, second language educators know that the quality of a teacher-made assessment tool cannot be reduced to its reliability or validity. Nor is the most innovative assessment tool inherently effective *per se*. The usefulness of assessments administered in the language classroom has everything to do with the quality of instruction. If instruction challenges and stimulates young language learners, assessment tools are likely to be conceived in the same intellectually challenging and stimulating spirit. [8]

In summary, good assessment instruments used with young language learners need to be reliable (accurate) and valid (produce the kind of data that educators seek to obtain), second language educators question reliability and validity of standardized proficiency and high-stakes tests used with young language learners. Suggestions have been made to take teacher judgment into account when evaluating language proficiency and academic attainment of young language learners. Some of the innovative assessment instruments used by second language teachers include journals, observations, and portfolios.

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## **ORGANIZATIONAL BASIS OF PEDAGOGICAL MANAGEMENT AND MANAGEMENT CULTURE**

*Abstract: This article describes the principles of pedagogical management, the education system and management principles, methods and organizational forms aimed at increasing its effectiveness, managing teachers in educational institutions, studying the specifics of the educational institution management culture, and developing a management culture.*

*Key words: pedagogical management, education system, principles, methods and organizational forms of management, efficiency, pedagogical management, educational institutions*

It is noteworthy that at the heart of the large-scale political, socio-economic reforms being carried out in Uzbekistan in recent years, issues related to man and his interests have been identified as a separate priority. These include the harmonious development of students of higher education institutions and their well-being. The conditions for the realization of the interests of future personnel and the creation of effective mechanisms are one of the main reforms in the country.

Therefore, the prospects of the final stage of the national training program are aimed at improving and further developing the training system in accordance with the prospects of socio-economic development of the country on the basis of analysis and generalization of experience gained in one of the areas.<sup>1</sup>

Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated August 20, 2015 No 242 "On measures to organize retraining and advanced training of managers and teachers of higher education institutions", December 3, 2015 "On management personnel of higher and secondary special, vocational education institutions" Resolution No.<sup>2</sup> 351 "On measures to organize targeted training of the reserve." Such attention paid by the state to the issue of personnel can be explained by the fact that Uzbekistan has a special place in the field of education. This, in turn, requires special training of management personnel who are able to operate with a view to modern students of personnel management.<sup>3</sup>

<sup>1</sup> Кадрлар тайёрлаш миллий дастури.\\ Ўзбекистон Республикаси Олий Мажлисининг Ахборотномаси,2013й,41 сон,543-модда.

<sup>2</sup> Ўзбекистон Республикаси қонун ҳужжатлари тўплами ,2015й,33-сон.442-модда.

<sup>3</sup> Ўзбекистон Республикаси қонун ҳужжатлари тўплами 2015й,48-сон,608-модда.



In order to be competitive, an educational institution is required to constantly develop, implement a personnel policy that meets the needs of the labor market and higher education customers, organize educational processes on the basis of innovative approaches. Its leader, on the other hand, determines the place of the educational institution in society, formulates strategies, makes decisions, distributes tasks, and sets an example in the formation and development of employee behavior. Many scientific papers have been published on the leadership culture and its role and importance in the life of a higher education institution (HEI).<sup>4</sup>

It is noteworthy that the scientific research of several experts in the field of management of educational institutions and some scientists who have conducted research in this field is devoted to the study of various aspects of management culture in the educational institution.<sup>5</sup>

Taking into account the role of education in the life of our country, it should be noted that the problems of studying the specific management culture of the educational institution, the formation of a culture of management, the practical use of human resources are relevant today.

Well-known researchers in the field of pedagogy have noted that the outcome of the educational institution depends in many respects on the level of interaction of all educators. Scholars such as ST Shatsky, FS Makarenko, VA Sukhomlinsky raised the issue of the formation of a single faith as the basis of a united, cohesive community, emphasizing that this situation will positively solve many problems in the field of governance. In this regard, measures aimed at the formation of managerial competencies of the reserve of management personnel in the educational institution constitute a means of managing the behavior of employees of the institution, as well as the entire teaching staff. In turn, using the management tool, the head of the educational institution forms a clear model of teacher behavior, ensures that the type of management appropriate to the goals of the educational institution leads the institution, enhances and uses its positive potential.

Pedagogical management consists of a set of principles, methods and organizational forms of management of the educational system aimed at improving the education system and its effectiveness, equipping it with processes, events and problems related to the characteristics of management activities of leaders and teachers in educational institutions. The study of this problem revealed that the essence of the leading type of management in an educational institution corresponds to a partnership-based management, which consists of a competent approach to the activities of all participants in the educational process. These types of signs are most evident in areas such as problem solving (in agreement with goals), leadership principles (joining views on common action). At the same time, the basic

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<sup>4</sup> Головнева И.В. Психологические основы кадрового менеджмента. \ Учеб. пособие для студентов высших учеб. заведений. 2-е изд. доп. и перераб. Х: Изд-во НУА, 2007. С. 152; Махмудов И. Бошкарув психологияси. -Т: "unaks-print", 2005. 170.6.

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management that should be dominant in this educational institution also reflects other types of culture.

Values such as competitiveness and innovation, which are supported and effectively implemented by the leadership, belong to the type of participatory culture and reflect the strong position of the management system in the educational institution. Methods of overcoming persistent problems in the educational institution correspond to the characteristics of bureaucratic management, that is, this is done by strengthening management and adherence to the rules. Entrepreneurial orientations of management culture are more pronounced in the treatment of disagreements and conflicts.

The culture of management in higher education is a management tool for the behavior of employees of the institution, as well as the entire teaching staff. Using this management tool, the head of the educational institution forms a clear model of pedagogical behavior, ensures that a certain type of culture leads in his organization, enhances and uses its positive potential. Because an educational institution will have several types of culture at the same time.

It should be noted that the growth of competition in the labor market and the demand for training require the development of participatory and entrepreneurial management in educational institutions. A similar approach is recognized by university staff. It is recognized that the comprehensive direction of discussion, which is characteristic of the type of participatory management of organizations, meets today's requirements. At the same time, it was emphasized that the solution of problems (through open interaction), the organizational framework of leadership (encouragement of communication and cooperation) in this area is fully consistent with the mission of the organization. For this reason, more attention has been paid to the participatory culture in the type of management that the organization has identified as promising.

Another activity identified as a promising direction is the search for new creative approaches in overcoming persistent problems. Another type of management that needs to be developed using this factor is the entrepreneurship-based approach.

In order to develop the basics of management, to improve the work related to the reserve of management staff, it is necessary to pay more attention to the following areas:

- development of methods and technologies for objective assessment of the development of employees included in the reserve of management personnel, opportunities and prospects for promotion;
- be able to choose a position that suits the abilities of each employee;
- Encourage competitive and highly skilled employees to leadership positions and develop tools and mechanisms to attract them.

In conclusion, the ability of the organization to use the resources of management personnel as one of the progressive tools in managing the behavior and behavior of employees and, most importantly, depends on the level of development

of management culture, technology used and the dynamics of the external environment.

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## **THE ROLE AND CURRENT SITUATION OF INDUSTRIAL PRODUCTION IN THE REGION'S ECONOMY**

*Annotation: The article discusses the role of industrial production in increasing the economic potential of the region. The solution of the economic development of the country and the region is mainly analyzed by indicators and economic situation of the industrial development of this region.*

*Key words: regional economy, industry, manufacturing, imports, exports, goods and services, gross regional income, agriculture, employment.*

Industry is very important in the modern economic activity of the region. The economic development of any country and region is largely determined by the industrial development of that region. Industry is one of the key links in modern civilization, providing us with the products and jobs we need. At the same time, it is one of the key sectors supporting industry, agriculture and services.

Some industries that depend on raw materials and agriculture are also agricultural-based industries. Industries are part of the secondary manufacturing sector, which is the main feeder of employment opportunities for many people. The level of employment and high incomes are directly determining the economic stability of the region.

The development of industrial production in the regions depends on a number of factors, which are determined by many factors. One of the important tasks is to study the factors influencing the industrial production of the region and to propose specific development models. In general, in today's era of modernization, the role of industries is an integral part of our lives. It can be said that without industry, it is difficult to ensure economic stability in any region.

Evolutionary economics argues that economic development and growth occur as a result of an evolutionary process (Nelson, 2008; Nelson and Winter, 2009). As part of this process, new firms become familiar with the existing industrial structure, and during their life cycle, most new firms experience growth and decline before they eventually die (Ireland et al. 2009).

This article argues that the overall level of regional economic performance in a capitalist economy stems from the consolidated decisions of firms. The industry is described as a group of firms that produce substitute products (Porter, 1980) and consists of actors seeking to advance their interests based on limited rationality in the regional industry (Simon, 1982) and in interactions with others (Sharp ), 1997). The result of these individual firm decisions is reflected in regional industrial development.<sup>6</sup>

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<sup>6</sup> Journal of Innovation and Entrepreneurship volume 6

Road dependence theory is increasingly being used as a theoretical basis for analyzing regional industrial development (Henning et al. 2013; Isaksen and Trippel, 2014). The theory is that regional industrial development is a road-dependent process because its historical heritage has a major impact on today's regional industrial structure (Boschma and Frenken, 2006, p. 280: 281). Road dependency theory argues that the emergence of industrial structures, infrastructure, and institutional structures today makes some industry-appropriate choices preferable to others (Martin and Sunley, 2006). In addition to the theory of road dependence, once created, industrial roads can develop in two directions (Martin, 2010). The first direction is aimed at limited road widening, while the other is aimed at more rapid development. While the limited expansion of the industrial path is based on the state of knowledge recycling, the dynamic evolution of the industrial path is based on updated regional knowledge and innovation.

Either contributes to the consolidation of existing technologies and knowledge, industrial renewal through the attraction of new technologies, industries or knowledge, or contributes to the creation of regional industrial routes by exploiting new business opportunities in the region and thereby introducing potential new industries (Martin, 2010; Martin and Sunley, 2006; Todtling and Trippel, 2013).

As creators of new enterprises, entrepreneurs make a significant contribution to the evolution of this regional industry. However, although context appears to be important in the business literature (Aldrich and Cliff, 2003), entrepreneurial researchers see both entrepreneurs and their new firms as decontextual individuals (Alsos et al. 2014). Along with this research, entrepreneurs seek to increase their business success opportunities by optimizing their new firm locations and thus contribute to increasing regional interactions and knowledge flows.

Industrial development is necessary for the modernization of agriculture. In many regions, agriculture is traditional and backward. Product cost is high and productivity is low. To modernize agriculture, we need tractors, machinery, pump sets and combines. To increase productivity, we need chemical fertilizers, pesticides. All of this is an industrial product. It is impossible to produce these goods without industrial development. Agricultural products such as jute, cotton, sugar cane and others are raw materials. Industrialization is also necessary for the production of finished products such as textiles and sugar. Hence, the development of industry is necessary for the modernization of agriculture.

Industrialization is often crucial to the region's economic growth and reducing long-term poverty. At the same time, the method of industrialization affects how the poor benefit from growth. Economic and industrial policies that support the poor are aimed at increasing economic returns on the factors of production that the poor have, e.g. increasing the incomes of unskilled workers, policies that promote high returns on capital and land will exacerbate inequality if they do not include changes in the concentration of physical and human capital and the concentration of land ownership. The use of capital-intensive methods instead of labor-intensive methods increases income disparities, as well as the introduction

of skill-based technologies, especially in regions with low levels of education and accumulated human capital.

The reason for the low level of industrial development in the regions is the fact that a large part of production technologies are associated with medium and low-level technologies.

Compared to the same period last year, the share of high-tech industry in the structure of manufacturing industry increased by 1.9% (in January-November 2019 - 1.5%), medium-high-tech - 23.1% (26, 1%), medium-low-tech - 40.5% (36.6%) and low-tech - 34.5% (35.8%) (Figure 1). We can see that the work on the widespread involvement of high technology in industrial production is still one of the most pressing issues.



Figure 1. The structure of production technologies in industry.<sup>7</sup>

At the same time, it is important to increase domestic and foreign investment in the industry. In many developed countries of the world, we can see that a very large part of industrial technologies are high-tech based on the latest innovations.

<sup>7</sup> Data of the State Statistics Committee of the Republic of Uzbekistan.

As a result of the assessment of modern industries in the regions of the country and their impact on the economic growth of the regions, the following main problems and shortcomings were identified:

- As a result of low investment activity in regions without large reserves of raw materials, there is a large gap between the regions in terms of attracting investment to the economy.

- The lack of foreign-invested enterprises in the regions makes them unable to attract enough foreign investment in line with the size of their economies.

#### Conclusions

The analysis shows that industrial development is an important basis for economic growth for the regions. The expansion of production is associated with stimulating exports, increasing trade openness, economic liberalization, and improving the business environment in many countries. At the same time, import protection and selected state intervention were also applied. Since poverty is mainly a rural problem in many developing countries, increasing agricultural productivity is often the key to reducing poverty at the beginning of economic development.

At the beginning of rural development, which was emphasized by agricultural reform or otherwise, there was a decrease in inequality, usually due to a decrease in rural poverty.

In order to further improve the industrial sector and increase industrial production in the regions of the country, it is necessary to take the following measures:

- ▶ increase the use of existing production capacity in the regions;
- ▶ Rehabilitation of idle production facilities, creation of new material and technical base;
- ▶ creation of favorable conditions for the activities of newly established enterprises, granting benefits;
- ▶ the number of small businesses and private entrepreneurs in industries encourage more reproduction and organization;
- ▶ Accelerate the development of programs to produce import-substituting finished products.

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## **THE ROLE OF MODERN TEACHING METHODS – INTERACTIVE METHODS, INNOVATIVE TECHNOLOGIES IN THE EDUCATIONAL PROCESS**

*Annotation: One of the reasons why the use of pedagogical and information technologies in the learning process is getting stronger, one of the reasons for this is that while traditional teaching has taught students to acquire only the knowledge, modern technology enables them to search for their knowledge, analyze them independently and analyze their conclusions they also teach themselves. As you know, application of innate pedagogical technologies in the educational process in higher education has a number of advantages. Innovative educational technologies effectively utilize knowledge, skills and skills in one or more related areas of students' educational work, as well as develop their personality and moral qualities.*

*Key words: Teaching, learning, modern, urgent problem, pedagogical technologies, educational process, international standards, well-trained, individual, interactive methods*

Language teaching in general and English language teaching in particular has tremendously changed over the centuries. Language learning and teaching are dynamic, fluid, mutable processes, so there is nothing fixed about them unlike the teaching of other subjects. Language teaching especially throughout the twentieth century underwent numerous changes and innovations. Approximately, every decade a new approach or methodology comes into practice. Many major theories, events, trends and technologies which shaped English language teaching during the past decades suggest methodologies are as much a product of their times as educational systems, and rooted in the ideas of their time. Ideas may come into and go out of fashion. Many new approaches are rediscoveries of old methods neglected but re-illuminated. English language teaching practitioners around the globe have been practicing different trends suitable to their context, needs, availability of resources and practicality. Teachers have had a large amount of methods offered at different times. Obviously, some teachers stick on certain methodologies very sternly.

Nonetheless, majority of the English language teachers instead of adhering to prescribed trends, follow different ones at different times applicable to their contexts. Besides, they practise different educational technologies to grow academically and professionally. Educational technologies, especially computers and computer-related peripherals, have grown tremendously and have permeated all areas of our lives.

It is incomprehensible that anyone today would argue that banks, hospitals, or any industry should use less technology. The Internet in particular is becoming



an increasingly vital tool in our information society. More people are going online to conduct such day-to-day activities as education, business transactions, personal correspondence, research and information-gathering. Each year, being digitally connected becomes ever more critical to educational advancement.

From the beginning of the computer age, educational researchers and practitioners were sure for technology use to be widespread in schools and universities it needed to be closely tied to education. No doubt, teaching is changing and, in many ways, becoming a more difficult job because of increasingly numerous contradictory expectations, including the following: We are living in an age of information overload with the expectation that students will learn high-level skills such as how to access, evaluate, analyze, and synthesize vast quantities of information. At the same time, teachers are evaluated by their ability to have students pass tests that often give no value to these abilities. Teachers are expected to teach students to solve complex problems that require knowledge necessary across many subject areas even as they are held accountable for the teaching and learning of isolated skills and information. Teachers are expected to meet the needs of all students and move them toward fulfillment of their individual potential even as they are pressured to prepare students for maximum performance on high-stakes assessment tests that are the primary measure of student and school success.

One of the most important and urgent problems facing the continuing education system is the use of innovative educational technologies in their teaching, training them in the educational process, and knowledgeable, compelling, entrepreneurial, professional, and competent staff training requirements of international standards, the formation of a to enhance the effectiveness of education and to gain full access to learning, it is important for the individual to be in the focus of attention of the education and in order to ensure that young people are well-trained in education and well-trained in education, and who can use modern pedagogical technologies and interactive methods and can use them in teaching and learning teachers need.

For this purpose, it is necessary to equip all teachers with innovative pedagogical technologies and interactive methods and to improve their skills in teaching and learning. All interactive teaching methods and teaching technologies aimed at ensuring effective and effective teaching process are widely used and widely used in all secondary and vocational, professional and vocational education institutions and faculties of the country and have positive results.

In addition, innovative pedagogical technologies are the main organizational and methodological tool of the pedagogical process. In contrast to the thorough development of the methodological development of the instructor's effective functioning, the teaching technology is focused on students' activities, which creates the necessary conditions for students to independently master their own learning materials, taking into account their personal and teacher work. Modern education should address the challenges of upbringing lifelong competences in the market economy, as well as educating a highly educated, competent person with a high sense of consciousness, an independent mindset, and an example of behavior.

This requires the teacher to use pedagogical technologies in the learning process, to be always creative and motivated, to use innovative teaching technology in the teaching process.

Distinctive features of innovative educational technology: Under the guidance of a teacher, the student receives, learns and accepts independent knowledge;

the pupil is not taught; it is taught to be independent; the student's independent opinion is valued; the students are not given the information in a ready manner, they are taught to be independent of different sources (textbooks, manuals, texts, ghostomas). Thus, the teacher's task is to explain, guide and manage the technology of innovative learning. The reader should be able to work independently, read, master, think and defend his or her thoughts. At the same time, the education model should be avoided. The education model can be divided into 3 categories: 1. Passive learning. The teacher is mainly employed, so the teacher is active, the student is passive (80/20); 2. Active learning. The teacher and the student (50/50) work equally; 3. Interactive learning. Student and student. Student active.

At the same time, the teacher is only a manager. Thus, interactive education is now an effective type of education. Education technology assures effective outcomes and achievement of educational objectives and identifies the universal system of modern information and pedagogical technologies. Education technology provides optimal ways and means of utilizing human resources and technical resources to achieve educational goals, power and time consuming.

In today's innovative processes, people need independent, self-reliant individuals capable of developing new information and independently evaluating their knowledge to address the challenges facing the education system. That is why the role of modern teaching methods – interactive methods, innovative technologies in the educational process of educational institutions is immense. Therefore, today's teaching and educational process of all educational institutions is characterized by the teacher's professional skills, experience, modern teaching methods, interactive methods, and the role and importance of innovative technologies.

Information technologies in English language teaching can actually assist with some of these expectations and make teachers and their students are more successful. However, as the world becomes more complex year-to-year instead of the generation-to-generation pace of most of the last century, educational needs continue to shift from teaching and learning isolated skills and information within each content area, to teaching skills that enable students to solve complex problems across many areas. Educators must prepare for a technology-rich future and keep up with change by adopting effective strategies that infuse lessons with appropriate technologies.

However, this is balanced by a significant observation: the benefit to students of using new technologies is greatly dependent, at least for the moment, on the technological skill of the teacher and the teacher's attitude to the presence of the technology in teaching. The skill and this attitude in turn are largely dependent on the training staffs have received in this area. It is safe to say, there is no single most

excellent way of teaching foreign languages. The successful language teacher does not confine himself or herself to only a single method. A method which is appropriate with one class on one occasion does not necessarily suit to the same class at another time. Likewise, a method which is suitable for one language teacher while teaching a particular language item may not be applicable for other teacher in the same or similar context. There has been a gradual shift from a literature based foreign language to equipping learners with communicative skills for interaction globally.

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## **“PRESS CONFERENCE” IN THE DELIVERING OF CHEMISTRY**

*Annotation: This article presents the information of delivery the lesson on the theme “Starch, its features and biological importance” in the form of didactic play technology “Press conference”.*

*Keywords: didactic game, Press Conference, experts, playful methods*

Reforms in the education system of our country and the introduction of modern educational technologies are required. Particular attention is paid to increasing the number of practical areas of theoretical knowledge.[1-2]

One of the most pressing issues in the teaching process today is the development of students' thinking skills, the ability to use their knowledge in practice and the ability to learn new knowledge independently.

Didactic game (conference lesson, business games, plot-role) lessons play an important role in the development of creative thinking. Because process activities are organized during play, students are able to naturally express their pictorial situations. Playful active activity, on the other hand, increases their creative potential and helps to develop thinking. Transformation of students' theoretical knowledge into practical skills and abilities, the formation of educational activity in them play a special role in the broad involvement of them in the process of social relations, as well as practical games.[3-5]

Didactic game technologies help to ensure the effectiveness of education, to create activity in students, to form knowledge, skills, abilities, to reduce time, to accelerate learning.

The psychological features manifested in the process of play allow each student to demonstrate their personal abilities, stabilize their place in social life, develop in them self-management skills.

Didactic game lessons can be divided into the following depending on the acquisition of knowledge, skills and abilities of students and the coherence of play activities:

- ✓ Plot-role role-playing lessons
- ✓ Creative-play lessons
- ✓ Business-game lessons
- ✓ Conference lessons

✓ Game-training lessons

In conducting any didactic game lessons, the teacher will first have to prepare and conduct the students for individual, then group lesson games, and after they have successfully passed, they will have to prepare for the mass game lessons. Because students need to have the necessary knowledge, skills and competencies to actively participate in didactic play lessons, there must also be collaboration and mutual support between the class community.[6-8]

In addition, it is important that the teacher adheres to the following didactic requirements when conducting didactic game lessons:

✓ Didactic game lessons should be aimed at solving educational, pedagogical, developmental goals and objectives

✓ Dedicate yourself to important problems and solve them throughout the game

✓ Compliance with the principles of upbringing a harmoniously developed person and the norms of Eastern morality

✓ The game lesson structure should be in a logical sequence.

✓ These lessons should follow didactic principles and achieve great results with the least amount of time.

During the pedagogical practice, we organized a "Press Conference" method of didactic games on the topic "Starch and its properties, biological significance" in the textbook of the ninth grade. To ensure that all students participate in this lesson, they should be asked questions in advance and given a list of references that they can use. This makes the lesson more effective and all students in the class participate equally. [6-8]

According to the method of "Press Conference", the lesson begins as follows: the lesson is attended by various representatives of the field of chemistry (biologist, biochemist, physicist, chemist, geochemist, technologist, ecologist) and answers all questions of students. The course is led by a facilitator. The teacher does not interfere in the lesson process, but only appears at the end of the lesson to summarize the topic and evaluates the participants and "experts" who actively participated in the lesson.

The facilitator begins the lesson by announcing the topic and explains that today's lesson involves various "experts" in the field of chemistry and can ask them questions that interest you.

For example, one of the students asked, "What is starch?" biologists and biochemists answer the question based on their fields

The technologist will answer the question about the process of obtaining starch and give detailed information about the areas of application of starch. The ecologist, on the other hand, dwells on the ecological aspects of starch.[9-12]

The question continues, "What is the advantage of starch?" The "consultant" participating in the conference will answer the question posed by the students and give their advice to their students about where starch can be used, its useful properties.[13]

10 minutes before the end of the lesson, the teacher comes on the field and concludes the topic "Starch and its properties." Participants and "experts" who actively participated during the lesson will be evaluated and homework will be announced.

The use of similar playful methods in the lessons, the proper use of pedagogical technologies in the educational process increases the interest of students in knowledge and education, allows the effectiveness of the educational process to be high.

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## **ECONOMIC VALUE GLICIRRHIZA GLABRA L.BUNGE. FROM THE FAMILY FABACEAE LINDL. CROP WILD RELATIVES OF CULTIVATED PLANTS OF THE REPUBLIC OF KARAKALPAKSTAN**

*Abstract: The article analyzes the crop wild relatives of cultivated plants from the Fabaceae Lindl family. Republic of Karakalpakstan. In Karakalpakstan, out of 171 WRCP species, the Fabaceae Lindl family consists of 10 genera and 15 species. According to the location, the WRCP was divided into 4 parts - this is the Karakalpak part of the Ustyurt plateau and Kyzylkum, the Amu Darya Delta and Aralkum. Analysis of the synopsis showed that Glicirrhiza glabra L. occupies a prominent place. Perennial rhizome, herbaceous plant. Blooms from late May to June. Licorice glabrous is a Pontic-Mediterranean species, the eastern border of the range of which reaches Iran and Afghanistan. Economic value: technical, fodder, medicinal, melliferous.*

*Key words: Crop wild relatives of cultivated plants, flora, Glicirrhiza glabra L.*

Introduction. About 80% of Uzbekistan's area is occupied by deserts, of which Kyzylkum is the largest with an area of 30 million hectares. A unique gene pool of various ecological groups is concentrated on the territory of Uzbekistan, which is a valuable reserve of forage, raw materials, medicinal, food and other useful plants. [13].

Determination of biological productivity and rational use of wildlife is one of the most important tasks of modern ecology [14].

Evaluation and preservation of the gene pool of desert wild species of local flora is closely related to the study of morpho-anatomical characters, chemical composition, including economic value.

Plants are a renewable resource of nature, and people have long used their healing properties. Despite advances in the synthesis of chemical compounds in the creation of medicines, plants remain the most important resource for obtaining a number of valuable medicines. On the international market, every third medicinal product is of plant origin, and as for the drugs used, for example, for the treatment of diseases of the cardiovascular system, 80% of them are of plant origin. The interest in medicinal plants is due to the fact that the systematic and long-term use of any synthetic drug can cause various disorders in the human body. Medicinal plants, as a rule, are not toxic (or contain toxins in small quantities), therefore they do not cause side effects. Preparations based on the use of several plants have medicinal properties precisely due to the total content of biologically active substances in them. In addition, many medicinal plants are available, and the

technology for making medicines from them is simple and feasible even at home. Sesquiterpene lactones, along with alkaloids, glycosides, coumarins, and flavonoids, are naturally biologically active compounds isolated from plants. Many of them have analgesic, antitumor, anthelmintic, growth stimulating, and antimalarial effects [4, 5, 6].

The republic possesses innumerable plant resources and many of them have not yet been touched by the breeder's hand. Creating new varieties, breeders are increasingly turning to wild forms of one type or another [3].

In Karakalpakstan, out of 171 WRCP species, the Fabaceae Lindl family consists of 10 genera and 15 species. According to the location, the WRCP was divided into 4 parts - this is the Karakalpak part of the Ustyurt plateau and Kyzylkum, the Amu Darya Delta and Aralkum. On Aralkum from the Fabaceae family Lindl. there are 4 genera and 5 species. Which belong to different life forms [1, 2].

Objects and research methods. The object of this research is the plant *Glicirrhiza glabra* L., a species from the Fabaceae Lindl family.

*Glycyrrhiza glabra* L. - Nude licorice. Perennial rhizome, herbaceous plant. Blooms from late May to June. The total identified area occupied by this plant is 2 856 hectares, from one hectare beekeeping farms receive 50-60 kg of pure honey. However, in view of the intensified exploitation of commercial thickets by organizations that harvest the roots and rhizomes of the plant, wild populations of licorice are decreasing from year to year [7, 9, 10].

Areal. Licorice naked is a Mediterranean species, the eastern border of the range of which reaches Iran and Afghanistan [11].

Ecology. The main habitats of licorice are the floodplains and river valleys of the steppe and desert regions of Central Asia, Kazakhstan, and the Caucasus. The peculiarity of the habitats of naked licorice is their temporary flooding in the spring-summer period and the relatively high standing of groundwater in them.

Economic value: technical, fodder, medicinal, melliferous. From the roots and rhizomes of licorice, up to 23% of saponin-glycyrrhizin (potassium and calcium salt of glycyrrhizic acid), which gives them a sweet taste, and 27 flavonoids (liquoritin, liquidoside, isoliquiritin, etc.) are isolated, the total content of which reaches 4%, glabrous (glycyrrhizic ) acid, steroids, essential oil, asparagine, ascorbic acid, bitterness, pigments, gums, etc. [7, 8].

Research results. The aerial part of licorice naked contains saponins, tannins, flavonoids, essential oils, sugars, pigments and other substances. This opens up prospects for the use of licorice herb in medicine, as a possible raw material for the creation of anti-inflammatory, protistocidal, antispasmodic and antiviral drugs.

Licorice preparations have long been used in medicine as a mild laxative, expectorant, emollient and diuretic, and also as a means of regulating water-salt metabolism. Dry extract, thick extract, licorice syrup, breast powder and other preparations are used. Licorice root also serves as a base for pills and improves the taste of various preparations and mixtures [7, 8].



Recently, on the basis of glycyrrhizic and glycyrrhetic acids, preparations have been created (glycyram, etc.) used for the treatment of inflammatory diseases, bronchial asthma, eczema, etc. Based on the flavonoids of licorice roots, preparations have been created that have antispasmodic and antiulcer activity - liquiditon and flacarbin. There are also encouraging data on the anticancer and protistocidal activity of licorice root and the substances it contains.

Licorice is used in more than 20 industries and agriculture. Its root and extracts are used in the tobacco and food industries (in the production of beer, kvass, confectionery). The foaming properties of the root have found application in technology (in the production of fire extinguishers and paints). Licorice root is also used in soap making, textile, leather and chemical industries, and even in metallurgy - to suppress sulfuric acid mist in electrolysis baths. Wastes from the production of licorice extract are used as raw materials for the manufacture of fertilizers, parchment, heat and sound insulation boards. Licorice hay is highly nutritious and is eaten by many pets [7].

Beekeeping farms receive 50-60 kg of pure honey from one hectare. However, in view of the increased exploitation of commercial thickets by organizations harvesting the roots and rhizomes of the plant, wild populations of licorice are decreasing from year to year [12].

Conclusions. Thus, summarizing the above, we can conclude that *Glycyrrhiza glabra* L. is a valuable plant, it is used as a medicinal, technical, fodder and honey plant. The wild flora of the Republic of Karakalpakstan has significant potential and, with rational and competent use, will provide the population with not only high-quality, environmentally friendly honey, medicine and other valuable products for many years to come.

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**THE MEDICINAL VALUE OF CROP WILD RELATIVES OF  
CULTIVATED PLANTS FROM THE FABACEAE LINDL. FAMILY  
REPUBLIC OF KARAKALPAKSTAN**

*Abstract: The article analyzes the crop wild relatives of cultivated plants from the Fabaceae Lindl. family, the flora of the Republic of Karakalpakstan by their medicinal properties. Analysis of the synopsis showed that WRCP consists of 10 genera and 15 species, and revealed the presence of 10 medicinal plants. Of these, two species are represented in the genera Alhagi Hill, Ammodendron Fisch, Astragalus L., Glicirrhiza L., Melilotus Mill, and in the rest Caragana Fabr., Medicago L., Onobrychis Hill, Trigonella L., Trifolium L. ...*

*Key words: crop wild relatives of cultivated plants, flora, the medicinal value.*

Introduction. About 80% of Uzbekistan's area is occupied by deserts, of which Kyzylkum is the largest with an area of 30 million hectares. A unique gene pool of various ecological groups is concentrated on the territory of Uzbekistan, which is a valuable reserve of forage, raw materials, medicinal, food and other useful plants.[1].

Determination of biological productivity and rational use of wildlife is one of the most important tasks of modern ecology. [2].

Evaluation and preservation of the gene pool of desert wild species of local flora is closely related to the study of morpho-anatomical characters, chemical composition, including economic value.

Medicinal plants, like other natural resources, are the property of the people and their protection is one of the most important tasks today. This should be remembered from the moment of organizing work on their procurement. When the areas and scales of procurement of medicinal raw materials are determined and explanatory work is carried out with collectors, special attention should be paid to the following: in order to preserve the habitats of useful plants, it is necessary to harvest only those parts of them (leaves, flowers, grass) that will be used, and strictly in the required amount. The entire plant should not be destroyed predatory by uprooting it. When harvesting medicinal raw materials, the species surrounding the medicinal plant must not be damaged. The underground organs of plants are usually harvested after the fruit has ripened, which must first be collected and scattered around the mother plant to ensure the preservation of natural thickets, and only then the plant must be dug up. It should be remembered that plant conservation is the business of every inhabitant of our planet.

The republic possesses innumerable plant resources and many of them have not yet been touched by the breeder's hand. Creating new varieties, breeders are increasingly turning to wild forms of one type or another. [3].

Crop wild relatives of cultivated plants (WRCP) are carriers of such biological properties as resistance to extreme environmental factors (high and low temperatures, droughts, salinity, flooding, etc.), as well as to diseases, pests, etc. Therefore, further progress in breeding is not conceivable without the comprehensive and complete use of wild relatives of cultivated plants.

A prominent place in the composition of crop wild relatives of cultivated plants for economic use belongs to the representatives of the legume family (Fabaceae Lindl.). In Karakalpakstan, out of 171 single WRCP species, the legume family consists of 10 genera and 15 species. Which belong to different life forms [4, 5].

Objects and research methods. The objects of study are wild medicinal plants of the Fabaceae Lindl family of the natural flora of the Republic of Karakalpakstan. The proposed list of wild relatives of cultivated melliferous plants was developed on the basis of a literature review.

Family Fabaceae - one of the largest families of the world's flora, herbaceous and woody plants. Legumes are easily recognizable by their flower shape. Another sign of legumes is a fruit characteristic only for this family, a bean. Valuable food plants are high in protein. (beans, mung bean, soybeans, peas, peanuts, etc.) vegetable oil, a source of medicinal substances, decorative, technical, etc. Many leguminous plants on the roots have nodules filled with nitrogen-fixing bacteria.

Considering, on the one hand, the insignificance and, on the other hand, the specificity of the species composition of the desert flora of the Republic of Karakalpakstan, knowledge about the use of useful qualities of plants is of particular interest. [6, 7].

Research results. Our research has shown that in the Fabaceae lindl. WRCP is marked with 10 genera and 15 species. Two of them were recorded in the genera *Alhagi Hill*, *Ammodendron Fisch.*, *Astragalus L.*, *Glicirrhiza L.* and *Melilotus Mill.* In other genera, one species is presented (Table 1).

Table 1

**The medicinal value of crop wild relatives of cultivated plants from the  
*Fabaceae* Lindl family.**

<i>Fabaceae</i> Lindl family.			
№	Genera	Species	Med
1	Alhagi Hill	1,1 <i>A. persarum</i> Boiss. et Bushe	+
		2,2 <i>A. pseudoalhagi</i> (Bieb.) Fisch.	+
2	Ammodendron Fisch	1,3 <i>A. conollyi</i> Bunge	+
		2,4 <i>A. longiracemosum</i> Raik	+
3	<i>Astragalus</i> L.	1,5 <i>A. transcaspicus</i> Freyn	–
		2,6 <i>A. unifolialatus</i> Bunge	–
4	<i>Caragana</i> Fabr.	1,7 <i>C. grandiflora</i> (Beib.) DC.	–
5	<i>Glicirrhiza</i> L.	1,8 <i>G. aspera</i> L	+
		2,9 <i>G. glabra</i> L.	+
6	<i>Medicago</i> L.	1,10 <i>M. lupulina</i> L	+
7	<i>Melilotus</i> Mill	1,11 <i>M. albus</i> Medik.	+
		2,12 <i>M. officinalis</i> (L.) Pall	+
8	<i>Onobrychis</i> Hill	1,13 <i>O. micranta</i> Schrenk.	–
9	<i>Trigonella</i> L.	1,14 <i>T. grandiflora</i> Bunge	–
10	<i>Trifolium</i> L.	1,15 <i>T. repens</i> L	+
Всего			10

The table shows that the analysis of the composition of plants from the *Fabaceae* Lindl. Family, found within the Republic of Karakalpakstan, revealed 10 species of medicinal plants. Of these, *A. persarum* Boiss medicinal species are of the genus *Alhagi* Hill. et Bushe and *A. pseudoalhagi* (Bieb.), and from the genus *Ammodendron* Fisch species *A. conollyi* Bunge and *A. longiracemosum* Raik, two species *G. aspera* L and *G. glabra* L. from the genus *Glicirrhiza* L., species *M. albus* Medik. and *M. officinalis* (L.) Pall from the genus *Melilotus* Mill. The other of the genera are represented by one species of medicinal plants - *M. lupulina* L, a species from the genus *Medicago* L. and *T. repens* L from the genus *Trifolium* L.

Other species: *T. grandiflora* Bunge from the genus *Trigonella* L., *O. micranta* Schrenk. from the genus *Onobrychis* Hill, *C. grandiflora* (Beib.) DC. from the genus *Caragana* Fabr. and the species *A. transcaspicus* Freyn and *A. unifolialatus* Bunge from the genus *Astragalus* L. have no medicinal properties.

**Conclusions.** It should be noted that the given figures for the composition of crop wild relatives of cultivated plants from the *Fabaceae* Lindl. flora of Karakalpakstan is not yet final. Further detailed study of the flora of individual regions of the republic, undoubtedly, should lead to a clarification of the number of genera and species of flora of the republic that are of economic value.

Thus, summarizing the above, we can conclude that the wild medicinal flora of the Republic of Karakalpakstan has significant potential and, with rational and competent use, will provide the population not only with high-quality, environmentally friendly drugs, but also other valuable products for folk treatment of various diseases.

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## **REFLECTION OF SOCIO-ECONOMIC LIFE IN MUKIMI'S WORKS**

*Annotation: This article analyzes the life of Muhammad Aminkhoja Mukimi, one of the great Uzbek poets, and the reflections of socio-economic life in his works. Socio-economic aspects of the events of the late XIX and early XX centuries are described in detail. It is also stated that the principles of this great poet still exist today and are present among the population.*

*Keywords: Mukimi, Mukimi's works, socio-economic life, way of life of the population, public administration.*

Literature is truly one of the most influential factors in the social development of a society. Raising the social consciousness of the society and its comprehensive development is done by increasing the attention to literature. Literary people describe the consciousness of the people, their worldview and aspirations on the basis of various literary works. In addition, many works of art can be used to embody the socio-economic situation of a particular period and draw conclusions about the life of that period. In addition, literary figures express the pain and perception of the people through their works. No other factor can have a strong influence on the social life of a literary society. Inculcating spiritual ideas in society, especially in the minds of young people, is important for them to become highly spiritual in the future.

Muhammad Aminkhoja Mukimi is one of the writers who had a glorious, exemplary way of life, who made a great contribution to the formation of society at a certain time and was deeply rooted in the hearts of the people. Muhammad Aminkhoja Mukimi was one of the great writers and lived an exemplary life. In his works, he not only created an artistic interpretation, but also expressed his views on economic views and public administration, which can serve as a model for today's generation. He was one of the richest people in the world, not just materially. If people pay attention to his personal life, they can learn a lot from his example. Based on the study of Mukimi's works, it is possible to observe and analyze the economic situation in the country during this period. The study of the works reveals the economic aspects that can be applied even today. In addition, Mukimi's work cites the personalities of the leaders and the important factors that the people demand of them. Although it was a difficult period, Mukimi was not afraid to criticize the system of governance and the tax system in the country. It is also possible to study the geographical location of the country and the social status of the regions during this period. The living standards of the population are also mentioned in the works.

Therefore, it is advisable to study Mukimi's work and promote it to the general public.

Mukimi has written in several genres of literature. His particularly humorous works are commendable. The conflict between Mukimi's worldview and the environment created a critical trend in his work. This was reflected more in his satire. His humorous works are divided into satire and humor. Mukimi has many works in this direction. His humor was mainly based on critical laughter, and he was able to poetically embody the problems that existed in society during his lifetime. He lived in extreme poverty and studied the lives of ordinary people. In his works, he described the problems that exist in society. Because of the vitality of his works, his influence is high both in his time and today. In his comedy he mainly tried to describe the socio-economic life of the period in which he lived. Even today, on the basis of the study of his works, it is possible to assess the lifestyle of the population in the past.

In his works, Mukimi also expressed his economic views. In particular, in his works he paid great attention to the tax system of this period. He was able to criticize in his works the high taxes imposed on the population and, as a result, the deteriorating living standards of the population. Through his writings, he warned members of the government that if such taxes were imposed on the population, the population could face poverty. Today, poverty is seen as a global economic problem.

He also criticized corruption, which is one of the global economic problems today. During this period, he strongly criticized officials who oppressed the common people and extorted money from them. After seeing such injustices in life, the poet decided not to work in the state structure. That is why he lived a normal life until the end of his life. His main goal was not to make a fortune or lead a good life, but to influence society. That is, through his works he aimed to develop society and solve existing problems. The poet spent his whole life in this way. In his time, he was highly respected and loved by members of society. Because Mukimi is a person who with his thoughts and good deeds has a deep place in the hearts of the people.

In particular, his work "Tanobchilar" reflects the views of the tax system of this period. Therefore, Mukimi was not indifferent to economic life in his time. This work provides detailed information about the tax system of the period and its shortcomings. Especially during this period, due to the direct involvement of the tax factor, various shortcomings and problems arose. This work is mainly devoted to the socio-economic life of Mukimi's time, which tells about the people's dissatisfaction with taxes and various frauds in the collection of taxes. In this play, the tax collection activities of two taxpayers in one village are analyzed and conclusions are drawn.




During his stay, taxes were collected directly by taxpayers and paid to the state treasury. Tax rates are set by public officials. Certain representatives assigned to the regions were engaged in tax collection. However, misunderstandings and problems have increased in these processes. The reason is that not all representatives



did the job based on the criteria of fairness. Mukimi, on the other hand, criticized such people in his works. During this period, due to the increase in taxes, most of the income of ordinary people spent directly on taxes. As a result, living conditions among the people became more difficult. During this period, the people lived mainly on agriculture and handicrafts. At the same time, low-income people have been negatively affected by the increase in taxes. The tax system in these areas has been established since that time. At the same time, there were big problems in this system, but later these problems were gradually eliminated and contributed to the development of a truly transparent tax system. The contribution of great scholars like Mukimi in this development is enormous.

Mukimi's other works also focus on economics. For example, he wrote a promissory note ("Veksel") on economics. During this period, the promissory note had just begun to enter the country. In the early days, misuse of the promissory note led to various misunderstandings and problems between members of the public. In this play, there are problems such as the misinterpretation of the promissory note in practice and the use of promissory notes by officials in their own interests. Mukimi expressed his attitude to them in this play.

He is also the founder of another great literary genre throughout his life. This genre is included in the literature under the name "Travelogue". This genre is present in the literature of almost all nations. A work of prose and poetry that contains travel memories and related details is called a travelogue. The genre of "Travelogue" has a unique history of formation and development in Eastern literature, including Uzbek classical literature. Mukimi is the founder of this genre, which was organized in Uzbek literature in a special poetic form and later became a literary tradition. Indeed, after Mukimi's Travelogues became popular, the Travelogues of Zavqi, Furqat, Tajalli, and other contemporaries of the poet were created in the same style. Travelogues of this period were often written in poetic form. Their internal structure is as follows:

-  The need to enter, that is, to travel, the reasons are stated.
-  Travel memories are described in detail.
-  Certain conclusions are drawn from travel.

Mukimi's Travelogues are mainly divided into three parts. The first of them is the memories of the trip from Kokand to Shahimardon. From here, Mukimi's journey from Kokand ends in Shahimardon, where he records his adventures. The second is the impressions of his trip from Kokand to Fergana. From this he describes the events that took place on the road from Kokand to Fergana. The third is a description of what he saw and learned during his trip from Kokand to Isfara. The poet's journey from Kokand ends in Isfara, and he summarizes all his impressions in this work.

In these travelogues, Mukimi mentions the geographical location of different regions and the way of life of the population in these areas during his lifetime. This work is based on his travels, and he recounts all his travel memories. Along the way, Mukimi visited all the regions, first of all, citing the socio-economic situation of the population in this area and the geographical location of the area. On the basis of this

work it is possible to analyze the historical condition of the regions. In addition, Mukimi cited the customs and traditions of the people in the areas he visited. He also focused on the system of regional governance.

In conclusion, Mukimi in his works was able to provide information about the socio-economic situation of the period in which he lived. In addition, he was one of the just men of his time and was always critical of various vices in society. For him, the priority was not his well-being, but the well-being of society. He respected the values and traditions of the people, and in his time was an ordinary man, one of the most respected people. His way of life can be considered as an example for people. Because he has always been on the tariff of justice and tried to contribute to the development of society. Therefore, it is important to inform the public about the life and works of Mukimi not only in Uzbekistan but all over the world. Good results can be achieved, especially in the upbringing of young people, by relying on the principles of Mukimi.

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## MUSIQA —FOYDALI SAN'AT

*Annotatsiya: Mazkur maqolada musiqaning inson ruhiyatiga qanday ta'sir ko'rsatishi, maqom san'atining inson komillikka erishishidagi o'rni to'g'risida bayon etilgan.*

*Kalit so'zlar: Abu Nasr Farobiy, Darvesh Ali Changiy, musiqa ilmi, maqom, san'at.*

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## THE MUSIC IS USEFUL ART

*Annotation: This article discusses how music affects the human psyche and the time of the art of makom in human perfection. Everyone is a unique, unique miracle, with different thoughts, ideas and worldviews.*

*Key words: Abu Nasr al-Farabi, Darvesh Ali Changi, musicology, makom, art*

Har bir inson o'ziga xos, takrorlanmas mo'jiza bo'lib, turlicha o'y-fikr, dunyoqarashga ega. Shuningdek, hammaning yurish-turishi, gapirishi, dunyoqarashi turlicha bo'ladi. Hammamiz kiyimimizni, iste'mol qiladigan oziq-ovqatlarimizni didimiz, xohishimizga qarab tanlaymiz. Tanamiz uchun bular qanchalik zarur bo'lsa, ruhimiz uchun ham ozuqa kerak. Ruhimizni ham did bilan tanlangan ma'naviy ozuqalar orqali oziqlantirsak, nur ustiga nur bo'ladi.

Mana shunday inson ruhiyatiga ijobiy ta'sir ko'rsata oladigan, uning ichki dunyosini go'zallashtiradigan, unga ma'naviy ozuqa bera oladigan ulkan kuchga ega san'at turi bu musiqadir. Bu borada buyuk allomalarimizning ham fikrlari mavjud. Jumladan, Abu Nasr Farobiy ta'kidlaydi: "Musiq ilmi shu ma'noda foydaliki, u o'z muvozanatini yo'qotgan odamlar xulqini tartibga keltiradi, mukammallikka yetmagan xulqni mukammal qiladi va muvozanatda bo'lgan odamlar xulqining muvozanatini saqlab turadi. Bu ilm tananing salomatligi uchun ham foydalidir. Chunki, tana kasal bo'lsa, ruh so'ladi, tana to'siqqa uchrasa, ruh ham to'siqqa uchraydi. Shuning uchun ovozlarning ta'siri bilan ruhni sog'aytirish yordamida tana sog'aytiriladi".

Musiq ilmining tarixi qadim-qadim zamonlarga borib taqaladi. Rivoyatlarda aytilishicha, Alloh taolo Hazrati Odam alayhissalomni yaratib, uning vujudiga jon kiritish paytida musiqa sadolari yangragan ekan. Bundan tashqari, har bir xalqni musiqa bilan bog'liq bo'lgan turlicha afsona, rivoyatlari mavjud. Ulardan biri XVI-

XVII asrlarda yashab ijod qilgan Darvish Ali Changiy va uning chang sozi ijrochiligiga oid quyidagi ma'lumotni keltirish mumkin: "Buxoroda (XVI asr) Shayboniylardan bo'lgan Abdullaxonning zamondoshi Xo'jai Kalon (Buyuk Xo'ja, Shayx Xo'ja Sa'd) og'ir dardga giriftor bo'ladi. Tabib Sulton Muhammad uni davolab, kasalni yengishda chang mashqlarini eshitishni tavsiya etadi. Xo'ja Sa'd Darvish Alini huzuriga chorlaydi. Darvish Ali uch oy davomida Sa'd qoshida chang chaladi. Shundan so'ng Xo'ja butunlay tuzalib ketadi".

Ushbu ma'lumotlardan ko'rinib turibdiki, milliyligimizni o'zida mujassam etgan mumtoz ohanglarimiz qadim zamonlardan beri insoniyat hayotida muhim o'rin tutgan va uzoq yillar davomida saqlanib, rivojlanib, sayqallanib kelgan.

O'zbek mumtoz musiqasi durdonalaridan biri hisoblanmish maqomlarimiz ham avvallari xon saroylarida ijro etilgan. Hozirgi kunda esa shoh asarlarimizdan barcha bahramand bo'lishi mumkin. Xalqimiz, yoshlarimizda yuksak insoniy tuyg'ular, mardlik ruhida ma'naviy tafakkurini boyitish, milliy o'zligimizni anglash, estetik didni shakllantirishda maqom san'atining o'rni beqiyos. Prezidentimizning 2017-yil 17-noyabrdagi PQ-3391-sonli qarorlarida O'zbek milliy maqom san'atini yanada rivojlantirish chora-tadbirlari ishlab chiqilgan. Ushbu qarorga muvofiq, bir qancha ishlar amalga oshirilib kelinmoqda. Jumladan, O'zbekiston davlat konservatoriyasi tarkibidagi O'zbek milliy maqom san'ati fakulteti - Yunus Rajabiy nomidagi O'zbek milliy musiqa san'ati instituti sifatida alohida ajralib chiqdi. Yaqinda Madaniyat vaziri Ozodbek Nazarbekov maktabgacha ta'lim yoshidagi bolalarga maqom ohanglaridan eshittirib borish taklifini berdi. Darhaqiqat, maqom ohanglarini yosh bolalarga eshittirish ularning estetik olami takomillashib borishiga zamin yaratadi. Madaniyat vazirligi tomonidan maqom kuy va ashulalaridan iborat bo'lgan maxsus to'plam bolalar uchun ishlab chiqildi.

San'atga oshino qalbdan yomonlik chiqmaydi, deyishadi. Bolalik paytidan boshlab milliyligimiz mujassam bo'lgan maqomlarimizni tinglab ulg'aygan yoshlarimizdan kelajakda Ibn Sino, Farobiy, Beruniy, al-Xorazmiy, al-Farg'oniy va boshqa ko'plab shu kabi buyuk insonlar yetishib chiqishiga aminmiz. Har bir inson qaysi sohada faoliyat yuritishidan qat'iy nazar milliy ohanglarimizni tinglasa, ular matnidagi mazmunlarni uqib olsa, xalqimiz madaniyati yanada yuksalib boradi.

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## **TAX FACTORS FOR SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP: STATUS, PROBLEMS AND SOLUTIONS**

*Abstract: The article discusses the issues of improving the tax factor for the development of small business and private entrepreneurship, its current problems and ways to solve them, the prospects of stimulating the development of small business and private entrepreneurship through tax incentives.*

*Key words: small business and private entrepreneurship, tax regime, tax incentives, simplified taxation, tax reform, investment tax credit.*

### **Introduction**

Continuation of the policy of reducing the tax burden and simplifying the taxation system in the third direction of the Action Strategy "Further development and liberalization of the economy" to provide additional motivation to small business and private entrepreneurship in the implementation of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021. Improving tax administration and expanding appropriate incentives, as well as creating a favorable business environment for the development of small business and private entrepreneurship, reducing government interference in the activities of business structures, ensuring the free operation of taxpayers and providing them with the necessary assistance to expand their activities.

Great attention is paid to creating a favorable investment climate and an attractive investment climate, promoting fair competition, and encouraging the rapid development of small business and private entrepreneurship. This approach is primarily explained by the priority of rapid development of the private sector in the economy of the republic.

Thanks to the measures taken over the past 5 years, Uzbekistan has risen from 146th to 76th place among 190 countries in the ranking of the World Bank and the International Finance Corporation "Doing Business".

Today, more than 90 percent of all businesses are small businesses. The main goal of small business development is to expand the share of the private sector in the country's economy, increase the self-employment of the population, especially youth, as well as increase the income from entrepreneurial activities to 70% of the total income structure. It is also planned to increase the turnover of small businesses by 2018, primarily due to the legalization of their activities, as well as increase labor productivity in this sector by at least 7%.

It should be noted that the measures taken will help to further strengthen entrepreneurship, diversify the economy, increase the share of private property in it, attract investment for modernization and technological renewal of production.

As a result, the share of small business in GDP in 2030 will increase to 70.1% (59.4% in 2018), industry to 54.3% (34.7%), investment to 52.3% (34.9%), exports to 45.2% (26.5%) [1].

As noted in the Address of the President of the Republic of Uzbekistan Sh. Mirziyoyev to the Oliy Majlis in 2020: "The only way to eliminate the 'hidden' economy is to reduce the tax burden on the basis of the new tax concept, increase the competitiveness of our economy through the application of a simple and stable tax system, create a favorable environment for entrepreneurs and investors."

Decisions made in recent years on the system of taxation of small businesses have introduced some misunderstandings, various controversial issues, including the application of the simplified taxation procedure, the turnover of a single tax payment of more than 1 billion soums. Under the simplified taxation procedure, 1 bln. The introduction of the soum is aimed at legalizing the hidden income and increasing the fiscal function of taxes, on the one hand, and on the other hand, it is necessary to equalize the tax burden on the general and simplified taxpayers.

As the head of our state Sh. Mirziyoyev noted: "Our citizens should not be interested in tax evasion, but in its timely payment. The main idea of the new tax concept, which will be introduced from 2019, is to reduce the tax burden, to apply a simple and stable tax system. In this way, we can increase the competitiveness of our economy, create a comprehensive environment for entrepreneurs and investors."

Law of the Republic of Uzbekistan No. ZRU-508 of December 24, 2018 "On amendments and additions to some legislative acts of the Republic of Uzbekistan in connection with the adoption of the main directions of tax and budget policy for 2019" and the Decree of the President of the Republic of Uzbekistan dated December 26, 2018 Resolution No. PP-4086 "On the forecast of key macroeconomic indicators and parameters of the State Budget and budget targets for 2020-2021" guarantees the implementation of the simple and stable tax system, as noted by the President.

#### Main part

The country's economy includes interconnected industries and sectors. This deepening and development, expansion of the division of labor, in turn, makes it necessary to ensure the balance of activities of all sectors and industries. The emergence of such a balance creates the basis for the balanced development of the economy and the welfare of the population. The higher the use of natural and labor resources, the greater the material basis for the success of the economy, human consumption, its higher standard of living. One of the features of modern production is the efficient use of labor resources, saving labor, ensuring its safety and freedom.

There are various ways to define the scope of small businesses, one of which is to identify businesses based on their area of activity and the number of people employed in them. Depending on the nature and objectives of the activities of these small businesses, a specific organizational and legal form is selected [2].

Entrepreneurial activity manifests itself as a form of business and is carried out in its various branches. Thus, an entrepreneur is an enthusiastic person with full or partial material or financial resources, who uses this resource to organize his business. The firm (organization, company, enterprise) created by him will become a part of developing small business in our country [3].

Today, a lot of attention is paid to the support of enterprises in the real sector of the economy, first of all, modernization of production, expansion of cooperation, establishment of strong cooperation, stimulation of domestic demand for domestically produced products. In particular, special attention is paid to the implementation of the following:

1. Take appropriate measures to support economic structures to reduce the tax burden, simplify and unify the taxation system.

2. Revision of overdue and current accounts payable of enterprises on payments to the budget and extra-budgetary funds for the purpose of state support.

3. Implementation of measures to reduce costs associated with the organization of business entities.

It is worth noting three important areas of state support for entrepreneurship. These are;

- Improving the order in foreign market relations;
- Improving fiscal and credit policies governing the financial condition of the enterprise;

- introduction of the mechanism of self-regulation of the existing state institutional system.

The state performs such tasks through the use of a coordination mechanism.

Further improvement of the business environment, creation of the most favorable investment climate, increasing the transparency of public and economic administration, on this basis, radically improving the business environment, creating new jobs and the population in the private sector of the economy. In order to increase employment, the President of the Republic of Uzbekistan on August 13, 2019 "On additional measures to radically improve the system of protection of private property and strengthening the guarantees of property rights, support for entrepreneurial initiatives, as well as financial resources and production Resolution No. PQ-5780 "On expanding access to infrastructure" was adopted. In accordance with this decision, the moratorium on tax audits of financial and economic activities of small businesses that pay taxes and other mandatory payments on time, as well as ensure sustainable growth and profitability of production, has been extended until January 1, 2021.

A number of programs are being implemented to provide financial support to various segments of the population, including young people, low-income and vulnerable citizens and small businesses. More than 7.2 trillion soums have been allocated for the implementation of the "Every Family is an Entrepreneur" program alone.

As the world experience shows, the development of small business and private entrepreneurship in general contributes to the emergence of the middle class,

the expansion of a stable tax base. At the same time, the development of small business and private entrepreneurship plays an important social role, especially in creating new jobs in rural areas and solving the problem of employment among young people [9].

It should be noted that the tax system is constantly being improved, depending on the direction of state economic policy and taking into account the results of existing taxes. Current measures to improve it are aimed at rational reduction of taxes, consolidation of some payments, introduction of a simplified and preferential system for small and private businesses. In particular, the new version of the Tax Code of the Republic of Uzbekistan, which came into force on January 1, 2020, provides for the transition to a simplified system of taxation for small businesses, ie a single tax instead of various taxes.

The transition to such a system should facilitate the work of accounting and reporting staff in the tax authorities and reduce the number of potential violations and irregularities. According to the tax authorities, about a quarter of small businesses have switched to a single tax payment. This does not significantly reduce the tax burden. Because under the new tax system, income from the sale of products is taxed, not profit. In this case, a single fixed tax rate is established for all categories of taxpayers, regardless of the size of the enterprise, output and profit.

As the economy develops and improves over the years, taxes take precedence. Therefore, in order to ensure macroeconomic stability, one of the most pressing issues today is to increase the share and quality of products created by small businesses operating in the country in GDP, the effectiveness of employment.

In order to determine the place of the single tax payment in the system of taxation, it is expedient to study its place in the system of state budget revenues of the Republic of Uzbekistan.

**Table 1**

**Dynamics of change in the share of the single tax in state budget revenues (in percent)<sup>8</sup>**

Indicators	2017 year	2018 year	2019 year
Without the income of state trust funds - total	100	100	100
Direct taxes	25,8	23,6	23,0
Allocations to the state budget from the single tax payment from trade and catering enterprises	3,3	3,3	3,4
Allocations from the single tax payment to the state budget	3,0	2,9	3,1

The table shows that the share of the single tax payment in the state budget is not so high. The dynamics of single tax revenues in 2017-2019 has an upward trend,

<sup>8</sup>Prepared on the basis of appendices to the decisions of the President of the Republic of Uzbekistan.



its share in total revenues in 2017 was 6.3%, in 2018 - 6.2%, in 2019 - 6.5%, ie its share in total revenues was 0 , An increase of 3 percentage points.

Single tax rates for 2019 were approved by the Decree of the President of the Republic of Uzbekistan dated December 26, 2018 No RQ-4086 "On the forecast of key macroeconomic indicators and parameters of the State Budget of the Republic of Uzbekistan for 2019 and budget targets for 2020-2021". it is categorized as follows:

**Table 2**

**Single tax rates <sup>9</sup>**

<b>T/ P</b>	<b>Payers</b>	<b>Tax rates, as a percentage of the taxable base</b>
1	Legal entities in all sectors of the economy, except as provided in paragraphs 2-8	4*
2	Legal entities providing customs clearance services (customs brokers)	5
3	Pawnshops	25
4	Legal entities that receive income from the organization of public performances by attracting legal entities and individuals (including non-residents) licensed to engage in concert activities	5
5	Brokerage agencies (except for those specified in paragraph 6), as well as legal entities providing brokerage services under brokerage, bidding agreements and other contracts for the provision of brokerage services	25**
6	Legal entities engaged in brokerage activities in the securities market and commodity exchanges	13**
7	Legal entities whose main activity is leasing of property (except for leasing companies)	30
8	Procurement organizations for the purchase, sorting, storage and packaging of agricultural products	4% of trade turnover or 25% of gross income

Note: \*) the amount of interest income on financial lease (leasing) for enterprises that lease property.

\*\*\*) as a percentage of the amount of remuneration (gross income).

From January 1, 2019, the fixed tax rate paid by individuals engaged in entrepreneurial activities without obtaining the status of a legal entity is as follows (Table 3).

<sup>9</sup>Taken from the Resolution of the President of the Republic of Uzbekistan dated December 26, 2018 No RQ-4086 "On the forecast of key macroeconomic indicators and parameters of the State Budget of the Republic of Uzbekistan for 2019 and budget targets for 2020-2021."

## Fixed tax rates for individual entrepreneurs <sup>10</sup>

T/p	Activity type	Fixed monthly tax rate (in soums)			
		Tashkent c	Nukus c. and cities under the province	Other cities	Other places
1	Retail:				
	with food and non-food items	1 000 000	750 000	400 000	300 000
	with agricultural products in farmers' markets *	400 000	200 000	100 000	50 000
	with newspapers, magazines and book products	500 000	250 000	200 000	50 000
2	Household services	350 000	200 000	100 000	50 000
3	Production and sale of own products, including the preparation and sale of national sweets and bakery products, as well as the preparation and sale of certain types of food sold in bulk at home or in specially designated areas by the decision of local authorities	300 000	200 000	100 000	50 000
4	Children's slot machines	300 00	200 000	100 000	50 000
5	Other activities	300 000	200 000	100 000	50 000
6	Road transport services:				
	For trucks with a carrying capacity of up to 3 tons	200 000			
	For trucks with a carrying capacity of more than 3 tons	300 000			

*\*) Livestock (livestock, raccoon, fur and other animals, fish, etc.) and their products slaughtered, raw or processed, in addition to industrial processing, livestock, beekeeping and agricultural products are natural and excluding sales in processed form (except for ornamental horticultural (floriculture) products).*

<sup>10</sup>Taken from the Resolution of the President of the Republic of Uzbekistan dated December 26, 2018 No RQ-4086 "On the forecast of key macroeconomic indicators and parameters of the State Budget of the Republic of Uzbekistan for 2019 and budget targets for 2020-2021."

In accordance with the Law "On the State Budget of the Republic of Uzbekistan for 2020" introduced two important innovations in the taxation of individual entrepreneurs.

The first is that from 2020, the trade turnover will reach 100 million. Individual entrepreneurs (YTTs) were given the right to choose the procedure for payment of personal income tax instead of the fixed tax.

In particular, the NTO may choose to pay personal income tax (at the rate of 12 percent) or income tax in a fixed amount by submitting a declaration to the tax authority on the income received.

Second, from 2020, the amount of fixed income tax amounts for NPOs has been significantly reduced.

### **Conclusion**

In the course of our research on improving the mechanism of taxation of small businesses and reducing the tax burden, the following scientific conclusions were made:

1. One of the most pressing issues in the context of modernization of the economy is the value added in the financial statements in order to determine and regularly analyze the real level of the tax burden on small businesses. It is also advisable to include an indicator.

2. Determining and substantially reducing the optimal option of the level of tax burden on enterprises is a complex process, and the percentage analysis performed may not reflect the real situation in practice.

When comprehensive measures are taken to address the factors affecting the level of the tax burden, it is possible to achieve a truly reasonable reduction in the tax burden on the enterprise. These factors are inextricably linked and, in our opinion, include: the number, size and level of taxes, levies and contributions to extra-budgetary funds paid by the enterprise in the chosen system of taxation; established benefits and conditions of their application; formation of the tax base of taxes and levies features; the level of solvency and financial soundness of enterprises.

3. An in-depth analysis of the tax planning process, which is effectively used in the activities of business entities in developed countries, was based on the expediency of expressing this concept as follows. Business tax planning is the process of reducing taxpayers' tax liabilities within the law, minimizing production costs, maximizing profits through efficient investment and identifying additional sources of income, efficient use of property, and the introduction of new innovative techniques and activities. is a set of actions aimed at reducing taxes with.

4. It is necessary to improve the existing mechanism for the transition of existing micro and small enterprises from the general taxation regime to the simplified taxation regime and, conversely, from the simplified procedure to the general taxation regime. Because, in our opinion, the mandatory establishment of the procedure for recalculation of general taxes and fees for the previous period, and non-compliance with this procedure is the basis for the imposition of financial sanctions, in our opinion, contradicts the principles of taxation.

In general, we would like to make the following suggestions and practical recommendations for improving the tax factor for the development of small business and private entrepreneurship:

1. At least two criteria in determining the status of small business and private entrepreneurship, namely, the number of people employed in the enterprise and the amount of annual working capital of the enterprise should be obtained. In our opinion, it is unreasonable to take the number of employees as the sole criterion for granting the status of a small enterprise in the support of the state, the provision of tax benefits. Given the number of employees in small businesses as a criterion for identification, it may hinder the objective resolution of employment, which is one of the most pressing issues for Uzbekistan.

2. Based on the results of the research, we consider it appropriate to define the tax burden as follows: the tax burden is based on the current tax legislation, all taxes and other mandatory payments, levies, other than the budget, calculated and paid by the business entity during the reporting period. contributions to funds and taxes by the business entity is the sum of administrative expenses, expressed as a percentage of the value added created during the reporting period of the business entity.

3. In our opinion, it is expedient to introduce stratified rates based on the share of value added created in the enterprises of the sector in setting OTR rates. Because Although the development of enterprises in some sectors plays an important role in the economy, the current tax rate for them is low, but the fact that they do not take into account the results of their activities in determining the tax base does not provide sufficient incentives for this type of activity. On the contrary, it is a priority in the economy. Despite the high rate of OTR in non-taxable sectors, the share of gross income as an object of taxation in the enterprises engaged in this activity is a relatively small share of OTR in sales revenue. This creates an unhealthy competitive environment in small businesses engaged in a variety of activities.

4. In order to improve the current practice of calculating the property tax and use it as a tool to encourage the efficient use of property, in the taxation of fixed assets on the balance sheet of business entities, based on their direct participation in the production process, divided into active and passive fixed assets In this case, it is advisable to apply the practice of setting tax rates. In this case, the tax should be levied at a lower rate on active fixed assets that are directly involved in the production process, and on passive fixed assets that are not directly involved in the production process. The introduction of this practice will force the company to make efficient use of underused administrative buildings and encourage investment in fixed assets involved in the production process.

5. Delay in payment of OTR to newly established micro and small enterprises for financial and economic activities of enterprises expanding the scope of the positive impact of the tax incentive provided in the form of in order to do so, the enterprise received the amount of deferred tax in those months. It is necessary to introduce the practice of distribution in proportion to the amount of income and to improve the process of granting the right to defer payment of OTR.

6. Accounts receivable that have not been collected during the claim period when the amounts are recognized by the economic court as "bad debt", a single tax payment to the state budget at the time of shipment of the product. The amount equal to the amount of the overdue "bad debt" must be returned to the enterprise. This will serve to improve the mechanism of implementation of the OTR on the basis of the principle of fair taxation.

7. In the process of transfer of OTR to the state budget by small enterprises producing goods, works and services, it is expedient to establish the procedure for the transfer of OTR, calculated by small enterprises, to the state budget in full. As a result, on the one hand, the procedure for collecting OTR in small enterprises will be adjusted to the tax principles, on the other hand, the redundancies made by the tax authorities and small enterprises will be eliminated.

8. In small enterprises that have voluntarily switched to YAT and VAT, it is advisable to fully reduce the amount of YAT to VAT. The application of this practice will serve to improve the mechanism of VAT accounting between counterparties and create a healthy competitive environment in the formation of prices.

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## **O'SMIRLIK DAVRIDA ALTRUISTIK XUSUSIYATLARNING PSIXOLOGIK AHAMIYATI**

*Annotatsiya: O'smir shaxsida ma'naviy- axloqiy xususiyatlar haqida tushunchalar shakllantirish orqali ularda shaxsiy xatti-harakatlarga nisbatan ma'suliyat hissini ortishiga zamin yaratish mumkin. Altruizm shaxsning ichki olami bilan bog'liq bo'lgan va uning tashqi xulq-atvorida namoyon bo'luvchi ijtimoiy axloqiy sifatlardan biri hisoblanib, o'smirlardagi empatiya hamda irodaviy sifatlarning barqaror shakllanganligi ulardagi altruistik xulq-atvorga zamin bo'lib xizmat qiladi.*

*Kalit so'zlar: o'smir, axloq, altruizm, empatiya, xulq-atvor, ijtimoiy norma, sanksiya, saxiylik.*

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## **PSYCHOLOGICAL SIGNIFICANCE OF ALTRUISTIC CHARACTERISTICS IN ADOLESCENCE**

*Annotation: By developing an understanding of the spiritual and moral qualities of a teenager, you can form in him a sense of responsibility for personal behavior. Altruism is one of the social moral qualities associated with the inner world of a person and reflected in his external behavior, and the stable formation of empathy and willpower in adolescents serves as the basis for their altruistic behavior.*

*Key words: youth, morality, altruism, empathy, behavior, social norms, sanctions, generosity.*

“Yoshlarimizning mustaqil fikrlaydigan, yuksak intellektual va ma'naviy salohiyatga ega bo'lib, dunyo miqyosida o'z tengdoshlariga hech qaysi sohada bo'sh kelmaydigan insonlar bo'lib kamol topishi, baxtli bo'lishi uchun davlatimiz va jamiyatimizning bor kuch va imkoniyatlarini safarbar etamiz” -deydi prezidentimiz Sh. Mirziyoyev.

Darhaqiqat, bolaning har jihatdan barkamol rivojlanishida uning ruhiy dunyosining sog'lomligi, xulq-atvorining mukammalligi, xatti-harakatlarining adekvatligi katta ahamiyatga ega. Bu bolaning ijtimoiy muhitda tez moslashuvida, maktabda bilim olishida, axloqiy ko'nikmalarning shakllanishida muhim o'ringa ega.

Jamiyatda har qanday shaxslararo munosabatlar zamirida o'zaro manfaatdorlik yotadiki, shunga muvofiq altruizm – bu mehr-muhabbat, xurmat,

g'amxo'rlik kabi psixologik hissiyot va ijtimoiy-psixologik qadriyatlarni o'zaro almashinishdir. Bunda kishilardagi o'z-o'ziga beradigan baho, o'z-o'ziga munosabat, emotsional soha muhim ahamiyat kasb etadi. Shaxs va jamiyat hayotida ijtimoiy ta'sirlarning roli beqiyosdir. Aynan ijtimoiy ta'sirlar, ya'ni, ijtimoiy norma, sanksiya, ijtimoiy ma'suliyat hissi va ijtimoiy rollarning o'zaro ta'siri natijasida kishilar altruistik xatti-harakatlarni sodir etadilar.

Milliy mintalitetimizga xos bo'lgan o'zgalarga xurmat, saxiylik, mehmondo'stlik, vatanparvarlik, mehr-muruvvatli qilib, boshqacha aytganda A.Navoiyning ta'kidlaganlaridek bolalarni «...yaxshilik, karam – bir jabrlanganning qattiqchilik yukini ko'tarmoq va o'sha qiyinchiliklardan qutqarmoqdir. [1]

Altruizm jamoatchilik tomonidan ijobiy sifat deb qaraladi va alturistik xatti-harakat ijtimoiy ma'qullangan xulq-atvor shakli sifatida tan olinadi. Chunki, shaxsning altruistik xatti-harakati uni ma'naviy, axloqiy, ruhiy kamolotidan darak beradi. Shaxsdagi bu kabi altruistik xulq-atvorni shakllantirish va barkamol avlodni tarbiyalash jamiyat oldida turgan muhim vazifalardan biridir. Zero, o'zaro muruvvat, sahovat, o'zaro beg'araz yordam, shaxsiy manfaatlardan jamiyat manfaatlarini ustun qo'yish kabi xulq-atvor elementlari o'zbek xalqining qon-qoniga singib ketgandir. Shu boisdan ham, o'smirlar orasida o'zaro mehr-muhabbat, sahovat, muruvvat kabi altruistik hislarni shakllantirish jamiyat taraqqiyotining zamiri bo'lmish barkamol avlodni tarbiyalashning muhim omilidir. O'smirlarda altruistik xulq-atvorni tarkib toptirishda quyidagi muhim jihatlarga e'tibor qaratish lozim:

Birinchi, beg'araz yordam berishga undovchi omillarni bartaraf etish darkor. Buning uchun shaxsda inqirozli vaziyatni aniqlashtirish yoki vaziyatga nisbatan ma'suliyat hissini tarkib toptirish lozim. [2] Bunda o'smirda dakki berish yoki qat'iy talab qo'yish ularda aybdorlik hissini va shaxsiy obro'sini tiklashga bo'lgan intilishni ortishiga olib keladi.

Ikkinchi, altruizmga o'rgatish mumkin. Ijtimoiy ma'qullangan xatti-harakatlarning ahamiyatini shaxsiy namuna asosida ko'rsatib berish orqali o'smirlarni anglangan xulq-atvorga o'rgatishning imkoniyatlari kengayadi. Oilada altruistik xulq-atvor namunalarini ko'rgan o'smirda o'zgalarga yordam berish, empatiya hislari yuqori darajada bo'ladi.

Uchinchi, agar biz o'smirlardan altruistik xulq-atvorni kutadigan bo'lsak, muhim jihatni, ya'ni ezgu ishlarni amalga oshirishga undovchi ichki motivatsiyani unutmasligimiz kerak. O'smir o'z altruistik xatti-harakatining ichki imkoniyatlari va motivlarini to'g'ri anglab yeta olsa, u o'zgalarga ongli ravishda beg'araz yordam berishda davom etaveradi.

Umuman olganda, shaxsni altruistik xulq-atvorga qanday motivlar undashi borasida ko'pgina atoqli faylasuf, psixolog, sotsiolog va boshqa sohadagi olimlar uzoq yillardan buyon izlanishlar olib boradilar. [3]

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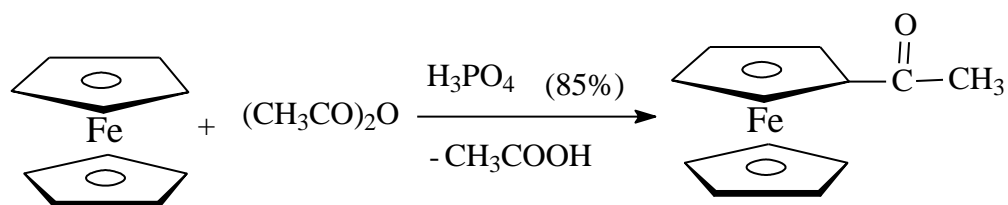


## FERROSEN REMOVAL REACTIONS

*Annotation: The article provides information on ferrocene arylation reactions, as well as biologically active substances containing ferrocene*

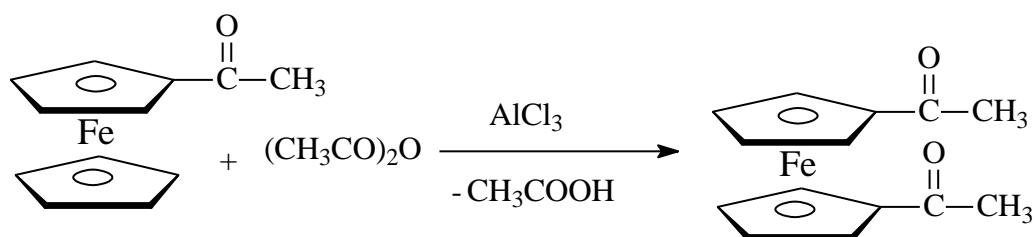
*Keywords: ferrocene, heteroannular, homoannular, diacetylferrocene, ferrosenylketone, polyalkylferrocene.*

Ferrocene is more susceptible to electrophilic substitution reactions than benzene. For example, the acylation reaction of ferrocene occurs in the presence of phosphoric acid under the action of acetic anhydride.

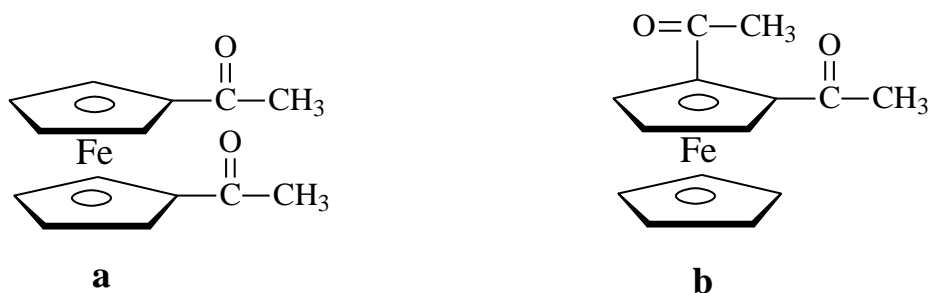


### Synthesis of monoacetylferrocene

The acetyl group reduces the activity of ferrocene. The addition of a substituent to a molecule, such as an acetylation reaction, occurs under more severe conditions in the presence of Lewis acids:

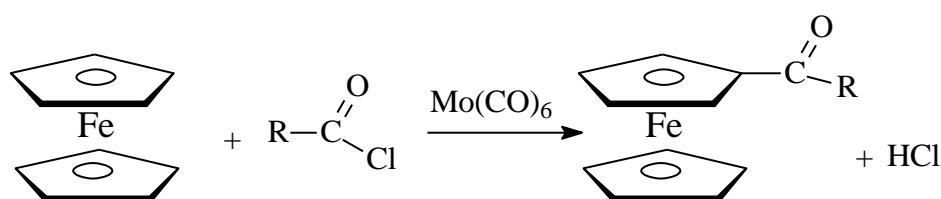


In the synthesis of diacetylferrocene mainly heteroannular diacetyl compound - 1,1'-diacetylferrocene and to a lesser extent its homoannular isomer - 1,2-diacetylferrocene are formed [1]:

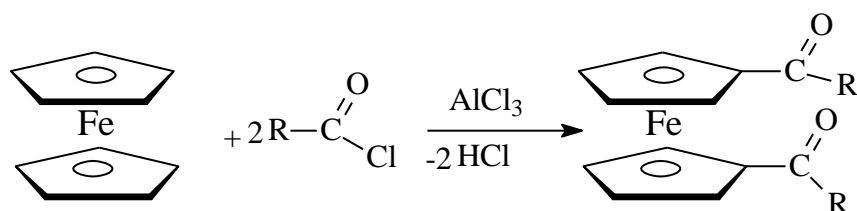


**a**-1,1'-diacetylferrrocene; **b**-1,2-diacetylferrrocene

It has been shown that ferrocene can be acylated with acyl chlorides in the presence of hexacarbon molybdenum:



Acetylferrocenes are used to obtain other derivatives of ferrocene. It has been shown that diacylferrocenes are formed when ferrocene is acylated with halogen anhydrides or anhydrides in the presence of large amounts of aluminum chloride. The reaction produces mainly heteroannular diacetylferrocenes and very few homoannular diacetylferrocenes.



#### Heteroannular diacetylferrocene synthesis

The two cyclopentadienyl rings in ferrocene can be linked by an acylation reaction [2].

The reaction produces a specific bridging compound of ferrocene.

The formation of mono- and polyalkylferrocenes as a result of alkylation of ferrocene by Friedel-Crafts has been reported in the literature [3]. Under such conditions, the yield of the alkylation reaction is of more medicinal value. This is because oxidation, isomerization reactions, and partial decomposition of the ferrocene nucleus occur during the process.

The unusual chemical structure of the ferrocene nucleus and the possibility that such compounds can be used in a variety of fields, including the production of

biologically active compounds, determine the relevance of the study of ferrocene derivatives over the last decade. Ferrosenyl (alkyl) derivatives have been found to have high anti-tumor activity and low toxicity [4].

The arylation reactions of ferrocene are also relatively well studied, and the methods of synthesis of arylferrocene are as follows [5]:

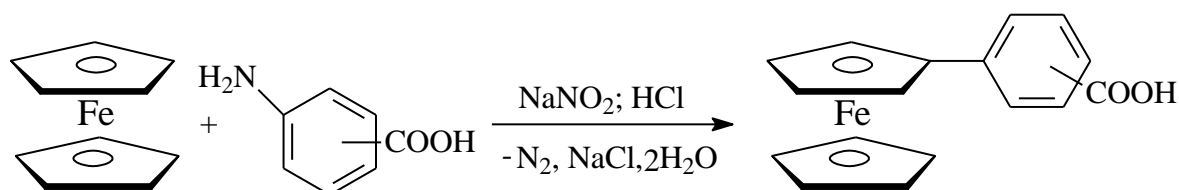
1. Radical arylation reactions;
2. Ferrosenyl halides are converted to arylboric acids or  $\text{Fc} - \text{EX}_n$  ( $\text{E} = \text{B}, \text{Zn}, \text{Hg}$  and b.,  $\text{X} = \text{Cl}, \text{Br}, \text{I}$ ) cross-coupling reactions of compounds of the type with aryl halides;
3. Reaction of alkali metals with arylcyclopentadienides with salts and complexes of Fe (II) or Fe (III).

Ferrocene derivatives with aromatic compounds are obtained mainly by diazotization.

It is known that the diazotizing reaction was discovered by P. Gris in 1858 and is widely used in organic synthesis. Based on this reaction, the production of paints on an industrial scale was launched. The diazotization reaction is also widely used to obtain various compounds of aromatic amines, ie to introduce an aromatic compound residue into a molecule of organic matter [6].

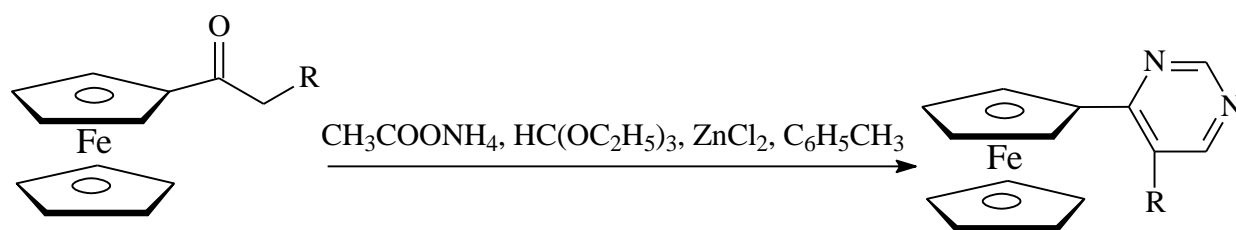
Ferrocene aryl compounds are relatively well studied. Arylation reactions are mainly carried out with arenediazonic salts. Depending on the reaction conditions, mainly mono- and partially bis-heteroannular diarylferrocenes were formed [1].

Among the arylferrosens, ferrosenylbenzoic acid is also important. The interaction of diazonium salts and ferrocene made from aminobenzoic acids results in the formation of ferrosenylbenzoic acid:

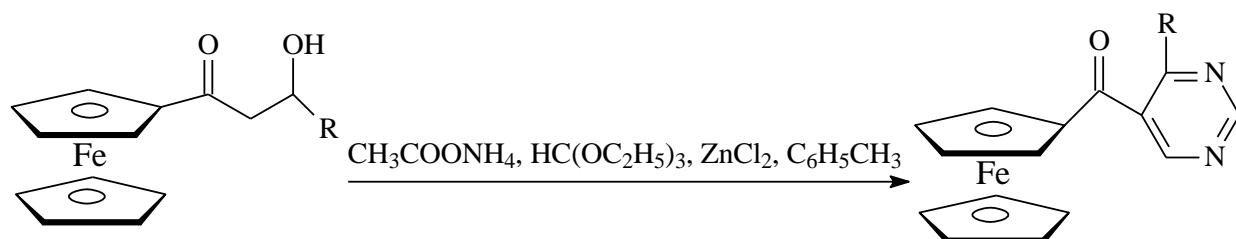


Ferrosenylphenols were also synthesized by this method. Some derivatives of ferrosenylbenzoic acids and ferrosenylphenols are biologically active compounds. For example, the sodium salt of p-ferrocenyl-phenol has been shown to be used in the treatment of anemia, while the sodium salt of o-carboxybenzoilferrosene has been introduced into the treatment of anemia under the name Ferrocerone [6,7].

Derivatives of ferrocene with some heterocyclic compounds have also been reported in the literature. For example, ferrosenyl-pyrimidines are derived from ferrosenyl ketones by annealing (a type of cyclization reaction in which an additional cycle is attached to an existing cyclic compound) and intramolecular cyclization reactions [8]. The electrochemical properties of the newly obtained compounds were studied.



Ferrosenoylpyrimidines have been shown to react with ferrocenylbutandione-1,3.



The structure of the obtained compounds was confirmed by PMR and <sup>13</sup>C spectroscopy methods. These compounds have been described as potentially biologically active substances.

Under the guidance of Professor IR Askarov, the synthesis of a number of aromatic compounds of ferrocene and its derivatives was carried out with high efficiency [9,10].

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## **THE ROLE OF INVESTMENT IN ACHIEVING ECONOMIC EFFICIENCY**

*Abstract: This article discusses the role of investment in achieving economic efficiency.*

*Key words: economy, efficiency, economic indicators, stock, investment, risk*

The concept of “investment” is quite multifaceted. In general, investment in the economic literature refers to any current activity that increases the future ability of the economy to produce. Accordingly, the investment of funds and other capital in the implementation of various economic projects with the aim of their subsequent increase is called investment. Legal entities and individuals making investment investments are investors.

The economic motive for investing funds is to receive income from their investment. In other words, investments include only those investments that are aimed at making a profit, increasing the volume of capital. Consumer investments, for example, in the purchase of household appliances, automobiles for household personal use and other goods, in terms of their economic content, are not considered investments.

In world practice, there are three main forms of investment: real (capital-forming) investments; portfolio investment; investments in intangible assets.

Real (capital-forming) investments are investments in real assets, i.e. in the creation of new, reconstruction and technical re-equipment of existing enterprises, industries, technological lines, various objects of production and social services in order to increase fixed assets or working assets.

Portfolio investments are investments in the purchase of securities of the state, enterprises, banks, investment funds, insurance and other companies. In this case, investors increase their not production, but financial capital, receiving income from the ownership of securities. At the same time, the real investments of funds spent on the purchase of securities are made by enterprises and organizations that issue these securities.

Investments in intangible assets include investments aimed at acquiring licenses, patents for inventions, certificates for new technologies, trademarks, certificates for products and production technologies and other intangible assets.

Investments in the economic literature are usually classified according to the following main characteristics:

1. By the nature of participation in investment:

a) direct investment - direct investment of funds by an investor in investment objects (this type of investment is carried out mainly by trained investors who have sufficiently accurate information about the investment object and are well acquainted with the investment mechanism);

b) indirect investment - investment mediated by other persons (investment or financial intermediaries). These investments are made by investors who do not have sufficient qualifications to select investment objects and further manage them. In this case, they purchase securities issued by investment or other financial intermediaries (for example, investment certificates of investment funds and investment companies), and the latter, collected in this way, place investment funds at their own discretion - they choose the most effective investment objects, participate in their management, and the income received is then distributed among their clients.

2. By the investment period:

a) short-term investments - capital investment for a period not exceeding one year (for example, in fast-moving commercial projects, short-term deposits, etc.);

b) long-term investments - capital investment for a period of more than one year (as a rule, in large and long-term investment projects).

In the practice of investment companies and banks, long-term investments are detailed as follows: up to 2 years, from 2 to 3 years, from 3 to 5 years, more than 5 years.

3. By the form of ownership:

a) private investments - investments made by citizens, as well as by non-state enterprises and organizations;

b) public investments - investments made by central and local authorities and administration at the expense of budgets, extra-budgetary funds, as well as state enterprises at the expense of their own and borrowed funds;

c) foreign investments - investments made by foreign citizens, legal entities and states;

d) joint investments - investments made by persons of a given country and foreign states.

Investments, especially real (capital-forming) investments, can be carried out both at the expense of internal (national) and external (foreign) sources. Both sources of investment play a significant role in enhancing the attraction of capital and the development of the country's economy.

First, let's look at internal sources of investment. On a national scale, the overall level of savings depends on the level of savings of the population, organizations and government. Thus, the population can set aside certain funds for the future, companies can reinvest part of the profits received from their activities, and the government can accumulate funds by exceeding the receipt of funds. into the budget over expenses. At the same time, the amount of savings directly affects the amount of investment in the country, since part of the funds is directed to consumption, and the rest to investment.

Based on this, the following main internal sources of investment can be identified:

a) profit

Businesses and organizations often use profit as a source of investment. Part of the profits earned is directed by them to business development, production expansion and the introduction of new technologies. It is obvious that those enterprises and organizations that do not allocate funds for these purposes ultimately become uncompetitive.

b) bank loan

Bank lending in many developed countries is one of the main sources of investment. At the same time, a special role is played by long-term lending, since in this case the load on the borrower is not high and the company has time to “spin up” the business. However, the role of bank lending as a source of investment depends on the development of the banking system and economic stability in the country. There is no doubt that the instability in the country leads to the reluctance of banks to issue long-term loans and finance investment projects.

In general, bank lending contributes to a gradual increase in production and, as a result, to the overall recovery of the country's economy.

c) issue of securities

The issue of securities is gradually becoming a source of investment in Russia. At the same time, in developed countries it is the issue of securities that is one of the main sources of financing for investment projects.

In order to receive funds, enterprises can issue both shares and bonds. At the same time, buyers of securities, as a rule, can be any legal entities and individuals with free funds. It is they who in this case act as investors, providing their own funds in exchange for the company's securities.

d) budget financing

Currently, there is a state budget surplus in Russia. Thanks to this, it is possible to implement part of the investment projects at the expense of centralized sources of financing. At the same time, both irrevocable budget financing of nationally significant projects and lending to potentially profitable projects can be used.

e) depreciation charges

Depreciation deductions are aimed at restoring the means of production that are worn out in the process of being used in the production of goods. However, at present in Russia depreciation charges are depreciating due to inflation, which significantly reduces their role as sources of investment.

a) foreign direct investment

It is customary to understand direct investments as capital investments in real assets (production) in other countries, in the management of which the investor participates. Investments can be considered direct if a foreign investor owns at least 25% of the company's shares, or their controlling stake, the amount of which can vary within a fairly wide range depending on the distribution of shares among shareholders.

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## **THE ROLE OF INVESTMENT IN THE DEVELOPMENT OF THE CAPITAL MARKET**

*Abstract: This article discusses the role of investment in the development of the capital market.*

*Key words: Capital, market, securities, investment, stocks*

The growth of the gross domestic product (GDP) that has taken place in recent years is evidence of the outlined recovery of the Russian economy. However, it is important that the growth of GDP in the country's economy was due to the development of industries producing high-tech and competitive products that provide demand in the domestic market and access to the external one. The most important factor for solving this problem is to increase the scale of investments and increase their efficiency.

As a result of market reforms in the country, there have been significant changes in the organization and implementation of investment activities, along with state investments and investors, private and foreign ones appeared. Accordingly, new, increased requirements were imposed on the efficiency of investment projects, the formation of sources of their financial support and the optimization of the latter. Under the influence of internal and external competition, innovation has become an integral part of business development. The stock market has been formed and is functioning, which allows enterprises to mobilize resources or invest them in financial instruments. Leasing, project financing, mortgage lending and other modern methods are being introduced into the practice of financing capital investments.

However, the key investment issue remains investment in fixed assets of the enterprise. It is investment in the development, improvement, timely maintenance or replacement of fixed assets that gives the enterprise the opportunity to improve production efficiency, expand the sales market, increase production capacity and the quality of products.

In other words, capital investments are investments in fixed assets (fixed assets), including the costs of new construction, expansion, reconstruction and technical re-equipment of existing enterprises, the acquisition of machinery, equipment, tools, inventory, design and survey work and other costs.

Thus, the objects of investment carried out in the form of capital investments are the costs of construction and installation work during the construction of buildings and structures; purchase, installation and adjustment of machinery and equipment; costs for design and survey work; the costs of maintaining the

directorates of an enterprise under construction; costs for training and retraining of personnel; costs of land acquisition and resettlement in connection with construction, etc.

Investments carried out in the form of capital investments are subdivided into the following types:

1) defensive investments aimed at reducing the risk of purchasing raw materials, components, maintaining the price level, protecting from competitors, etc .;

2) offensive investments, due to the search for new technologies and developments, in order to maintain a high scientific and technical level of manufactured products;

3) social investments, the purpose of which is to improve the working conditions of personnel;

4) mandatory investments, the need for which is associated with the satisfaction of state requirements in terms of environmental standards, product safety, other conditions of activity, which cannot be ensured by only improving management;

5) representative investments aimed at maintaining the prestige of the enterprise.

Depending on the direction of action, there are:

- initial investment (net investment) made upon acquisition or founding of an enterprise;

- extensive investments aimed at expanding production potential;

- reinvestment, which is understood as the investment of released investment funds in the purchase or manufacture of new means of production;

- gross investment, including net investment and reinvestment.

In economic analysis, another grouping of investments made in the form of capital investments is also used:

1) investments aimed at replacing equipment worn out physically and (or) morally;

2) investments in equipment modernization. Their goal is primarily to reduce production costs or improve the quality of products;

3) investments in the expansion of production. The task of such investment is to increase the possibilities of producing goods for previously formed markets within the framework of already existing industries, while expanding the demand for products or switching to the production of new types of products;

4) investments in diversification associated with a change in the range of products, the production of new types of products, the organization of new sales markets;

5) strategic investments aimed at introducing the achievements of scientific and technological progress, increasing the degree of competitiveness of products, reducing economic risks. Structural changes in the economy are implemented through strategic investments, key import-substituting industries or competitive export-oriented industries are developing.

Investments made in the form of capital investments play a very important role in the life of every enterprise. The main opportunity to improve the financial condition of the enterprise is precisely the investment in the organization's fixed assets. Through investments in development, improvement, timely maintenance or replacement of fixed assets, it gives the enterprise the opportunity to improve production efficiency, expand the sales market, increase production capacity and the quality of products. Ultimately, this can increase the volume and range of products, expand the client base, shorten the delivery time of raw materials, production time, product delivery and, as a result, increase the profit of the enterprise.

However, it should be borne in mind that for all these positive effects from capital investments, a comprehensive economic analysis of the project is required, which will answer the question: will the company's management be able to control the increase in production? After all, the concentration of production can lead to the loss of production management, a decrease in labor productivity, significant damage to social development and disruption of the natural environment. Therefore, before the implementation of the project, it is necessary not only to analyze its positive aspects, but also to pay attention to the managerial, organizational and optimization capabilities of the bodies managing the project.

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## MARKETING AUTOMATION-BENEFITS AND COSTS

*Annotation: Within manufacturing industries, automation has led to increased labour productivity as fewer workers are needed to produce the same number of manufactured goods.*

*A perceived downside of automation is that it leads to jobs being displaced in traditional areas of work – in particular, 'blue-collar' manufacturing jobs. Less visible is how the process of automation leads to the creation of new jobs in areas such as robot manufacture, research, marketing and software development.*

*Key words: manufacturing industries, automation, job, economy of scope, economy.*

Definition of automation Automation refers to the process of automatically producing goods through the use of robots, control systems and other appliances with a minimal direct human operation.

However, there are still concerns about the social and economic impact of the rapid job displacement associated with automation and globalisation. In fact, there is enduring concern automation is costing jobs – an idea some economists argue is just an enduring faith in the Luddite fallacy.

Automation	
Pros	Cons
<ul style="list-style-type: none"> <li>More efficient production</li> <li>Higher labour productivity and higher wages/profit.</li> <li>Cheaper goods <u>increases</u> disposable income of consumers.</li> <li>Avoids boring, repetitive jobs</li> <li>Can enable a shorter working week</li> <li>Can improve safety and remove risk of human error</li> <li>Can give consumers greater choice of goods.</li> </ul>	<ul style="list-style-type: none"> <li>Some workers displaced – possible structural unemployment</li> <li>Creates winners and losers – possible increase in inequality</li> <li>Automation could increase monopoly power</li> <li>Loss of human interaction – dealing with computers leads to lower quality of life.</li> <li>Automated systems can show lack of empathy with events.</li> </ul> <p style="text-align: center; font-size: small;">www.economicshelp.org</p>

Benefits of automation for firms

- Automation enables firms to produce goods for lower costs. Automation leads to significant economies of scale – important in industries which require high capital investment.

- Automation enables firms to reduce number of workers, and this limits the power of trades

unions and potentially disruptive strikes.

- Automation also enables a greater economy of scope. This means that one factory is able to produce a greater range of goods; this diversity and product differentiation is as important for firms as lower unit labour costs. In the 1950s, the goal was to produce goods as cheaply as possible. Now, consumers are looking for greater customisation of products. Automation enables consumers to be able to customise the size, look and function of your fridge – rather than just picking a standard model from the assembly line.

- Automation can also enable shorter lead times, quicker delivery and more efficient use of stock and cash flow.

- Automation can improve safety records by implementing automatic fail safe mechanisms and reduce the risk of human error.

#### Costs of automation for firms

- Requires significant capital investment and the benefits may take several years to exceed current production methods.

- Firms who are under short-term pressures may be reluctant to take the investment needed and lag behind. Lack of investment in automation has been put forward for poor growth in labour productivity in US and UK.

- Requires more specialised labour to develop software and maintain machinery.

- Some forms of automation may put off consumers. For example, consumers may get frustrated speaking to a computer rather than dealing with a human on the end of the phone.

#### Benefits of automation for the economy

- In addition to the benefits accruing to firms, automation can have various benefits for wider society. Consumers have gained the convenience of greater choice of goods and services. For example, ATM cash machines are a very simple example of automation which enables people to get cash when banks are closed.

- Lower costs of production enable lower prices, leading to more disposable income to be spent on a wider range of services.

- Leads to the creation of new kinds of jobs, which are more creative, less repetitive and enable more flexible labour markets. For example, rather than do repetitive jobs in a factory, young workers can become software engineers to develop the ideas, design and methods that the robots will then make.

- More profitable firms should, in theory, enable governments to receive more tax revenue to spend on public goods.

- Automation is essential to remain internationally competitive. If one country doesn't automate, production will shift to those countries who do, and then gain comparative advantage.

#### Problems of automation for the economy

- It can create winners and losers. Some will benefit significantly from automation – owners of more profitable factories, and software developers. However, those who lose jobs from the process of automation, may struggle to gain equivalent employment.

- In recent years, there has been a rise in male unemployment and inactivity across western Europe / US. Globalisation and automation has been suggested as one reason for these higher structural rates of unemployment – especially amongst unskilled male workers. Even those who have found work, often find it is in the gig economy – zero hour contracts. This has created ill-feeling towards the direction of the economy – despite higher GDP.

- Impact on equality. The process of automation has co-incided with a rise in levels of inequality in UK and US. There are many reasons for the rise in inequality, but the fear is that some benefit from automation more than others.

- Automation may increase corporate profit, but not necessarily median wages. Since 2008, we have seen a rise in real GDP, but median wages have stagnated. Company profit has increased, but the share of tax revenue paid by companies is not increasing.

- Automation can increase monopoly power of the most successful technology firms, e.g. Apple, Amazon have all benefitted from automation to gain higher market share.

- Loss of human element. We are moving to a society where we have less personal contact – self-service till, automated announcements and buying online. It means we can avoid having human contact and although the economy may be efficient, it could create problems of loneliness and a sense of separation. This human touch is something not measured by economic statistics like GDP.

- For example, if a human is making announcements about trains, they can make jokes and entertain waiting passengers. An automated computerised announcement system has no sympathy, empathy, but is robotic. Uber uses an automated pricing mechanism. This meant during some crisis, the price of Ubers went through the roof. This gave impression Uber was profiting from tragedy. (Uber later but cap on surge-pricing).

Future trends of automation

- 3d printing and automation of customised production are just in their infancy. Over the next few years/decades we could see a prolonged revolution in labour markets. Quite soon we could see driver-less taxi's, and print on demand services for a whole range of goods. If this occurs, we could see further pressures on old fashioned styles of jobs. The labour market could see further fragmentation between 'insiders/high skill' and outsiders/low skill.

Conclusion Automation is a major influence on the economy and will continue to be over the next decade. In theory, automation can lead to significant benefits for the whole economy. Greater GDP, higher productivity and increased customisation of the consumer experience. However, there are legitimate concerns about how these gains will be distributed. It is tempting to dismiss all concerns of new technology as the old Luddite fallacy. But, there is no guarantee that displaced workers will be seamlessly integrated into a very different labour market.

But, on the other hand, it would be a mistake to be too pessimistic. Past trends in automation have served the economy well. Who would go back to a time of 1 million people working as a coal miner or 90% of the population growing their own food? Automation will lead to new opportunities, and with increased technology, we could see the potential for a revitalisation of cottage industries – with self-employed workers having the ability to use their creativity to join a fast-changing economy.

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## **INDUCTIVE AND DEDUCTIVE METHODS OF TEACHING GRAMMAR**

*Annotation: Two very distinct and opposing instructional approaches are inductive and deductive. Both approaches can offer certain advantages, but the biggest difference is the role of the teacher. The article looks into two distinctive ways of teaching grammar.*

*Key words: inductive, deductive, monolingual classroom, authentic material, grammatical structures.*

There are two main ways that we tend to teach grammar: deductively and inductively. Both deductive and inductive teaching have their pros and cons and which approach we use when can depend on a number of factors, such as the nature of the language being taught and the preferences of the teacher and learners. It is, however, perhaps generally accepted that a combination of both approaches is best suited for the EFL classroom. Inductive and deductive approaches to teaching grammar have been studied since the beginning of the 20th century and continue to be the subject of experimental studies in the 21st century.

A large and growing body of literature has investigated the effects of deductive and inductive approaches on the acquisition of various grammatical structures. Deductive teaching is a traditional approach in which information about target language and rules are driven at the beginning of the class and continued with examples. The principles of this approach are generally used in the classes where the main target is to teach grammar structures. For instance, these principles are convenient for the classes that grammar translation method is applied. A deductive approach is based on the top-down theory which the presentation and explanation of grammar rules take the precedence over teaching.

These two approaches have been applied to grammar teaching and learning. A deductive approach involves the learners being given a general rule, which is then applied to specific language examples and honed through practice exercises. An inductive approach involves the learners detecting, or noticing, patterns and working out a 'rule' for themselves before they practise the language.

A deductive approach (rule-driven) starts with the presentation of a rule and is followed by examples in which the rule is applied. An inductive approach (rule-discovery) starts with some examples from which a rule is inferred.

– Thornbury, 1999

Both approaches are commonplace in published materials. Some course books may adhere to one approach or the other as series style, whereas some may be more flexible and employ both approaches according to what the language being taught lends itself to. Most inductive learning presented in course books is guided



or scaffolded. In other words, exercises and questions guide the learner to work out the grammar rule. The following course book extracts illustrate the two different approaches. The subsequent practice exercises are similar in both course books.

#### Inductive

The inductive teaching approach in TESOL is a sort of discovery learning that focuses on the student. For example, an instructor might use or show a few examples of a grammar point in English and then ask students what they notice. In many cases, the grammar point might be introduced by simply engaging the students in a directed conversation to slowly introduce it. The teacher guides the students to noticing the grammar pattern, and finally explicitly exposes them to it.

#### Example

A teacher writes on the board a few examples of simple present and simple past sentences. The teacher then asks the students what differences they notice in the sentences. The students discuss the differences and maybe even try converting some simple sentences from present to past on their own. Finally, the teacher explains the rule for converting sentences from past to present.

Pros and cons of an inductive approach to grammar teaching An inductive approach starts with some examples from which a rule is inferred. It is also called discovery learning. There are several advantages of this approach. First, rules learners discover for themselves are more likely to fit their existing mental structures than rules they have been presented with. Second, the mental effort involved ensures a greater degree of cognitive depth which again, ensures greater memorability. Third, students are more actively involved in the learning process rather than being simply passive recipients. Fourth, it is an approach which favors pattern-recognition and problem-solving abilities. Fifth, if the problem-solving is done collaboratively and in the target language, learners get the opportunity for extra language practice. Finally, working things out for themselves prepares students for greater self-reliance and is conducive to learner autonomy. However, there are several disadvantages as well. First, the time and energy spent in working out rules may mislead students into believing that rules are the objective of language learning rather than a means. Second, the time taken to work out a rule may be at the expense of time spent in putting the rule to some sort of productive practice. Third, students may hypothesize the wrong rule, or their version of the rule may be either too broad or too narrow in its application. Fourth, it can place heavy demands on teacher in planning a lesson. Fifth, however carefully organized the data is, many language areas such as aspect and modality resist easy rule formation. Finally, inductive approach frustrates students who would prefer simply to be told the rule.

#### Deductive

A teacher writes examples of simple present and simple past sentences on the board. The teacher then proceeds to explain the differences between present and past in English. Once the lecture is complete, worksheets are handed out and students are asked to convert simple sentences from present to past.

In contrast to deductive approach, the inductive approach represents a different style of teaching where the new grammatical structures or rules are

presented to the students in a real language context. The students learn the use of the structure through practice of the language in context, and later they realize the rules from the practical examples. It means from specific to general. For example, if the structure to be represented is the preposition the teacher would begin the lesson by showing a picture of flat and saying, “ This is my room and it is comfortable. There is a book on the table, there are six chairs near the table.” The teacher would then provide many examples using students and items from the classroom, hotels, living rooms or anything within the normal daily life of the students, to create an understanding of the use of the structure. After each of the various examples students practice the structures meaningfully in small groups or pairs. Fluency is emphasized than accuracy. Because according to Bob Adamson, The deductive method is often criticized because:

- a) It teaches grammar in an isolated way;
- b) Little attention is paid to memory;
- c) Practice is often mechanical.

It's a good opportunity in order to improve the learner's communicative skills. With this approach, the teacher role is to provide meaningful contexts to encourage demonstration of the rule. As Benjamin Franklin mentioned: “Tell me, then I forget, teach me then I remember, involve me and I learn”. Yes, if we involve our learners to learn the language through different types of activities, they'll learn with a great interest. As we know practice makes perfect. You can explicitly confirm the rules the students have discovered. You will not have told them these rules, you will merely guided the class towards them. So it also promotes increased student participation and practice of the target language in the classroom, in meaningful contexts. The use of the inductive approach has been noted for its success in classrooms world-wide, but its disadvantage is that it's sometimes difficult or students who expect a more traditional style of teaching to induce the long rules from context and that it is more time consuming. Except that, with the help of this method students will improve their transferable skills, which they use in a real life situation, such as: communicative skill ↓ problem solving skills ↓ decision making skills ↓ time management skill ↓ autonomy skill ↓ critical thinking skills ↓ presentation skills ↓ leadership skills.

In general, inductive techniques tend to adopt a naturalistic approach, while deductive methods mostly entail raising learners` consciousness of a particular feature. The relative merits and demerits of inductive and deductive methods of teaching grammar have been researched rather exhaustively in both societies where English is predominantly spoken and countries where it is spoken as a second language. The problem is that the findings of such studies are not truly generalizable to parts of the world where English is considered a foreign language. Furthermore, despite this large volume of research, it can be seen that there is little agreement in this regard. Some studies have pointed to the superiority of deductive methods, while others have made a compelling case for inductive approaches. It was found that those learners who had been taught grammar deductively demonstrated

significantly higher levels of accuracy than their peers who had been provided with inductive instruction.

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## THE IDEA OF ENLIGHTENMENT IN CHOLPON'S WORK

*Annotation: This article summarizes the views of one of our modern scholars Cholpon on the issues of spiritual and enlightenment education, including the role and importance of the concept of enlightenment in the life of the nation. The views of the Uzbek people on educational reforms that determined the socio-political life of the early twentieth century are widely analyzed.*

*Key words: Cholpon, enlightenment, beauty, spirituality, freedom, poetry, literature, ignorance.*

The enlightened writer Abdulhamid Cholpon was one of the great people who lived and worked during the oppression. In the poet's poetry, such ideas as love and devotion to the country, hatred of colonial oppression, raising the national consciousness of the people are expressed with great skill. In this sense, the writer's work has a special role in the education of a harmoniously developed generation.

The idea of enlightenment has a special place in Cholpon's art. In his story "Doctor Muhammadiyar", in the language of Muhammadiyar, he said, How high and beautiful it would be if they stood up for their duties and did their work in an orderly manner and showed the benefit of our people. " But these dreams remain imaginary because they have no real ground. However, two aspects of the work do not go unnoticed, the first is that Cholpon in the story shows the ignorance and ignorance in the life of Turkestan, urges people to study European culture, and secondly, Uzbeks sing of solidarity with all nations.

The power that governs all of Muhammadiyar's actions is his love for his people. On the one hand, the fact that our rich people, who earn money and spend their money on gambling and prostitution, and their property passes into the hands of foreigners, the ignorant drunkards quarrel with each other and cannot see beyond their noses, on the other hand, insults and actions make Muhammadiyar suffer. Indeed, in his eyes, the greatest evil that has destroyed the nation is ignorance. As he travels away from his homeland by train, the grandfather, who has seen his great-grandfather, cries out to the mountains. He urges them to open their eyes and keep pace with the times: "O my compatriots! How long is this ignorance? Why aren't you so excited? After all, you are human too! Act like people! What do you not enter without using the fruit of knowledge and enlightenment that comes to mind? Awake from sleep! Try it! Seek knowledge, enlightenment and profession! It's time, maybe it's over! "

Cholpon expresses his desires and feelings in these words, that is, he calls the people to enlightenment, because the main problem for this period was ignorance.

When Muhammadiyar traveled to Europe for many years and returned to Turkestan, he encountered the same old scene on the train: "The chaotic compatriots who slept in the car and lost their tickets and were beaten by the conductors ... Muhammadiyar could not bear to go to the tanbur. The scenery of the charming homeland strikes the eye. No, these are absolutely no different from Switzerland. And the fertile soils are no less than those of the Americans. The writer here once again expresses beauty and splendor, the hidden beauty must be sung to the world, for which the people must awaken from their slumber, from the ugliness, that is, no less than America or Switzerland.

In general, the main problem in each period is the upbringing of a harmoniously developed generation. For example, in the works of Eastern scholars Al-Khwarizmi, Abu Nasr Farabi, Abu Rayhan Beruni, Abu Ali Ibn Sino, Yusuf Khas Hajib, Umar Khayyam, Ahmad Yugnaki, Alisher Navoi and others, the issues of the perfection of a harmoniously developed generation are also mentioned. In the first part of Alisher Navoi's "Khibatul-haqayiq" about the benefits of science, the harm of ignorance, A. Navoi says, "Knowledge plays an important role in the formation of the person." Knowledge opens the way to happiness, so be knowledgeable, seek the path of happiness. The learned man is a precious dinar, the ignorant man without knowledge is a worthless fruit. When will an educated man and an ignorant man be equal? An educated woman is a man and an ignorant man is a woman. Enlightenment issues also played a key role in the works of enlightened poets Ogahi, Muqimi, Avaz Otari, Zavqi.

If we pay attention to the work of Abdullah Avloni, one of our modern scholars, the main motive was school and education. School work, the dissemination of enlightenment among the people, formed the main direction of Avloni's activity until 1917. He showed great devotion in this way. In 1913, the work "Turkish Gulistan or Morality" was published. The book was written as a textbook for high school students. However, the significance of this work, which is one of the rare events of the Uzbek Jadid enlightenment at the beginning of the century, is not limited to the school. It also served as a guide for lovers of literature and ethics.

Cholpon, like his followers, propagated the ideas of enlightenment among the people. His famous novel "Night and Day" was also covered with the idea of enlightenment, and Miryokub's meeting with Sharafiddin Khodjaev had a special effect on his mind. Sharafiddin Khodjaev, a trader from Tashkent who travels to Finland, calls himself a "serious". In the past, Miryaqub had a different opinion about the Jadids, thinking that they were "the worst of infidels." Or rather, they had explained it to him. This is completely different. He thinks about his country, talks about his friends and enemies. The socialists insisted that the children of every nation should be educated in their own language, otherwise it would ruin their upbringing, the land of the rich, the factories of the factory workers would be taken barefoot. On the contrary. Get rich! Get a factory! Fabrika och! Use five thousand, tens of thousands of roubles! Develop national industry! Gives such ideas, but also

emphasizes the superiority of science and enlightenment in the upbringing of children. From this conversation, the image of Miryokub begins to take a new step, to think about the future of the nation. He opens the eyes of the nation and begins to think that it needs knowledge, enlightenment. He begins to be disgusted with his past. In the image of Cholpon Miryokub, it is as if he is describing himself. Although Cholpon was in the colonial system in his works, he took the ideas of enlightenment as the main motive for the future of his nation.

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## STATE ACTIONS IN THE DIRECTION OF ANTI-CRISIS POLICY

*Annotation: The article describes the actions taken by the state, which seeks to smooth out the consequences of crisis situations with the help of anti-crisis policy.*

*Keywords: sustainable economic growth, anti-crisis policy, ways to overcome global financial crises, economic disasters, lending system, diversification of budget funds, financial control.*

Society in the modern world is full of needs and it is not enough just to satisfy the needs, but it is also necessary to constantly improve living conditions. The commendable pursuit of comfort is justified by marked positive changes in living standards. In the global economy, however, observations show that economic growth has an unstable trend. The economy as a cyclical mechanism has its own recessions and peaks. In turn, the recessions have a negative effect on practically all aspects of the life of society, for this reason, state policy is aimed at smoothing out their consequences through the implementation of an anti-crisis policy. Thanks to history, it is possible to determine how these and those states managed the consequences of crises. The practice of resisting the economic, financial, industrial and other crises of developed countries is one of the most important objects of scientific and applied research, which helps to isolate the most effective anti-crisis policy tools.

In the modern world, society strives for constant improvement of conditions and living standards, which can only be ensured by sustainable economic growth. However, observations show that economic growth is constantly interrupted by periods of economic instability. The economic system tends to develop cyclically: it has crises and ups. At all times, people have strived and will strive for the peak of their well-being, and the government, in turn, for the peak of the state's economy. But it should be borne in mind that the country's economy cannot be forever at the peak of its development, and recession and crisis will inevitably follow. Crises have a negative effect on practically all aspects of the life of society; therefore, the state seeks to smooth out their consequences through an anti-crisis policy.

The experience of countering the economic, financial, structural, industrial and other crises of the governments of developed and developing countries is an important object of scientific and applied research, designed to highlight and summarize effective instruments of anti-crisis policy of the authorities. Crisis is not only an economic concept; this term is used in many cases of life. In the final sense, it is an unintended development that manifests itself suddenly, unexpectedly. The crisis negatively affects the entire state at the macro level, and the firm at the micro

level. The definition of a financial crisis can be interpreted as follows: "it is the destruction of the financial market from an increase in the scale of problems of wrong decisions, as well as moral risk, the reasons for the loss of influence of financial markets, funds on the possibility of the most productive investment [1].

In turn, the global crisis is a phenomenon that systematically covers all spheres of financial and economic activity, money circulation, the banking sector and others [2]. That is why the approach to solving such global issues should be systematic and carefully thought out. It will be advisable to supplement and even, perhaps, tighten the measures that have already been applied in a number of areas to restore the economy. In order to stabilize the situation in the country, it is necessary to choose short-term or long-term ways of overcoming the global financial crises, which include the following measures:

- Development of agriculture;
- Increasing humanitarian aid and adjusting social policy;
- Solving the problem of food supplies;
- Creation and increase of gold and foreign exchange reserves;
- Expansion of cultivated areas and the involvement of people in public works;
- Revision of the pricing policy.

Economic disasters require not only government intervention in the financial sector, but also coordination and coherence of actions by the governments of different countries, their joint actions. In the context of globalization, international financial institutions are acquiring more and more importance, designed to provide conditions for the sustainable development of the states of the world community. One of the most important of them is the International Monetary Fund, which plays a significant stimulating and regulating role, both in the development of the economies of the participating countries, and, indirectly, in the development of the world economy as a whole. Currently, the main activity of the IMF is aimed at providing financial and other types of support that are required by member countries to cope with the consequences of the global crisis.

Amid the spread of the global financial crisis originating in advanced economies, developing countries have taken unprecedented steps to reform their policies towards low-income countries, culminating in the announcement of significant new resources. The initiative was launched in collaboration with low-income countries in response to a call from the leaders of the G20- 35 for urgent strategic action to meet the needs of developing countries. As a result of these reforms, the amount of funds available to these countries has sharply increased, the IMF's lending system has radically changed, and the conditions for granting loans to the Fund have been simplified. It should be noted right away that the negative consequences of the global financial crises affect literally all countries, but each state may suffer to a greater or lesser extent. Countries certainly have an opportunity to break the financial impasse. Include internal resources and make a number of important internal political decisions.



And each state solves these problems in its own way. For many countries, such negative events become plainly, the desire for economic growth. Therefore, thinking about ways out of a difficult situation, it is necessary to analyze all the factors and causes of the crisis. And only after that, proceed to balanced, coordinated, correct, and most importantly effective actions. The fight against inflation only by using monetarist methods leads to insufficient lending to the real sector of the economy and industrial production. The result of such a financial policy may be the disappearance and reduction of production, the growth of imports and the dependence of the financial system on foreign loans, local goods will be unclaimed in the demand market. Each crisis situation is individual, and therefore there is no single solution to overcome it. However, it is possible to summarize several basic steps that will be most effective in overcoming a crisis situation, namely:

1) Diversification of budgetary funds: creating the maximum number of ways to generate income. In this case, due to a drop in production in any one industry, the economy as a whole will suffer less;

2) Creation of jobs necessary to increase employment of the population. For the budget, this is useful in that more funds will come in the form of taxes, and, in addition, the population will spend more, stimulating production. To create jobs, it is necessary to maintain a conducive business environment;

3) Curbing inflation;

4) Financial control: over the exchange rate, over the interest rate;

5) Informing the population and enterprises: about the current situation, about forecasts and prospects, about recommendations for overcoming problems;

6) Renewal of the industrial sphere: equipment and technologies;

7) Support for key sectors of the economy, if necessary - adjusting the budget allocation (reducing costs for less important sectors and increasing costs for more important ones).

If we create a system of incentives for the formation of an economy with characteristic features, the proposed scenario will allow us to survive the crisis with the least losses and get out of it with a more productive economy. The financial crisis, as you know, is considered a situation of dramatic and instantaneous decline in the value of organizations or global financial assets. The complexity of building a financial system is determined by a number of problems, for example, such as all kinds of currency crashes, bank bankruptcies, the difficulty of managing liquid assets, as well as sovereign defaults. The interrelation of strategic actions and anti-crisis measures of the government remains an important point, as well as their differentiation. And only timely prepared and implemented measures will make it possible to overcome the consequences of the global financial crisis and reduce to minimum losses in the economic and social spheres.

Crises may not always affect the economies of a developed and a developing country equally, at some point developed countries suffer much more than others, for example, the 2008 crisis, and vice versa, countries with a developing economy or a transitional one are more affected by the crisis.

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## **THE MAIN DIRECTIONS OF DEVELOPMENT OF THE TARIFF SYSTEM IN RAILWAY TRANSPORT**

### Introduction

In world practice, it is considered as the only integrated component of the international supply chain system for trucks. Their effectiveness is considered to be the achievement of the synergistic effect of their interrelated components. It is well known that synergy is a science and technology aimed at increasing the efficiency of distribution, production and sales in the field of logistics in the face of other methods of management. Their structurally mutually beneficial coordination in the delivery of goods and information flows and provides an icon to reduce stagnation due to the appropriate increase in the competitiveness of the enterprise, which is also very important in times of crisis.

Analysis of the efficiency of railway transport the lack of a system and the fact that this system lags behind foreign industries in terms of production and technology at least 15-20 times, requires radical reform in this area. The logistical approach to the reform of the railway network requires the competitiveness of the network, the transition to a new tariff system, the creation of a system with equal economic benefits for both consumers and service providers.

### Analysis and results

The main method of regulating railway transport tariffs is the establishment of tariffs or the establishment of their minimum and maximum limits through constant indexation of existing tariffs based on price list № 10-01. This system was developed and put into practice in 2003.

- the following conclusions were drawn from the study of tariffs in the railway transport system:
- the tariff system does not cover the country's railway transport. It covers only the activities of JSC "Uzbekistan Railways", designed for the monopoly market, and does not provide for structural reforms that will create new conditions;
- the tariff system causes a lot of complexity and misunderstanding among users due to the fact that it is not coordinated on the specific factors and conditions that cause tariffs;
- the overall level of tariffs is high and also unreasonably indexed, given the development system;
- regulation of tariffs and the general system is not developed in a convenient way, taking into account market conditions;
- errors in the equation on the main factors are observed;

– tariffs do not include adequate incentives and quality development to increase the efficiency of private transport.

The following are the shortcomings of the system of tariffs for freight transportation by rail, which are viewed by consumers, and as a result of their implementation on the basis of logistics practices, the quality and efficiency in the industry is declining. № The 10-01 price list has remained only two different basic blocks in recent years after several changes. It is observed that the tariffs for the same type of transport services differ radically from each other (Table 1).

Table 1

**Basic structural comparison of price list blocks № 10-01<sup>11</sup>**

Basic tariff status	Section 2	Section 3
	Transportation of export and import cargo through domestic transport and seaports	Transportation of export and import cargo by land
1. Carried out on the basis of the general tariff "consisting of wagons" (the tariff is divided into two parts)	Yes	No
2. Optimization on three tariff classifications	Yes	No
3. Apply the minimum weight of the increase in the consideration of tariffs	A separate point of view on each tariff nomenclature	Consolidation of loads by main groups (17 cases)
Unified Tariff and Statistical Nomenclature	Yes (several cases)	In another abbreviated view
Average rate of tariffs as a percentage	100	More than 150

The problem is that the concepts of "domestic" and "international" transportation are not clearly defined. In our opinion, if the transportation of goods begins and ends in the territory of the country, it would be legally illogical to apply the concept of "international transportation". Accordingly, international tariffs should not be applied to goods, regardless of whether they are export-import.

A comparative analysis of the situation with rail and road transport shows that there is a huge difference between them: the transportation of small consignments of goods up to 2000 km by rail lags behind the road transport by 10-15 times;

<sup>11</sup> The results of the research were developed by the author.

shipping in wagons is approx 5-10 times less. In particular, when transporting goods over distances of 200-500 km, railway transport lags significantly behind in terms of time.

Today, about 80 percent of shipments across the country in the railway system are ordinary shipments. However, their average speed is 20-25 km per hour. This figure is 70 km per hour in Europe. It should be noted that it is incomparably low and requires radical reform of the management and organizational structure of the railway transport sector. The problem of reducing the time of delivery of goods in transport poses a task not only for users but also for transport service providers, including the lack of wagons, a decrease in production, an increase in cost.

In order to increase the impact of delivery times, the following should be taken into account when setting tariffs:

- identify several delivery criteria for the timing of delivery of goods and coordinate their diversity according to the tariff, for example, the timing can be defined as within the norm, expedited, immediate;
- setting the standard speed depending on the main routes or routes of shipment;
- establishment of administrative incentives for the continuous implementation of measures to reduce the duration of the movement of goods. Administrative incentives can be implemented as a state order, which sets tasks to increase the speed of use of freight cars.

Successful use of container transportation technology, which improves the quality of delivery in alternative and competitive transport systems, as well as logistical and economic errors in the field of railway transport services in the case of reasonable tariffs - this leads to reduced demand for the industry.

Table 2 shows the mechanism for applying tariffs for rail services for the transportation of relatively heavy coal in Germany using an integrated logistics approach. This approach gives users of railway transport services (shipper, consignee, forwarder) an additional opportunity to plan freight transportation. At the same time, it manages to build the most reasonable supply chain and model.

Table 2

**Tariffs for railway services in Germany (system of reduction of tariffs for coal transportation on direction trains)**

The net weight of the wagon was not less than one ton	Reduction of coal transportation costs on scheduled trains as a percentage			
	three times a week	three times a week	on weekdays	once every two days
900	9,0	13,0	15,0	17,0
1100	16,0	21,0	23,0	24,0
1300	20,0	25,0	27,0	28,0
1600	23,0	28,0	30,0	31,0

According to the table, in Germany, discounts on the cost of transporting coal on direct trains are up to 30% depending on the number of flights and the volume of production. It should be noted that to date, the structural reform of the railway transport network has not found its essence, but in other cases leads to further confusion in terms of freight tariffs. It is advisable to confirm the correctness of the choice made in the delivery of goods with technical and economic reports based on the analysis of costs associated with the transportation of different types of transport. This selection criterion also serves to some extent in solving the problem of optimizing the cost of delivery of goods in mixed transport (Table 3).

Table 3

**Specific features of freight delivery cost optimization<sup>12</sup>**

Selection criteria	Type of transport				
	Railway	Water	Car	Pipe	The weather
<b>Speed</b>	average	minimum	high	low	maximum
<b>Cost level</b>	average	lowest	low	low highest	highest
<b>Possible assortment of goods</b>	highest	low highest	minimum	very limited	partially limited
<b>Number of markets served</b>	big	limited	unlimited	very limited	partially limited
<b>Delivery reliability</b>	average	low	goof	high	average

The wide range of transport and logistics services and their wide range of variables in terms of quality, their impact on the competitiveness of services and cost, as well as other factors make it necessary for the company to have a clear, specific strategy in the field of logistics services to consumers requires A comparative analysis of transportation costs by modes of transport is presented (Table 4).

<sup>12</sup> The results of the research were developed by the author.

Table 4

**Comparative analysis of freight costs by modes of transport<sup>13</sup>**

<b>Cost of transporting 20 tons of cargo per 1 km (by example of textiles)</b>				
<b>Uzbekistan</b>	<b>Kazakhstan</b>	<b>Kyrgyzstan</b>	<b>Tajikistan</b>	<b>Turkmenistan</b>
2,45 \$	1,70 \$	1,55 \$	1,35 \$	0,92 \$
<b>Cost of transportation of 1 standard wagon cargo per 1 km (up to 100 km)</b>				
<b>Uzbekistan</b>	<b>Kazakhstan</b>	<b>Kyrgyzstan</b>	<b>Tajikistan</b>	<b>Turkmenistan</b>
7,29 \$	4,24 \$	2,65 \$	6,83 \$	2,65 \$
<b>Number of procedural documents required for export and import</b>				
10/11	10/12	9/10	11/12	6/5

If we pay attention to the analysis of prices on a comparative basis, we can see that the costs of domestic producers are somewhat higher. For example, to deliver a standard wagon load (60 tons of textiles) per kilometer, you have to pay \$ 7.29 to the rail transport service. The same figure is \$ 4.24 in neighboring Kazakhstan, \$ 3.65 in Kyrgyzstan, \$ 6.83 in Tajikistan and \$ 2.65 in Turkmenistan. This has a negative impact on the competitiveness of our country's railway transport in international transport. Expenditures on the cost of transport services from 2009 to 2019 were studied (Table 5).

Table 5

**Changes in the cost structure of transport,<sup>14</sup> %**

<b>№</b>	<b>Indicators</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
I.	<b>Transport</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
1.1	Salary costs	8,4	6,7	7,4	6,9	6,3	6,1	6,4	7,4	7,4	7,5	8,3
1.2	Depreciation	3,6	7,1	9,9	9,3	9,6	9,1	8,1	8,4	9,6	10,3	12,3
1.3	Material costs	48,6	41	45,6	41,6	49,2	56,1	51,9	52,3	48,5	44,8	37,0
	Hence, fuel (energy) costs	11,8	9,3	9,8	11,3	11,8	10,3	9,4	11,5	10,4	9,3	9,6
1.4	Other expenses	39,4	45	37,1	42,2	34,9	28,7	33,6	31,9	34,5	37,4	42,4

<sup>13</sup> The results of the research were developed by the author.

<sup>14</sup> The results of the research were developed by the author.

It is known that about 9.6% of the total cost of work performed by vehicles is spent on fuel (energy) and lubricants. Consumption of fuel resources in the transport sector of Uzbekistan, in relation to this value, forms the total cost of services. At the same time, wages, which are part of the cost of transport, make up 8.3% of total expenditures. This figure is 50-52 percent in the EU, while other costs are 40.2 percent. Depreciation is 12.3% in Uzbekistan and 6-7% in the European Union. The logical conclusion of scientific research work often ends with the identification of realistic amounts of economic or social efficiency that can be achieved as a result of the proposed science-based measures.

In determining the economic effect that can be achieved as a result of the practical application of the scientific proposals discussed and recommended in the previous chapters, it is advisable to first approach the case on a case-by-case basis. For example, in calculating the economic efficiency is the efficiency of the tariff for the carriage of goods by rail:

$$E_{rwk} = \frac{\sum_{i=1}^n I_i}{n * \sum_{i=1}^n P_i} - \frac{I_{min}}{P_{min}}, \text{ sum/tkm} \quad (1)$$

Here:

$I_i$  – total income of the railway enterprise in the form of  $i$ , sum;

$P_i$  –  $i$ - railway transport work,  $tkm$ ;

$I_{min}$  –  $i$ - income of the enterprise with the tariff of the smallest railway transport enterprise, sum;

$P_{min}$  – the amount of business transport work of the enterprise with the smallest railway transport enterprise number  $i$ ,  $tkm$ .

Using this indicator, the amount of economic efficiency that can be obtained from the total volume of freight transported by rail can be determined by the following formula:

$$E^{rwk} = (S - S') * P^{rwk} = \left( \frac{\sum_{i=1}^n I_i}{n * \sum_{i=1}^n P_i} - \frac{I_{min}}{P_{min}} \right) * P^{rwk} = E_{rwk} * P^{rwk}, \text{ sum} \quad (2)$$

here:

$P^{rwk}$  – amount of total transport work in railway transport,  $tkm$ .

Thus, as a result of the implementation of an integrated information management system, the exchange of data in railway transport enterprises will be accelerated and the cost of transportation will be reduced. Given the importance of electronic computers in reducing the cost of railway transport enterprise in determining such a change, the share of cost reduction is determined by the following formula.

$$\Delta E_{\text{information of integration}} = \left( \frac{\sum_{i=1}^n D_i}{n * \sum_{i=1}^n P_i} - \frac{D_{min}}{P_{min}} \right), \text{ sum/tkm} \quad (3)$$

here:

$D_i$   $i$  – number railway company transport case,  $tkm$ ;

$D_{min}$  – enterprise income with the lowest railway company tariff, sum;

$P_{min}$  – the amount of transport work with the lowest railway company tariff,  $tkm$ .

Conclusions and suggestions



Based on the above considerations, a six-step approach to improving the tariff system in the transport and logistics system was proposed:

1. Assess the general situation in the services market in terms of logistics;
2. Clear definition of goals and objectives and principles of tariff regulation in the transport system;
3. Establishing the demand for transport and logistics services in the links of the logistics system in places where transport facilities are dense and high speed;
4. Formation of competitive transport logistics systems taking into account the value in the logistics chain and assessing their impact on the final cost of the finished product;
5. Establishment of maximum tariffs in the transport and logistics system, taking into account government support and other factors in tariff regulation;
6. Evaluate the effectiveness of tariff regulation mechanisms in the transport system.

In short, the development of a successful tariff policy in the state regulation of the tariff system is a very important factor not only for structural reforms in the field of railway transport, but also to create the opportunity to achieve the expected economic benefits of macro and micro logistics.

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## **COMMUNICATIVE APPROACH TO TEACHING FOREIGN LANGUAGES**

*Annotation: A communicative approach is an approach which is worldwide known and established it has established itself in many parts of the world as a way of teaching languages, especially English. It is the approach that has prevailed in English Language Teaching over the past 50 years, and it is still used nowadays. The following article looks into the application of this approach in language classes.*

*Key words: method, approach, techniques, grammar translation method, structuralism, communicative approach.*

The goal of the linguist is to study the linguistic competence native speakers are endowed with. He also showed, rightly, that structuralism and behaviorism were unable to account for one fundamental aspect of language, namely the creativity and uniqueness of individual sentences. A child is able to produce an infinite number of sentences that s/he has never encountered. This makes the factors of imitation, repetition, and habit formation weak arguments to account for any language learning theory.

Communicative language teaching (CLT), or the communicative approach, is an approach to language teaching that emphasizes interaction as both the means and the ultimate goal of study.

Language learners in environments utilizing CLT techniques, learn and practice the target language through the interaction with one another and the instructor, the study of "authentic texts" (those written in the target language for purposes other than language learning), and through the use of the language both in class and outside of class. Learners converse about personal experiences with partners, and instructors teach topics outside of the realm of traditional grammar, in order to promote language skills in all types of situations. This method also claims to encourage learners to incorporate their personal experiences into their language learning environment, and to focus on the learning experience in addition to the learning of the target language.

According to CLT, the goal of language education is the ability to communicate in the target language. This is in contrast to previous views in which grammatical competence was commonly given top priority. CLT also focuses on

the teacher being a facilitator, rather than an instructor. Furthermore, the approach is a non-methodical system that does not use a textbook series to teach the target language, but rather works on developing sound oral/verbal skills prior to reading and writing.

However, all these linguists and educators felt that students during those years were not learning the language in the right way. They claimed that they did not learn the 'whole language' and realistic language. Students did not know how to communicate outside the classroom in real life situations, using the appropriate social language. So far they were relying on the structures of language instead of relying on functions and notions of language. This made them unable to communicate in the culture of the language studied.

Communicative Language Teaching (CLT), which is an approach to the teaching of second and foreign languages, emphasizes interaction as both the means and the ultimate goal of learning a language. It is also referred to as the "Communicative Approach". Historically, CLT has been seen as a response to the Audio-Lingual Method (ALM), and as an extension or development of the Notional-Functional Syllabus. Task-based language learning, a more recent refinement of CLT, has gained considerably in popularity.

Communicative language teaching can be understood as a set of principles about the goals of language teaching, how learners learn a language, the kinds of classroom activities that best facilitate learning, and the roles of teachers and learners in the classroom. Communicative competence includes the following aspects of language knowledge:

- Knowing how to use language for a range of different purposes and functions;

- Knowing how to vary our use of language according to the setting and the participants;

- Knowing how to produce and understand different types of texts;

- Knowing how to maintain communication despite having limitations in one's language knowledge.

So, Communicative Language Teaching is an approach to the teaching foreign languages that emphasizes interaction as both the means and the ultimate goal of learning a language.

Principles of CLT:

- In the CLT approach, the meaning is given prime importance. The main focus of the approach is to make the learners able to understand the intention and expression of the writers and speakers.

- In this approach, it is believed that communicative functions are more important rather than linguistic structures. Littlewood states that «one of the most characteristic features of communicative language teaching is that it pays systematic attention to functional as well as structural aspects of language, combine these into a more fully communicative view». Each language has a limited number of sentence patterns. Mastering only those sentence patterns does not help the

learners to communicate in the target language. The learner needs to learn the communication functions of those structures.

–While using the CLT approach in teaching language, the target language is used in the classroom. The target language is a vehicle for class room communication, not just the object of study.

In a world where communication of information and information technology have broken new considerable ground, CLT can play an important role in education.

#### Criticism

Notional syllabus was criticized as merely replacing one kind of list, namely a list of grammatical structures, with another list of notions and functions.

The various categories of language functions are overlapping and not systematically graded like the structures of the language.

The communicative approach focuses on the use of language in everyday situations, or the functional aspects of language, and less on the formal structures. There must be a certain balance between the two. It gives priority to meanings and rules of use rather than to grammar and rules of structure. Such concentration on language behavior may result in negative consequences in the sense that important structures and rules would be left out.

The approach relies extensively on the functional-notational syllabus which places heavy demands on the learners.

A major principle underlying this approach is its emphasis on learners' needs and interests. This implies that every teacher should modify the syllabus to fit the needs of the learners. The requirements are difficult. Not all classrooms can allow for group work activities and for teaching aids and materials.

In spite of its critics, CLT has gained widespread acceptance in the world of language study. CLT can succeed, as long as teachers don't completely reject the need for the structure provided by grammar. Teachers must strive for moderation and shouldn't neglect the merits of other methods. CLT, in the hands of a balanced teacher, can bring new life and joy to the classroom. Its vitality makes it an important contributor to language learning approaches.

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## **THE USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN VARIOUS BRANCHES OF SCIENCE AND TECHNOLOGY**

*Abstract: In this article, we consider the use of artificial intelligence technologies in various branches of science and technology, its introduction into everyday life has greatly simplified security tasks. The speed of data processing, the extraction of important information, the identification of people and almost any objects, the detection of the behavior of objects allows you to quickly respond to possible violations and incidents, which reduces costs and ensures the effectiveness of security systems.*

*Keywords: AWAN camera, important information, Video analytics, algorithm, process.*

In our time, video surveillance has become an integral part of an integrated security system, because current video surveillance systems can not only show and record video, but also program the reaction of the entire security system in case of emergency situations. Depending on the type of equipment, video surveillance systems are divided into analog and digital.

Artificial intelligence will be useful where it can solve a problem better and faster than a human. There are many such tasks in video surveillance. For example, when processing a parallel image transmitted from several cameras, the operator may miss an important point, and the total amount of information is immense for a person. Here a video analyst comes to the rescue, whose task is to compile metadata describing the object, identify significant events, detect deviations in the behavior of the observed object in the video stream for further responding to them in a predetermined way. And the integration of such systems into a network will make it possible to obtain information about the movement of an object even without its identification. Artificial intelligence for video analytics. Video analytics can be either software, where data is processed on a recorder or server, or hardware - the processing is performed by a processor built into the camera. Such cameras are

called smart - that is, smart. There are several information processing methods: Image processing methods based on comparing pixels are used in motion detectors, abandoned object detectors, etc. Note that most of the algorithms are implemented at this level. Object recognition. The algorithm is based on determining the class of an object from its video image with subsequent comparison with a database of objects. This includes face recognition, license plate recognition, and so on. These are relatively simple analytics. Analysis of behavior and tracking of objects in the frame. The methods are based on complex mathematical algorithms, while in most cases it is difficult to compose an algorithm that would accurately describe the behavior of objects in the frame. It is even more difficult to implement the "transfer" of an object from one video camera to another. Consider a practical example - observing people in public places. Let's say a man who looks like a suspect walks into a shopping center. This person was traveling through the store with a large backpack that could contain dangerous goods. When the security service managed to identify him, he had already visited various rooms and disappeared into the parking lot. How can I find it on the video recordings of cameras installed on the floors and combine these videos? In this case, video analytics is used, which helps to identify a person and compare it with information available in databases or track the movement of a person even if he is not in the databases. Today there are technologies that allow performing all these operations in automatic or semi-automatic mode.

An AWAN camera is a section that connects the supply channel with the water intake front of the NS.

Most often it is an expanding and deepening AWAN camera with a length of at least (1.2-1.3) the length of the whirlpool zone.  $L_{AB}=(1,2-1,3)\times L_B$

Arrange the rivers leading edge short with central taper angles up to 40-45 °, but not less than 30-35 °.

If mark. bottom of the water intake coor. is below the mark. bottom supply, channel, then the expanding front chamber is arranged with a straight bottom slope  $i = 0.2$ . The nature of the flow in such an AWAN camera is extremely unfavorable. If sediments are present in the water, they are deposited in the front chamber.

An effective means of improving flow spreading in a short expanding front chamber and reducing sediment deposition in it is the device of the front chamber bottom with a reverse slope of the bottom. With a gradual decrease in the depth of the fore-chamber, the flow in it expands better.

To reduce the length of the draw-off front in stations and of the block type, a curvilinear draw-off front is arranged.

By design, water intake facilities are divided into water intakes of the type of a coastal well, regulating the construction, suction pipes and the simplest tubeless bucket ones.

Water intakes of the shore well type are used at the HC for household and drinking purposes. To reduce local losses at the inlet of the flow into the suction pipe, the diameter of the inlet section is increased and  $D_{in} = 1.3-1.5 D_{vs.tr}$  or at the recommended speed equal to 0.8-1 m / s. The inlet is buried under min. The water

level at  $h_2 = (1-1.5) \text{ Din}$ , but not less than 0.5 m. The distance between the inlet of the vertical suction pipe and the bottom of the chamber is  $h_1 = 0.8 \text{ Din}$ .

Non-pressure water intakes of the type of a regulatory structure are arranged with several suction chambers. They are used at irrigation stations with the supply of each pump no more than  $2 \text{ m}^3 / \text{s}$  and fluctuations in the water level in the water source no more than 2-3 m. The speed of approach to the suction. Pipes no more than  $1 \text{ m} / \text{s}$ , and the velocity of the flow entering the inlet section is about  $0.8 \text{ m} / \text{s}$ . Excess of the site coor. above the maximum water level, depending on the capital class, take 0.5-1 m. The width of the chamber  $b_k = (2.5-3) \text{ Din}$ . Deepening of the suction inlet. Pipeline for min. the water level is not less than  $0.8 \text{ Din}$ ; the distance from the bottom of the well to the inlet of the suction t-yes is not less than  $0.7-0.8 \text{ Din}$ .

Suction pipes of chamber and elbow shape are built into the concrete block of the NS building with vertical pumps - axial and centrifugal. The chamber supply is arranged when the pump is supplied up to  $2 \text{ m}^3 / \text{s}$ . The structural dimensions of the suction pipes are taken according to the catalogs or drawings of the manufacturer. Bottom lattice water intakes should be referred to the types of water intake structures specific to mountain rivers. The river bed is blocked off by a low concrete blind spillway dam, which forms a kind of spillway threshold. ] Between the goby and the left-bank abutment, a horizontal gallery is cut into the dam, covered with a lattice. Water passing over this gallery enters ("falls through") through the grate and is discharged into the water intake chamber located in the left bank abutment. The design of the intake chamber provides for the possibility of flushing it from sediment trapped in it. The intake chamber usually has emergency entrance windows for water intake in case of clogging or freezing of the grating of the intake gallery. From the receiving chamber, water is supplied through water lines to the primary clarification tanks for clarification.

The design of such a water intake allows water intake at any change in flow rate and at any depth. It can be recommended for ingestion of water containing relatively coarse sediment.

This type of water intake is used in a wide range of flow rates (from  $0.1$  to  $8 \text{ m}^3 / \text{s}$ ).

In order to prevent clogging of the gratings with a stone, they are made of T-section steel (with the edge down). The width of the gaps should be less than the prevailing (60-90%) sizes of bottom sediments. In practice, the gaps are 6-12 mm wide. To be able to clean them and the gallery, the grates are arranged with lifting - in separate sections 1–2 m long.

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## **THE STUDY OF THE GEOECOLOGICAL PROBLEMS OF A BIG CITY**

*Abstract: This article analysis the system of studying the geoeological problems of large cities, in particular cities, assessing its complex indicators such as: the state of atmospheric air, soil, hydrogeological and engineering and geologists.*

*Keywords: air pollution, soil, surface and underground water, engineering and geological conditions.*

The problem of the geocology of the urban environment is the subject of studying various branches of knowledge: ecology, geography, geology, biology, soil science, and hydrogeology. Geoeological features of the urban environment, for example, the city of Tashkent is also determined by its geographical. The city is located on the right bank of Chirchik in the zone of influence of emissions into the atmosphere of waste from the industrial objects around its industrial facilities. Gorodiecology of the city has a specific place in the entire complex of environmental sciences. This is due to the functioning of the city in a limited territory and conditions for the high concentration of people, which leads to the formation of almost all existing types of anthropogenic pollution, which determines its geoeological state. One of the main issues in the study of the modern geoeological state of the city of Tashkent under the influence of natural and technogenic factors is to assess its complex indicators such as: the state of atmospheric air, soil, hydrogeological and engineering and geological conditions. The purpose of the study is to oborimize the complex indicators as: the state of atmospheric air, soil, the hydrogeological and engineering and geological conditions of the city of Tashkent in recent years. Geoeological studies are aimed at resolving issues of interactions between nature and society related to the geoeological assessment of the economic activity consequences, the quality of the environment and the development of environmental management recommendations. Geoeological studies operate on the following set of methods: geological, geochemical, geophysical, hydrogeological, geomorphological, geocryological. Because of the obtained data interpretation, phenomena, processes, properties and dependencies are established. They act as geoeological factors, so reflect certain interaction aspects of the lithosphere, atmosphere, and hydrosphere with the biosphere. Geological studies include those aimed at studying the properties of the geological environment, the petrological nature of rocks, and geodynamic processes. The petrological properties of rocks are due to their mineral and chemical composition, structure and texture, occurrence conditions and the changes that they undergo in earth's crust depths and on its surface. Geodynamic processes occurring both inside the crust and on its surface are expressed in the form of tectonic movements, seismic and volcanic processes. Petrological rocks properties in combination with

geodynamic processes determine the place and time of occurrence, as well as the nature of geocological factors. Practice shows that the lack or poor knowledge of the geological environment state often leads to disastrous consequences. A striking example of this are large-scale damage during earthquakes. Tragic situations also arise during the underground and surface mine works, especially, when previously unknown and not mapped in time faults and floods make themselves known. Because of geological studies, they reveal features of geological processes manifestation, outline geopathogenic zones, determine their nature and degree of functioning. Geochemical studies study the distribution of chemical elements or chemical compounds in rocks, atmosphere, natural waters, vegetation, and animals. In recent years, they are widely used in the practice of geocological work. Particularly special geochemical surveys techniques and mapping of certain areas are attractive, including urban agglomerations. They are carried out in order to identify places of elevated concentrations of chemical elements, delineate and assess the magnitude of geochemical anomalies, and primarily to determine the distribution contours of toxic and radioactive elements. More than 57 thousand business entities are registered in Tashkent, of which about 20 thousand, or more than 35%, have a direct impact on the geocological state of the city. The city of the city from industrial enterprises and autotran of these, motor vehicles in 2018 accounted for 97% of all emissions. This situation is characteristic of all major cities, where emissions from road transport are 80-99% of the total volume of outlied pollutants in the air pool. The share of motor vehicles exploited in the city is over 20% on the total number of cars in the republic as a whole. Approximately the number of cars in the city increases to 12-14 thousand units per year. An indicator of the level of pollution of atmospheric air is a complex index of the atmosphere contamination, which is calculated in five priority pollutants (dust, carbon monoxide, nitrogen dioxide, and dioxide. The level of air pollution is considered low at from 0 to 4, elevated - from 5 to 6, high - from 7 to 13, very high – with more than 14. Observations on the quality of atmospheric air of the city of Tashkent, nitrogen dioxide - from 0.04 to 0.02 mg per cubic without a change, the content of sulfur and ammonia dioxide - 0.003 and 0.01 mg per cubic meter, respectively remained. Surface and groundwater. An irrigation network through a Bozsu water system, the main power source of which is the Chirchik River, irrigates the territory of Tashkent. The main trunk channels is Bostsu, South Karasu, Salar, Anhor, Damashi, Karakamysh. There are 129 watercourses with a total length of 417.5 km; there are also several artificial water-based lakes with a total area of 91 hectares and a volume of 1.4 million m<sup>3</sup>.

As of 2018, the level of pollution of the watercourses of the city in the index of pollution of the main watercourses has changed positively from IV-V to II-IV classes, and exceeding those fixed in certain cases are At the same time, the condition of the channels and collectors of the city cannot be recognized as satisfactory, this problem remains one of the most acute geocological problems of Tashkent. The groundwater is characterized by the pollution of industrial facilities. The unsatisfactory condition of the treatment facilities and underground

communications, low level of technological operation and insufficient environmental control are the main causes of the poor state of groundwater.

In terms of bacteriological indicators, 36.1% do not correspond to the normative indicators. We believe that the main source of pollution is solid household waste. Engineering and geological conditions of the city of Tashkent. Geoecological state the city has changed significantly due to the change in the relief of the city. Because of these studies, it was found that change in relief and engineering and economic impact on urban territory, leads to the formation of negative processes, such as suffusion, landslides, and rise in the level of groundwater. It was found that most intensively under the influence of technogenic load the upper part of the lithosphere changes, so the main attention is paid to the study changes in relief, engineering-geological and hydrogeological conditions to pay special attention to the core - the impact zone of ground and underground structures. As a result, it was revealed that the relief within the city varies unevenly. Within the city of Tashkent distinguishes four zones characterized by different geological structure, located in different conditions of engineering economic impact, different capacities of technogenic deposits in valleys of the erosion network and watercourses, various morphometric characteristics, direction and intensity of relief changes. The zone of intensive relief changes is located in the southwestern part of the city. And is confined to areas of new development of industrial enterprises and residential arrays. Negative landforms, ravines, covered with ravines. Should note that the thickness of technogenic deposits, represented by household and industrial waste in the valleys of these ravines is tens of meters. In the northern, northeastern and western areas of new and residential development is zone of strongly changed relief. Small landforms and erosional relief incisions covered with fabricated deposits. Areas of old buildings, which are located in the central parts of the city, because of backfilling of erosional cuts in the valleys of ancient watercourses, reduced dissection of the relief.

The southeastern and eastern part of the city, the surface of the floodplain and the second above the floodplain terrace of Chirchik, which is composed mainly of pebbles, overlapped from the surface by loams with a thickness of 0.5 to 5.0 is considered as zone of practically unchanged relief. Insignificant dissection and a small number of watercourses and shallow erosional incisions characterize the territory. Changing the form of relief in the city of Tashkent, associated with the high rates of housing and industrial construction, redevelopment of the city, the reduction and destruction of the existing hydrographic and erosion network, an increase in the capacity of this city. There is a violation of the water balance and the groundwater balance, the level of groundwater and the formation of the flooding process occurs. From the above, it should be studied by the geoecological state of the city of Tashkent showed that there is no uniform methodology for comprehensive research. Currently, there is no unified methodology for organizing research activities. Analysis and evaluation of the environmental situation in the city is a challenging task and its successful solution depends on the proper choice of the technique.

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## **FEATURES OF IDENTIFICATION OF PAINT MATERIALS BY THERMAL ANALYSIS**

*Annotation: This article reveals the feature of identification of paints materials by thermal analysis. The thermal behavior of samples depends on the chemical composition and the amount of added components. Methods of thermo gravimetric analysis were developed in the control mode of metrological characteristics using standard samples of paint materials. Offered for implementation developed methods for the identification and quantification of paint materials by thermal analysis methods provide for the establishment of an optimal solvent system for differential thermal derivatographic control.*

*Keywords: paints materials, identification, thermal analysis, differential-thermal derivatographic control*

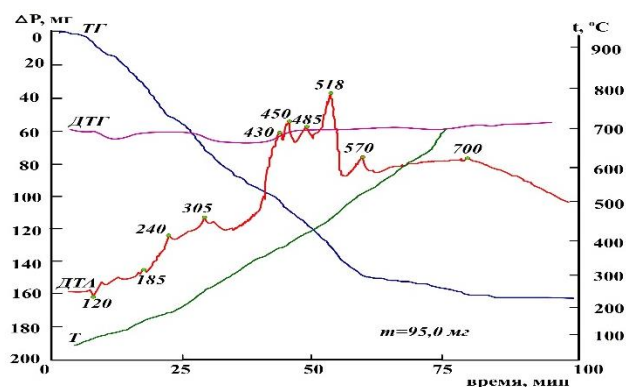
Thermal analysis methods - methods for studying physicochemical and chemical processes based on the registration of thermal effects, accompanied by temperature programming. Installation for thermal analysis methods usually includes a furnace, sample holders, thermocouples measuring the temperature in the furnace and samples [1].

When heating or cooling the sample, changes in the temperature of the object with time are recorded. In cases of phase transformations, a platform or kink appears on the heating (cooling) curve. Samples were preliminarily crushed in an agate mortar to a powder state in order to uniformly fill the crucible of the derivatograph and uniform temperature gradient during heating of the sample in the derivatograph. Then the sample was dried in an oven to remove residual moisture and solvent [2].

Thermal analysis was performed on a Paulik-Paulik-Erdey system derivatograph with a heating rate of 100 °C / min and 0.1 g sample at a sensitivity of the T-900, TG-200, DTA-1/10, DTG-1/10 galvanometer in an air atmosphere. Weighed samples were in the range of 10-40 mg. The sample was heated in an atmosphere of air in ceramic crucibles in the temperature range from 250C to 700C. Recording was carried out under atmospheric conditions with a constant removal of the gaseous medium using a water-jet pump.

The holder was a platinum crucible with a diameter of 7 mm without a lid. Alumina was used as an inert carrier. The analysis was carried out according to the DTG, DTA and TG curves, which were obtained by registration on a personal computer having an analog-to-digital converter. From the obtained thermograms, the thermo-oxidative stability and kinetic characteristics of the thermo-oxidative destruction of the samples were determined: the destruction rate, the destruction rate constant, and the activation energy. The results of thermogravimetric analysis of

paints are shown in the figures. On the heating curve of the Royal mel sample (Fig. 1.), two endothermic effects were detected, at 120, 185 ° C, which corresponds to aldehydes and alcohols. The exothermic effects at 240, 303, 430,450, 485, 518, 570 and 705 ° C correspond to the thermal effects of polyacrylamide, o-xylene, cyclopentane, octane, undecane, cyclohexane, cyclodecane, pentadecane.



**Figure 1. The result of differential thermal analysis of Royal mel.**

Conclusions: The thermal behavior of the samples depends on the chemical composition and the amount of added components. Classification and coding of goods are important components of customs. The correct determination of the code of goods according to the HS is one of the urgent tasks.

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## **CHARACTERISTICS OF KHOREZM DOSTON ART**

*Annotation: This article comprehensively analyzes revealed and tradition of folk art (epos) Khorezm and views of scientists and thinkers of Central Asia for the development of musical art* *Key words: Dastan, bakhshi, performance, tradition, spirituality, music.*

*Key words: Khorezm music, epic, folklore, tradition, baxshi, musician, art, international festival*

Uzbek epic poetry is a very ancient and important symbol of spiritual heritage. Folk art, art has a special place in the spiritual development of man. The development of all arts is based on folklore. From the beginning of mankind to the present day, folklore has been used in folk art, such as literature and singing. The most beautiful of these patterns is the art of giving. Art not only enriches a person's worldview and thinking, but also introduces him to the world of virtues, goodness, and beauty. It is impossible to imagine human life without music. After all, art is one of the most important aspects of human spiritual activity, a great and powerful force that encourages creativity. Today, in order to widely promote the art of baxshi and epic poetry in our country and abroad, teachers, epic poets, scholars of the field, talented young bakhshis, material and spiritual support, the Cabinet of Ministers of April 26, 2018 304- The "Yo'l xaritasi" for 2018-2022 for the further development and improvement of the art of baxshi and epic poetry was approved by Resolution No.

It is planned to monitor the full and quality implementation of the measures envisaged in the "Yo'l xaritasi", to coordinate the activities of the responsible ministries and departments, local authorities on a systematic basis. Preservation and development of unique examples of Uzbek baxshi and epic poetry, its widespread promotion, strengthening the sense of respect and attention to this type of art in the hearts of the younger generation, the development of friendship between different peoples. Resolution of the President of the Republic of Uzbekistan Shavkat Mirziyoyev on November 1, 2018 to hold the International Festival of the Art of Bakhshichilik in order to strengthen ties of friendship and brotherhood, creative cooperation, further expand the scope of cultural and spiritual relations at the international level It was noted that the need to organize creative meetings of scientists and practitioners in the field between the events of the festival. In this regard, an international scientific conference on "The role of the art of baxshi in world civilization" was organized. The main purpose of this scientific conference is to further develop the art of baxshi and epics, scientific study of epics of Uzbek and



other peoples, scientific cooperation in this area, cooperation in the field of culture and art, as well as in the field of enlightenment at the international level. expansion. The epics embody the rich and ancient traditions of our people's artistic thinking. Bakhshi is an artist and folk narrator who sings and recites songs and epics by heart. Bakhshi must know the life and culture of the people, the history of the country in which he lives, and the art of memorization. He should be able to make effective use of various forms of living vernacular, word games and idioms, proverbs and sayings. Being able to find a melody that captivates the audience, making the epic attractive and interesting is one of the main requirements of narration. That, in turn, requires natural talent, a strong intellect, and the ability to exercise regularly with perseverance and endurance. Bakhshis love to sing epics of various meanings, which glorify devotion to the motherland, love, friendship, brotherhood, courage and bravery, heroism. Khorezm epic poetry has its own peculiarities in terms of repertoire. In almost all parts of Uzbekistan, solo performances dominate the delivery of epics, while in Khorezm, mostly collective performances. Khorezmian epic poetry is distinguished by its ancient roots, unique style and dialect, bright and attractive melodies. In ancient Khorezm, storytellers were considered to be lovers, bakhshi, goyans, and women as khalfas. The word bakhshi should be close to the Persian word bakhshi. Translated into Uzbek, the word "bakhshi" means "to forgive", "to forgive". In fact, the bakhshis have been performing epics dedicated to an event as if they were their own experience. Khorezm epics differs from other styles by its musicality, wide development of lyrics, as well as by many Turkic peoples, Khorezmian epics are characterized by smooth rhythms, preludes, curtain and sound changes. One of the rarest aspects is the unique style and dialect, the rich complexity and at the same time the common literary and musical reality. The melodies and songs of the epics "Gorogly", "Avazkhan", "Baziryon" on the way to Khorezm are not inferior to maqoms or songs in terms of their potential. Khorezm epic poetry consists of 2 main schools "Shirvoniy" and "Eroniy". The common denominator of both styles is that most of the bakhshis are literate and do not invent a poem when it is the turn of the song after telling a part of the story, but rather a stable musical text of the epic. memorized and used instead. Sometimes his manuscript is carried with him and can be used during the performance. Shirvan poets often know how to pronounce epics, but often keep them a secret. The Iranian style, on the other hand, sometimes mentions the name of the poem in the story, where the text of the poem comes from. Shirvan-style bakhshis recite epics accompanied by dutar, buloman or gijjak, and doira accompanied by doira, while Iranian-style bakhshis perform the epic mainly with dutar. It also differs from Shirvani by its dramatic melancholy feature, simple musical weight, weighty performance, and various jumping movements. One of the main features of the Iranian-style epic tradition is that the bakhshi mainly recites epics with a dutar. He is often accompanied by a bully or a bully. In some cases, the bakhshi sings solo in front of a crowd without musicians. The Khorezm school of epic poetry has its own traditions and differs from other local epic schools. Khorezmian epics are distinguished by their performance in the "open voice", the introduction of the

instrument, the change of the curtain and the sound. Ahmad Bakhshi, Kurbannazar Abdullayev (Bola Bakhshi), Ruzimbek Murodov, Qodir Bakhshi Jumaniyazov, Otaxon Bakhshi Matyokubov, Jumaboy Khudaiberganov, Kalandar Bakhshi Normetov, Norbek Bakhshi Abdullaev have made a great contribution to the development of Khorezm epics. Kurbannazar Abdullaev (Bola Bakhshi) is one of the founders of a unique school of baxshi in Khorezm. Kurbannazar Abdullayev memorized about 40 epics: "Avazkhan", "Oshiq Garib va Shohsanam", "Gorogli", "Bozirgon", "Hirmon dali", "Oshiq Mahmud". Kurbannazar Abdullayev (Bola Bakhshi) was awarded the title of "People's Epic of Uzbekistan" in 1938. He was the first in Uzbekistan to receive this title. In short, although technology has penetrated people's lives over time, it still relies on national spirituality. Our folk art is past, present and future. Wise, great and eternal heritage of our people, this Uzbek name is glorified everywhere and always. Because at the heart of the original folklore is the idea of human perfection. It reflects the eternal history of the people. Preservation and development of unique examples of this unique art, its widespread promotion, strengthening the sense of respect and attention to this type of art in the hearts of the younger generation and further strengthening international cultural ties between the peoples of the world serves for. It is necessary to thoroughly study the history of the art of bakhshi and epic poetry, the work of bakhshis and epic poets, to conduct fundamental research in this area, to restore forgotten epics, and to pass them on to future generations. One of the main tasks in the development of epic schools is to record the performances of bakhshis on audio and video tapes, to turn their works into books, to record Khorezmian epics, to make films from these epics as much as possible. After all, epics, which embody a variety of arts, such as literature, poetry, music and spectacle, are not only a means of education, but also a unique gem of our cultural heritage.

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## **TURK SIVILIZATSIYASI: XUNLAR IMPERIYASINING DUNYO DAVLATCHILIK TARAQQIYOTIGA TA`SIRI**

*Annotatsiya: Hasan Ato Abushiyning (XIX-XX asr boshi) yozishicha, "Xunlar miloddan avvalgi davrlarda Oltoy tog'laridan boshlab Tibet, Chin xududlarining shimoliy g'arb sahrolarigacha hamda Torim nahri va Lubnur(Lubnor) ko'llarigacha, hozirgi Mo'g'uliston sahrolaridan Turkistonu, Qirg'iziston sahrolariyu, O'rol tog'lariga qadar keng yaylovlarga tarqalishgan. Xunlar haqida Xitoy manbalarida qarib 3 ming yil avvalgi davrlardan ma'lumotlar uchraydi. Xitoyliklar ularni "Xyun-yu, Xyun-nu" keyinchalik "Xun" ba'zan "Xen" deb ataganlar. Xunlar Buxoro va Qirg'iz sahrolarini birga qo'shib, avval bir yirik va quvvatli hukmronlik tashkil etganlar. Lekin zamonlar o'tishi bilan ular 3 toifaga bo'linib, "janub xunlari yoki oq xunlar", "g'arb xunlar", "shimol xunlar" deb yuritildilar va ular tub joy qabilalar bilan aralashib boshqa nomlar bilan ham atalganlar.*

*Kalit so'zlar: Xunn, xionnu, Mo'g'uliston, imperiya, ittifoq, bosqin, qabila.*

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## **TURKISH CIVILIZATION: THE IMPACT OF THE CUNNILINGUS EMPIRE ON THE DEVELOPMENT OF WORLD STATEHOOD**

*Abstract: Hasan Ata Abushi (early 19th - early 20th centuries) Writes: "The Huns in the period from Gorny Altai to the northwestern deserts of Tibet, China and the rivers Torim and Lubnur (Lubnor), modern Mog. from the deserts of Ulistan to the deserts of Turkestan, Kyrgyzstan and the Ural Mountains. Chinese sources date the Huns around 3000 years ago. The Chinese called them "Hyun-yu, Hyun-nu" and then "Hun" and sometimes "Hyun". The Huns united the Bukhara and Kirghiz deserts to form a large and powerful empire. But over time they were divided into three categories called "Southern Huns or White Huns", "Western Huns" and "Northern Huns", and they were mixed with local tribes and received other names.*

*Keywords: huns, xionnu, Mongolia, empire, union, invasion, tribe.*

Miloddan avvalgi birinchi ming yillikda. Mo'g'uliston janubidan Kaspiygacha Markaziy Osiyoning keng hududlarida ko'plab qabilalar yashagan. Ulardan biri xunnlardir. Xitoy manbalariga ko'ra, "xionnu", "xunn" so'zi zamonaviy

Mo'g'ulistonda joylashgan Orxon daryosi nomidan kelib chiqqan. Miloddan avvalgi III asrda. bu erda yashovchi ko'chmanchi qabilalarni Mod birlashtirgan. Xitoyliklar Xunlar hukmdori - Shanyu deb atashgan. Xunlar Yenisey bo'yida va Oltoy tog'larida yashagan qo'shni qabilalarni bo'ysundirdilar. Ular Xitoyni har yili ipak matolari, paxta, guruch va bezaklarni jo'natish shaklida o'lpon to'lashga majbur qilishdi. Xunliklar ittifoqiga turli qabilalar kirgan. Davlat harbiy printsip asosida qurilgan: u chap, markaziy va o'ng qanotlarga bo'lingan. Shtatdagi ikkinchi shaxslar "tumenbasi" - temniklar edi. Ular odatda hukmdorning o'g'illari yoki uning yaqin qarindoshlari edilar. Ular 24 klanni boshqargan va barcha 24 temnik Shanyuga shaxsan bo'sungan. Har bir temnikda 10000 qurollangan otliq bor edi. Imperiyaning hukmdori qatlami qabila zodagonlaridan iborat edi. Yiliga uch marta barcha rahbarlar, harbiy rahbarlar Chanyuga yig'ilib, davlat ishlarini muhokama qilardilar.

Xunlarning G'arbgga harakati boshqa barcha qabilalar va xalqlarni harakatga keltirdi. Tarixda misli ko'rilmagan bu ko'p tilli qabilalar va xalqlarning harakati "Xalqlarning buyuk ko'chishi" deb nomlandi. Sekin-asta, ammo ishonch bilan xalqlar Sharqdan G'arbgga qarab, yangi yerlarni o'zlashtirdilar. 375 yilda Balamber boshchiligidagi xunlar Volgadan o'tib ketishdi. Bir necha yil davomida Qora dengiz mintaqasining butun hududi xunlar tomonidan bosib olingan. Mahalliy aholining bir qismi - gotika qabilalari - xunlarning tarkibiga kirdilar. 395 yildaxunlar Sharqiy Rim imperiyasining poytaxti Konstantinopolga yaqinlashib, Kavkaz va Mesopotamiyada yurishlar qildilar. Sharqiy Rim imperatori xunlarga oltindan o'lpon to'lashni va'da qildi. 437 yilda xunlar Yevropaga chuqur sayohat qildilar. Zamonaviy Fransiya hududida ular Burgundiya qirolligini mag'lub etdilar.

445 yilda Atilla hokimiyat tepasiga keldi. Atilla - Xunlarning 434 yildan 453 yilgacha bo'lgan rahbari, Rim imperiyasiga istilo qilgan barbar qabilalarining buyuk hukmdorlaridan biri. G'arbiy Yevropada ular uni "Xudoning balosi" dan boshqa narsa deb atashmagan. Atilla o'zining birinchi istilo kampaniyasini ukasi Bleda bilan birgalikda amalga oshirdi.

Ko'pgina taniqli tarixchilarning fikriga ko'ra, amakilari Rugila vafotidan keyin aka-ukalarga meros bo'lib qolgan Xunlik imperiyasi, g'arbda Alp tog'lari va Boltiq dengizidan sharqda Kaspiy (Xun) dengizigacha cho'zilgan. Margus (hozirgi Pozarevak) shahrida Sharqiy Rim imperiyasi hukmdori bilan tinchlik shartnomasi imzolanishi munosabati bilan ushbu hukmdorlar birinchi marta tarixiy yilnomalarda tilga olinadi. Ushbu kelishuvga binoan, rimliklar xunlarga o'lpon to'lashni ikki baravar oshirishi kerak edi, uning miqdori bundan buyon yiliga etti yuz funt sterlingga teng bo'lishi kerak edi.

Xunlarning tarixi to'satdan boshlandi va tugadi, qisqa vaqt ichida deyarli butun Yevropani zabt etgan butun bir imperiya shakllandi va xuddi shu qadar tez yo'q bo'lib ketdi. Biroq, bu kichik bo'shliq ham xunlar uchun o'z madaniyatini, dinini va turmush tarzini yaratishi uchun yetarli edi.

Xun qabilalari o'sha davr uchun murakkab ijtimoiy tashkilotga ega edilar. Mamlakatning boshlig'i cheksiz kuchga ega bo'lgan "osmon o'g'li" deb nomlangan

Shany edi. Xunlar urug' (urug') ga bo'linib, ularning soni 24 tani tashkil qilgan. Ularning har biriga "avlod hukmdorlari" rahbarlik qilgan. Fath urushlarining boshida yangi yerlarni o'zlari o'rtasida bo'linadigan menejerlar edi, keyinchalik Shanya bu bilan shug'ullana boshladi va menejerlar har biri uchun 10 ming kishidan iborat otliqlar ustidan oddiy boshliqlarga aylanishdi.

O'zini hurmat qiladigan har bir davlat singari Xun imperiyasi ham o'z diniga ega edi. Ularning asosiy xudosi Tengri - Osmon xudosi edi. Ko'chmanchilar animistlar edilar, Osmon ruhlarini va tabiat kuchlarini ardoqladilar. Himoya tuynuklari oltin va kumushdan yasalgan; plastinkalarda hayvonlarning, asosan ajdarlarning tasvirlari o'yib yozilgan.

Xunlar odamlarga qurbonlik qilmagan, ammo kumushdan yasalgan butlari bo'lgan. Diniy e'tiqodlarga ruhoniylar, sehrarlar va tibbiyot xodimlari jalb qilingan. Xunlarning hukmron elitasida ko'pincha shamanlar bilan uchrashish mumkin edi. Ularning vazifasi yilning qulay oylarini aniqlash edi.

Samoviy jismlar, elementlar va yo'llarni ilohiylashtirish ham ularning diniga xos bo'lgan. Otlar qon qurbonligi sifatida taqdim etilgan. Barcha diniy marosimlar har qanday hodisaning majburiy atributi bo'lgan harbiy duellar bilan birga bo'lgan. Bundan tashqari, kimdir vafot etganida, xunlar qayg'u belgisi sifatida o'zlariga jarohat etkazishga majbur edilar.

Xunlarning bosqini tarixiy voqealar rivojiga katta ta'sir ko'rsatdi. G'arbiy Yevropa qabilalariga kutilmagan bosqinlar ko'chmanchilar pozitsiyasida o'zgarishlarni keltirib chiqaradigan asosiy katalizator edi. Ostrogotlarning yo'q qilinishi Yevropa sklavenlarini nemislashtirish imkoniyatining oldini oldi. Alanlar g'arbga chekinishdi va Sharqiy Yevropaning Eron qabilalari zaiflashdi. Bularning barchasi faqat bitta narsani guvohlik beradi - faqat turklar va sklavenlar tarixiy voqealarning keyingi rivojlanishiga ta'sir ko'rsatdilar.

Hatto aytish mumkinki, Xunlarning yetakchisi Yevropaga bostirib kirib, Sharqiy proto-slavyanlarni gotlar, eronliklar, alanlar va ularning madaniyat rivojiga ta'siridan ozod qildi. Sklaven qo'shinlari xunlar tomonidan harbiy yurishlarning yordamchi zaxirasi sifatida foydalanilgan.

Atilla davrida xunlar hududi aqlga sig'maydigan joylarni egallab olgan. Volgadan Reyngacha cho'zilgan Xunniklar zabt etuvchilar imperiyasi maksimal darajada kengayib boradi. Ammo Atilla vafot etganda buyuk kuch parchalanadi.

O'rta asrlarning tarixiy voqealarini tavsiflovchi ko'plab manbalarda Yevroosiyaning turli qismlarida uchraydigan turli xil ko'chmanchi qabilalar xunlar deb nomlangan. Biroq, hech kim Yevropalik xunlar bilan munosabatlarini isbotlay olmadi. Ba'zi nashrlarda bu so'z "ko'chmanchi qabilalar" degan ma'noni anglatuvchi atama sifatida talqin etiladi.

Buyuk imperiya inqirozidan so'ng bu ittifoq tarkibidagi ba'zi qabilalar o'z nomlari bilan yangi siyosiy uyushmalar-hokimlik tipidagi davlatlarini tuzganlar. Oq Xun yoki Eftalitlar va Tavg'ach, Davan, Qang' (qang'ar) kabi davlatlar shular jumlasidandir. Bu davlatlarning nomlari asosan birlashmaga asos solgan qabilalar nomi bilan atalgan. Ular dastlab bir necha yirik urug'lar va kichik qabilalar birlashuvidan hokimlik ko'rinishidagi mustaqil siyosiy uyushmalar tarzida yuzaga

kelib, keyinchalik davlat tipidagi yirik qabilalar birlashmalarga aylanganlar va ancha keng hududlarni o'z ta'sirlariga qaratganlar. Bu holat Xunlarning migrasiyasi tufayli ham ancha oldingi davrlardan boshlangan. Umuman, xunlar ilk turkiyzabon qabilalardan biri bo'lib, Markaziy Osiyo va boshqa mintaqalardagi ba'zi xalqlarining, jumladan, o'zbeklarning ham eng qadimgi ildizi-ajdodlari sanaladi.

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## **METHODOLOGY OF TEACHING GERMAN AS A SECOND FOREIGN LANGUAGE**

*Abstract: The second foreign language in the universities is a new phenomenon. It can be argued that the introduction of a second foreign language into the curriculum of a general education school has become a real step towards multicultural education, towards the formation of a multilingual personality. German is typically the second foreign language. As practice shows, three out of four who study German as a second foreign language have studied English as a first foreign language and can use the experience, knowledge, abilities and skills that can be transferred into the second foreign language and greatly facilitate its learning.*

*Key words: German language, second foreign language, intercultural communication, learning process.*

When teaching German as a second language, it is necessary to rely on the general principles that apply when teaching any foreign language. Despite the fact that these principles have much in common, they still have some modification in relation to the second foreign language, taking into account the specificity of the learning conditions, for example, the presence of three languages in contact in the learning process, extensive experience in learning a foreign language, etc.

The most essential principles are as follows:

1. As in teaching any foreign language, communicative goals predetermine the general methodological approach to teaching. But since the students already have experience in learning English, mastering German is carried out by them more consciously, they can compare both certain linguistic phenomena of German, and the organization of the learning process. Students who study English and German have more developed reflection. That is why the general methodological principle

in teaching German can be defined as communicative-cognitive, where the cognitive aspect is subordinated to the communicative, and it manifests itself where it is necessary to find any analogies that facilitate assimilation, or, conversely, to identify differences in order to avoid interference.

2. The entire educational process should be focused on the student's personality, on his development, independence, on taking into account his capabilities, needs, interests.

When teaching German, there are even more prerequisites for this than when teaching English, thanks to the experience of learning a foreign language, a later start of learning and a more conscious approach to learning the language ... For some students, it is necessary to create conditions for faster progress, while others should be given the opportunity for repetition and training.

The problem of an individual's activity in learning is one of the most urgent in educational practice. The negative attitude of students to a foreign language, these include:

- Lack of systematic and in-depth clarifications about the importance of learning foreign languages;

- Incorrect teaching, not stimulating logical and meaningful memorization of language material, but orienting students only to intuitive understanding. Students accustomed to a system of work based on the principle of conscious learning cannot come to terms with a method of working on a language that contradicts their usual focus in working on other subjects. As a result, they become convinced that a foreign language is some kind of special subject that requires primitive, uninteresting forms of work;

- Inability of the teacher to organize work depending on the different levels of education. The methodology of teaching a foreign language should be rebuilt at different stages of work, of course, in accordance with the age characteristics and the increased volume of students' knowledge;

- Lack of tangible practical results of work on the language among students. Students, after several years of studying a foreign language, not seeing the practical results of this study, are disappointed and come to the conclusion that their work on the language is useless, which, of course, does not contribute to an increase in interest in the subject being studied;

- Lack of timely individual assistance in the event of a backlog of students.

In addition, the lack of correspondence between the construction of lessons and the mental needs of students also leads to a loss of interest among learners in the subject being studied. It is also important to note that the specificity of teaching a foreign language is fundamentally different from the specificity of teaching other school subjects.

The impossibility of a foreign language to implement the entire set of functions performed by the native language. After all, acting in the unity of the functions of communication and generalization, at first it is the main means of the learner's "appropriation" of social experience, and only then is the means of



expression, formation and formulation of his own thought. A foreign language under the conditions of higher education can no longer serve as an instrument of cognition of the surrounding world as a native one.

If a student masters all other subjects by means of the native language as a tool, tool, means, then when mastering a foreign language there arises the problem of gradual, externally controlled assimilation of the language itself, its means and methods of functioning, so that in the future with their help move on to solving complex cognitive problems. The challenge is to pinpoint the transition from what is currently the goal to tomorrow that will be the means to another, more complex goal. To remove this difficulty, that is, to identify whether a foreign language at a certain moment is the goal or means of teaching, methodologists divide the process of teaching the language into several stages.

The educational process as a model of real intercultural communication, she identifies such four stages of mastering foreign language communication as the stage of the formation of speech skills, their improvement, the development of speech skills and communication training. Thus, all of the above allows you to understand the peculiarities of a foreign language as an academic subject in order to take them into account when including active teaching methods in a foreign language educational process. It is necessary to highlight the criteria, guided by which it is possible to determine the place of each of the methods in foreign language lessons, as well as to identify the means that ensure the applicability and effectiveness of active teaching methods.

A German lesson is a logically finished part of the work of teaching a language, the main goal of which is to achieve certain goals of a practical, general educational and educational nature. To achieve a positive result in the implementation of these goals, it is necessary to do pre-planned exercises and tasks, based on the means and teaching methods laid out by the teacher. The essence of the lesson depends on the speech orientation.

Successful assimilation of language skills and information in a German lesson is directly dependent on the organization of this lesson.

A German lesson can only be complex, that is, it should contain a variety of types of work and study different aspects of the language. During the lesson, students should demonstrate vigorous speech activity. Transfer of knowledge and skills from the native language to the target language. During the lesson, the training and consolidation of the passed material should prevail over the study of new.

A lesson system is a collection of lessons of different types, which are arranged in a hierarchical chain and have a common end goal. The system of lessons is characterized by the sequence of processing of some language material and often covers an entire paragraph of the textbook or a certain conversational topic.

In the system, lessons are of the following types:

- ✓ A lesson in mastering primary skills;
- ✓ A lesson in practicing speech skills;
- ✓ Oral speech lesson;
- ✓ Lesson of repetition of the studied material.

In addition to these types, there are also survey and trial lessons.

Lessons for practicing primary skills are intended for: submitting new material, repeating this material, solving exercises and tasks for recognizing language material. The number of such lessons depends on the degree of complexity of the new material and on the level of knowledge of the target language. During the lessons of practicing speech skills, the main attention is paid to reading, dialogues.

The educational process is the most difficult moral relationship between a teacher and a student, in which the corresponding, defining feature is the upbringing of a sense of honor and dignity.

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## **FUNCTION OF ACCUSATION IN THE CRIMINAL PROCEDURAL LAW OF THE REPUBLIC OF THE UZBEKISTAN**

*Annotation: This article analyzes the essence of the accusation in the judicial and legal system, as well as the historical aspects of the origin of the accusation, the role and significance of the accusation in the criminal process of legal status, the norms and scientific views of the essence of the accusation based on foreign and national legislation.*

*Keywords: accusation, suspicion, defence, justice, function.*

President of the Republic of Uzbekistan Mirziyoyev Sh.M. in his Address to the Oliy Majlis of the Republic of Uzbekistan on December 29, 2020, noted that "Justice is a solid foundation of statehood" [1].

In fact, in recent years, the reform of the judicial sphere, as well as reliable protection of human rights and interests, has reached a new level.

If we turn to history, then in the 8th century our ancestors, who lived on the territory of modern Uzbekistan, converted to Islam, after which, like in other Muslim countries, the courts of "kadis" and "biys" began to operate in our country.

If the kadis made decisions based on Sharia (Muslim law) in criminal and civil cases, disputes related to inheritance, family and marriage issues, then the courts of biys resolved disputes based on local customs and traditions.

During this period, cases were considered without the participation of a defence attorney; there was no defence function in the trial. Moreover, the accusation was expressed in a private form, that is, one sued the other.

In our country, this system existed almost unchanged until the second half of the 19th century.

By 1864, according to the judicial reforms carried out in Russia, the legal profession was legislatively enshrined in the judicial charter, and the legal profession became a new legal institution in Russia. Since that time, in the Turkestan Territory, as in other countries of Russia, when considering criminal and civil cases in court, defence lawyers were given special powers. In general, from this period, the function of protection appeared in the criminal process.

The function of the accusation was due to the introduction of the concept of the institution of the prosecutor's office in the draft of the interim Regulation on the management of the Turkestan region from 1867. Analyzing the judicial and legal history, we note that in 1887, by order of the Minister of Justice of Russia, regional prosecutors were created at the courts of the Syrdarya, Margilan and Samarkand regions, who were administratively subordinate to the Minister of Justice of Russia.

After the formation of the Uzbek SSR, based on the Criminal Procedure Code of the RSFSR of May 25, 1922, the first Criminal Procedure Code of the Uzbek

SSR was adopted, which operated until 1959. On May 21, 1959, the new version of the Code of Criminal Procedure of the Uzbek SSR was adopted, which operated until the first days of our independence.

On September 22, 1994, the Code of Criminal Procedure of the Republic of Uzbekistan was adopted, and in connection with its introduction into force, the Code of Criminal Procedure of the Uzbek SSR of 1959 lost its force.

Above, we touched upon the judicial and legal system of Turkestan and its historical roots. Now let's pay attention to the existence of the function of accusation, defence and justice in the criminal process of democratic rule-of-law states.

This situation is reflected in the principles of the criminal procedure legislation of our country "on the administration of justice only by the court and on the adversarial nature of the proceedings in court" [2].

According to paragraph 6 of the Resolution of the Plenum of the Supreme Court of the Republic of Uzbekistan dated December 19, 2003, No. 17 "On the practice of the courts' application of laws that ensure the suspect, the accused the right to defence", the adversarial principle implies the separate implementation of the functions of prosecution and defence. At the same time, the court cannot act on the side of the prosecution or the side of the defence and should not express any of their interests. The court, while maintaining objectivity and impartiality, must carry out the function of resolving the case, that is, provide the parties with equal opportunities to defend their positions by exercising procedural rights.

As our scientists noted in their research, "the functions of the criminal process can be conditionally divided into three types, in particular:

- 1) based functions (prosecution, defense, justice - case resolution, control);
- 2) optional functions (compensation for damage, securing a civil claim, establishing the cause of the crime and the conditions that contributed to its commission);
- 3) additional functions (supporting functions: the function of the secretary of the court session on drawing up the minutes of the court session, etc.)[3].

This means that the main functions of the criminal process such as prosecution, defence and justice are inextricably linked with each other, they are very thinly separated from each other.

At the same time, the accusation is an important function of the criminal procedure. Since, without the function of accusation, without accusing a person of committing a crime, neither defence nor justice is carried out.

It is necessary to note the popular expression of ancient Roman law: "Nullum crimen sine poena, nulla poena sine lege, nullum crimen sine poena legāli". That is: "There is no crime without punishment, there is no punishment without law, there is no crime without legal punishment."

Researcher of the Russian Federation A. Kovaleva characterizes the accusation as "the starting point and driving force of the entire trial, since if no one accuses anyone, then there is no need for protection from accusation, as well as for the administration of justice" [4 ].

If we turn to Western experience, then in the Federal Republic of Germany the central concept of criminal procedure is "suspicion" [5]. German textbooks mainly focus on the concept of "suspicion", study it in every possible way and widely disclose it.

In German criminal law, the initiation of a preliminary investigation is linked to "suspicion". In particular: "When the prosecutor's office receives information about the commission of a criminal act based on a statement of the commission of the act or otherwise, it must examine the factual circumstances to decide whether a public charge should be brought" [6].

Russian researcher Y. Ploshkina believes that: "Suspicion plays a key role in the criminal process in Germany, serving as the basis for the initiation of a preliminary investigation, for the application of measures of criminal procedural coercion, as well as for the appearance in the process of various participants in criminal proceedings. Not only the German criminal procedural doctrine, but also judicial practice, and the legislator in criminal proceedings are guided by the doctrine of suspicion" [7].

It should be noted that although according to German law, "suspicion" appears as a central concept in criminal proceedings, in Germany there is no such participant in the process as "suspect". As a result of suspicion in the German criminal process, such participants as "the accused" and "the witness under suspicion" arise.

The notion of "charge" is also touched upon in the International Covenant on Civil and Political Rights of December 19, 1966, in particular: "Every arrested person shall be informed upon the arrest of the reasons for his arrest and shall be promptly informed of any charges brought against him." Also, the International Covenant uses the term "accused" as a concept of a participant in a criminal process [8].

Our legislation contains such concepts as "suspicion", "charge", "suspect" and "accused", each of which is defined separately. The rights of the suspect and the accused are specified in separate norms of the criminal procedure law (Articles 46, 48 of the Criminal Procedure Code of the Republic of Uzbekistan).

Summing up, within the framework of covering the topic, we can conclude that the prosecution serves to improve criminal procedural law and regular reform of human rights and guarantees, such functions as prosecution, defence and justice are interconnected, the functioning of which independently testifies to the existence of the rule of law in society [9].

Improving one function will not only negatively affect the activities of justice, but will also lead to the loss of citizens' confidence in justice and the state. The practicality of procedural equality in court always ensures a fair trial.

Therefore, in our opinion, ensuring the independence of each participant in the criminal process, performing the function of prosecution, defence and justice, separating them from each other, especially proceeding from the principle of adversarial, the creation of equal rights and opportunities for the implementation of the functions of prosecution and defence guarantees justice.

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## **ЧИГИТЛИ ПАХТА НАМЛИГИНИ АНИҚЛАШ ВА ХАТОЛИКЛАРНИ КАМАЙТИРИШ**

*Аннотация: Ушбу мақола чигитли пахта намлигини аниқлаш жараёнлари, ўлчаидаги хатоликлар ва уларни камайтириш усулларини муҳокама қилади.*

*Калит сўзлар: ўлчаи мосламалари УСХ-І, ВХС-І ва ВХС-МІ асбоблари, ўлчаидаги хатоликлар номувофиқлик ,хатони топиш усуллари.*

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## **DETERMINATION OF MOISTURE OF COTTON COTTON AND REDUCTION OF ERRORS**

*Abstract: This article discusses the processes for determining the moisture content of cotton seeds, measurement errors and ways to reduce them.*

*Keywords: measuring devices USX-I, VXS-I and VXS-MI, measurement errors inconsistency, error detection methods*

Ўзбекистон қишлоқ хўжалигини тараққий топган, лекин табиий шароити тахминан бир хил бўлган бошқа давлатлар қиёсласак, шундай қатъий хулосага келиш мумкин: Ўзбекистонда аграр тармоқ ҳосилдорлигини ошириш имконияти ниҳоятда катта. Бизда бу борада имкониятлар кўп. Улар жаҳонда белгиланган ва кенг қўлланилаётган агротехник меъёрларга, қоидаларга амал қилишни, деҳқончилик маданияти ва қишлоқ хўжалиги ишлаб чиқаришини оқилона ташкил этишни талаб этади. Пахта ва толанинг хўжалик ҳамда технологик кўрсаткичлари нуқтаи назаридан бир кўсакдаги пахтанинг ва 1000 дона чигитнинг вазни, тола чиқиши, узунлиги, ингичкалиги, нисбий узилиш кучи, пишиб етилганлиги, микронейр кўрсаткичи, толанинг текислилиги ва ташқи кўриниши муҳим аҳамиятга эга.

Чигитли пахта намлигини аниқлаш усуллари

Чигитли пахта намлиги деб уни қуритишда йўқотиши мумкин бўлган намлик миқдори тушунилади. Материал намлигини юқори иссиқликда доимий қуруқ массагача қуритиш йўли билан аниқланади.

Намликнинг массавий нисбати – намлик массасининг қуруқ модда массасига нисбати (фоизларда).

Меъёрланган (ҳисобий) намлик – хом ашё ёки маҳсулотнинг кондицион массасини аниқлаш учун меъёрий ҳужжат билан белгиланадиган намликнинг массавий нисбатида (ёки намликнинг массавий улушида) меъёрий намлик ифодаланадиган шартли намлик.

Намлик – пахтадаги сув миқдори (фоизларда).

Намликнинг чекланган меъёри – юқори намликка эга бўлган хом ашёни қабул қилишни ёки маҳсулот ишлаб чиқаришни чекловчи меъёрий ҳужжат билан белгиланадиган намлик меъёри.

Пахта тозалаш саноатида пахта ва унинг маҳсулотлари намлигини қуритиш шкафларида

(Уз-7М, ШСХ-1) ( $110 \pm 1,5$ )°С Шароратда ва тезкор усулда УСХ1, ВХС, ВХС-М1 ва "Сифат" тезкор аниқловчи ўлчаш ускуналарида ( $195 \pm 2$ )°С ҳароратда намунани қуритиш йўли билан аниқланади. Намликни аниқлашдан мақсад – қуритиш шкафлари ва тезкор аниқловчи ўлчаш қурилмаларини қўллаш йўли билан пахта намлигининг массавий нисбатини аниқлашдир. Намликни аниқлаш учун пахтадан намуналар олинади.

Намунани олиш ва танлаш тартиби ва усуллари О‘zDSt644:2006 стандартида аниқ кўрсатиб ўтилган. Ушбу стандарт талаблари қўлланилиш соҳаси бўйича мажбурийдир. Намликни тезкор аниқловчи ўлчаш қурилмаларида намликни аниқлашда қуйидагилар қўлланилади;

-УСХ-1, ВХС-1 ва ВХС-М1 ўлчаш қурилмалари бюкслар билан. ўхшаш метрологик тавсифларга эга бўлган бошқа қуритиш шкафларини қўллашга рухсат этилади;

–Аниқлиги 4 чи синфга мансуб юқори тортиш чекланиши 500 г ва ҳар бир бўлинмаси 10 мг дан юқори бўлмаган умумий қўлланиладиган лаборатория тарозиси;

Қуритиш шкафларида намликни аниқлашда қуйидагилар қўлланилади:

– таркибига металл бюкслар, шунингдек ГОСТ 9871 бўйича шкала бўлими 20С бўлган контактли термометр, ГОСТ 28498 бўйича шкала бўлими 0,50С дан ошмаган назорат термометри киритилган табиий ҳаво алмаштиргичли УЗ-7М типидagi ёки мажбурий ҳаво алмаштиргичли ШХСтипидagi қуритиш шкафи, ёки терморегуляторли УЗ-8 типидagi қурилма.

Ушбу стандарт талабларини қониқтирувчи бошқа ўлчаш қурилмаларини қўллашга рухсат этилади.

– хлорли кальцийга эга бўлган ГОСТ 25336 бўйича эксикатор;

– аниқлиги 2-чи синфга мансуб юқори тортиш чекланиши 200 г бўлган лаборатор тарозиси;

–валиклари оралиги ( $2,0 \pm 0,2$ ) мм бўлган пахта чигитини валиклари оралиғи майдалаш мосламаси.

Ўлчашни бажаришга тайёргарлик намликни тезкор аниқловчи қурилмалар синов натижаларини тасдиқланган текшириш қўлланма билан



вакти-вакти билан қуритиш шкафлари синов натижаларига солиштириш йўли орқали текшириб турилиши лозим.

Ўлчаш бажарилишидан олдин ўлчаш мосламалари ва қуритиш шкафлари қуйидагича киздириб турилиши лозим:

-УСХ-І, ВХС-І, ВХС-МІ –  $(195\pm 2)$  °С

-қуритиш шкафлари -  $(110\pm 1,5)$  °С

Пахта тўдасидан намуналар танлаш О‘zDSt643 га мувофиқ бажарилади.

УСХ-1, ВХС-1, ВХС-М1 ўлчаш мосламаларида намликни аниқлаш учун намуналар танлашда синов учун намуналар банкага солинган ёки столга ёйиб қўйилган бирлаштирилган (ўрта кунлик) намунадан танлаб олинади. Бирлаштирилган намуна столга ёйиб қўйилган бўлса намуна ёйиб қўйилгандан кейин дарҳол танлаб олинади. Бирлаштирилган (ўрта кунлик) намунанинг ҳар еридан 10-13 г бўлган пахта танлаб олинади. Танлаш 3-4 марта қайтарилади.

Танлаб олинган пахта қўшилади ва шу заҳоти массаси  $(40,00\pm 0,02)$  г га етказиб тортилади.

–ҳар бир ўрта кунлик ёки бирлаштирилган намунадан пахтанинг намлиги 20% гача бўлса – бир намуна ва намлик 20 % дан ортиқ бўлса

– икки намуна танлаб олинади.

– ҳар бир келтирилган пахта тўдаси намлигини аниқлаш учун бирлаштирилган намунадан, унинг намлигидан қатъий назар, бир намуна олинади.

Пахта қабул қилиш пунктларида намликни аниқлашни тўғрилигини назорат қилиш учун уч намуна танлаб олинади. Қуритиш шкафларида намликни аниқлаш учун намуналар танлашда синов учун намуналар бирлаштирилган (ўрта кунлик) намунадан УСХ-1, ВХС-1 ўлчаш мосламаларига қўйилган талабларга мос қуйидаги ўзгартиришлар билан танлаб олинади. Массаси 10-13г бўлган пахта олдиндан оғирлиги тортилган 4 бюксага бир хилда қилиб солинади. 3-4 марта танлангандан кейин ҳар бир бюксадаги пахтанинг массаси  $(10,00\pm 0,01)$  г га етказилади.

Намликни тезкор усулда аниқлаш О‘zDSt644 стандарт бўйича аниқланади.

УСХ-1, ВХС, ВХС-М1 ва "СИФАТ" ўлчаш ускуналари бюкслар билан биргаликда пахта, тола, момик ва чигитнинг намлигини тезкор усулда аниқлашга мўлжалланган. Ушбу ускуналарда қуритилаётган намуна юпқа қатламини қиздирилган сиртлар оралиғида ёпик камерада қизиган сиртга тегиб турган ҳолда тез қуритиш усули қўлланган. Ўлчаш услубиятлари О‘zDSt644:2006, О‘zDSt634:2010, О‘zDSt659:2011, О‘zDSt600:2011 давлат стандартлари талаблари бўйича амалга оширилади.

УСХ-1 ўлчаш ускунаси қуйидаги техник кўрсаткичларга эга

- қуритиш камераси;

- қиздириладиган юзаларининг марказидаги ўртача ҳарорати  $(195\pm 2)$  °С

-қуритиш шкафларининг қиздириладиган юзаларининг оралиғи ( $3.7 \pm 0.5$ )  
0.2)

-қуритиш вақтини тугаганлиги ҳақида ёруғлик сигнали берилиши вақти мин ( $-5 \pm 10$  с) пахта ушлаб туриш - автоматлашган.

УСХ-1, ВХС, ВХС-М1 ва "СИФАТ" қурилмалари ёрдами билан чигитли пахта, чигит ва толадан намуналар олинади. Олинган намуналарни аниқлиги 0,01 г гача аниқликда ўлчанади.

Ўлчашларнинг рухсат этилган хатолиги

1 Икки ҳар хил лабораторияда олинган икки намунани синаш (усулнинг келишувчанлиги) натижалари орасидаги ёки, бир лабораторияда ҳар хил шароитда олинган икки синов (усулнинг қайтарилувчанлиги) орасидаги фарқланиш, намликнинг массавий нисбатини аниқлашни тўғрилигини текширувчи назорати остида олинган натижаларнинг рухсат этилган фарқланишидан, пахтанинг намлиги 10% гача бўлганда  $\pm 0,5$  абс. % дан ва УСХ-1, ўлчаш мосламаси қўлланилганда ва намлик 10 % дан юқори бўлганда  $\pm 5$  нисб. % дан ошмаслиги керак.

2 Пахтанинг намлиги 10 % гача бўлганда УСХ-1, ВХС-1, ВХС-М1 ўлчаш қурилмаларида намликни аниқлашнинг хатолиги қуритиш шкафида аниқланганига нисбатан  $\pm 0,5$  абс. % дан ошмаслиги ва намлик 10% дан юқори бўлганда  $\pm 5$  нисб. % дан ошмаслиги керак.

3 Қуритиш шкафида намликни аниқлашнинг ҳисобга олинган систематик хатолиги  $\pm 0,2$  % дан ошмаслиги керак.

Хулоса

• Хатоликлар чиқмаслиги учун намликни аниқловчи ускуналарни такомиллаштириш зарур. Уларни модернизация қилиш муҳим ҳисобланади. Масалан ВХС қурилмаси лабораторияда ишлатилиш жараёнида тез қизиди, қуритиш камерасини қулфи яхши ёпилмайди, сет лампаси тез куйиб қолиш жараёнлари жуда куп кузатилган. Қурилмани таъмирлаш куп вақтни олади. Шу ва шунга ўхшаш ҳолатларни бартараф этиш учун чора тадбирлар амалга оширилмоқда. Технологик ускуналарни шундай лойиҳалаш ва уларни ишлаб чиқиш жараёнларини шундай ташкил этиш лозимки, қайсики ишлаб чиқариш ёки йиғишда тузатишларга йўл қолмасин;

• Хатолардан ҳимояланишни қўллашда ахамияти мезонлирдан фойдаланиш (Олдини олиш, топиш, инсонлар фикри ва бошқалар орқали);

• Хатодан ҳимояланишдан биринчи қадами бу хато қилмасликга ҳаракат қилишдир.

Хозирги кунда мамалакатимизда пахта тозалаш корхоналари кластерларга айлангач, янгича технологиялар билан жихозланмоқда уларни фаолият юргизиши учун давлатимиз томонидан кенг куламдаги ишлар амалга оширилмоқда. Пахта-тўқимачилик кластерлари томонидан жойларда босқичма-босқич замонавий қишлоқ хўжалиги техникалари паркини яратиш, соҳани механизация даражасини ошириш, етиштирилган ҳосилни чуқур қайта ишлашни йўлга қўйилмоқда. Кластерлар эндиликда ҳосилдан максимал

фойда олиш мақсадида эскириб қолган воситаларни, қурилмаларни янги замонавий технологияларга алмаштириш самарадорликни оширишни ўз олдига мақсад қилиб қўйиши лозим.

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## **THE ROLE OF THE LEADER IN INCREASING THE EFFICIENCY OF THE ENTERPRISE**

*Abstract: This article discusses the role of the leader in improving the efficiency of the enterprise.*

*Key words: organization, leadership, beans, efficiency, economic growth*

Leadership is the ability to influence individuals and groups of people to motivate them to work towards goals. There are many means by which you can influence others and lead people with you.

According to the personal theory of leadership, the best leaders have a certain set of personal qualities that are common to all. Developing this thought, it can be argued that if these qualities could be identified, people could learn to cultivate them in themselves and thereby become effective leaders. Some of these studied traits are the level of intelligence and knowledge, impressive appearance, honesty, common sense, initiative, social and economic education and a high degree of self-confidence [Mokshantseva O.S. Social Psychology. Uch. pos. for universities - M.: Infra-M, 2001.].

However, personality studies continue to produce conflicting results. Leaders tend to be distinguished by intelligence, desire for knowledge, reliability, responsibility, activism, social participation, and socioeconomic status. But in different situations, effective leaders displayed different personal qualities. Scientists concluded that "a person does not become a leader only because he has a certain set of personal properties."

The behavioral approach has created a framework for classifying leadership styles or behaviors. It has become a significant contribution and a useful tool for understanding the complexities of leadership. This approach to the study of leadership has focused on the behavior of the leader. According to the behavioral approach, efficiency is determined not by the personal qualities of the leader, but rather by his demeanor towards subordinates.

Neither a personality or behavioral approach has been able to identify a logical relationship between a leader's personality or behavior, on the one hand, and efficiency, on the other. This does not mean that personal qualities and behavior are irrelevant to the leadership. On the contrary, they are essential ingredients for success. However, more recent research has shown that additional factors can play

a decisive role in the effectiveness of leadership. These situational factors include the needs and personal qualities of subordinates, the nature of the task, the requirements and influences of the environment, and the information available to the manager.

An important contribution of the behavioral approach to leadership theory is that it helped to analyze and classify leadership styles. Leadership style in the context of management is the habitual manner in which a leader behaves towards subordinates in order to influence and motivate them to achieve the goals of the organization. The extent to which a manager delegates authority, the types of power he uses, and his concern primarily for human relationships or, above all, for the performance of a task all reflect the leadership style that characterizes a given leader.

Each organization is a unique combination of individuals, goals and objectives. Each manager is a unique personality with a number of abilities. Therefore, leadership styles do not always fit into a specific category. According to the traditional classification system, the style can be autocratic (this is one extreme) and liberal (the other extreme), or it will be a work-centered style and a person-centered style. An autocratic leader in management is authoritarian. The autocratic leader has enough power to impose his will on the performers, and, if necessary, does not hesitate to resort to it. The autocrat deliberately appeals to the needs of the lower level of his subordinates on the assumption that this is the level at which they operate.

Based on these initial assumptions, the autocrat usually centralizes authority as much as possible, structures the work of subordinates, and gives them little freedom to make decisions. The autocrat also tightly directs all work within his competence and, in order to ensure that the work is done, he can exert psychological pressure, as a rule, threaten.

When an autocrat avoids negative coercion and uses a reward instead, he is called a benevolent autocrat. Although he continues to be an authoritarian leader, the benevolent autocrat takes an active role in the mood and well-being of his subordinates. He may even agree to allow or encourage them to participate in scheduling assignments. But he retains the actual power to make and execute decisions. And as supportive as this leader may be, he extends his autocratic style further, structuring tasks and imposing strict adherence to a huge number of rules that rigidly regulate employee behavior.

The ideas of a democratic leader about workers differ from the ideas of an autocratic leader:

- Labor is a natural process. If conditions are favorable, people will not only accept responsibility, they will strive for it.
- If people are attached to organizational goals, they will use self-management and self-control.
- Involvement is a function of goal achievement reward.
- The ability for creative problem solving is common, and the intellectual

potential of the average person is only partially used.

Due to these assumptions, the democratic leader prefers such mechanisms of influence that appeal to the needs of a higher level: the need for belonging, high purpose, autonomy and self-expression. A real democratic leader avoids imposing his will on his subordinates.

Organizations dominated by a democratic style are characterized by a high degree of decentralization of powers. Subordinates take an active part in decision-making and enjoy wide freedom in performing tasks. Quite often, by explaining the goals of the organization, the leader allows subordinates to define their own goals in accordance with the ones that he has formulated. Instead of exercising strict control over subordinates in the course of their work, the grassroots leader usually waits until the work is completed to the end in order to assess it. The leader acts as a liaison, ensuring that the goals of the production group are aligned with those of the organization as a whole, and that the group gets the resources it needs.

Because a democratic leader assumes that people are motivated by higher-level needs - for social interaction, success, and self-expression - he tries to make the responsibilities of subordinates more attractive. In a sense, he tries to create a situation in which people, to some extent, motivate themselves, because their work, by its nature, is itself a reward.

It also encourages subordinates to understand that they will have to solve most of the problems without seeking approval or help. But the leader puts a lot of effort into creating an atmosphere of openness and trust so that if subordinates need help, they could not hesitate to turn to the leader. To achieve this, the head organizes two-way communication and plays a guiding role.

One can understand why both the autocratic approach and the human relations approach have won many supporters. But now it is already clear that both those and other supporters sinned by exaggeration, drawing conclusions that are not fully supported by facts.

There are many well-documented situations where a supportive autocratic style has proven to be highly effective.

The democratic style has its strengths, successes and weaknesses. Certainly, many organizational problems could be solved if improved human relations and worker participation in decision-making always lead to greater satisfaction and higher productivity. Unfortunately, this does not happen.

Scientists have encountered situations where workers were involved in decision making, but, nevertheless, the degree of satisfaction was low, as well as situations where satisfaction was high and productivity low.

It is clear that the relationship between leadership style, satisfaction, and performance can only be determined through lengthy and extensive empirical research.

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## **PROBLEMS OF REFLECTION OF TRADITIONS IN LINGUISTIC COUNTRY-STUDY TEXTS**

*Annotation: This article provides information on the difficulties and linguistic problems in the clear expression of English customs and words in Uzbek in linguistic texts, and compares the semantic differences of words in the two languages.*

*Keywords: art of translation, transformation, free combinations, realia, semantic structure, grammatical connection, English grammar, Uzbek grammar, translation language.*

The art of translation is one of the most delicate and elegant arts and requires a perfect, careful use of word space. The words should be chosen in such a way that the translation is understandable to everyone and that the meaning expressed in the original sentence is consistent with the meaning given in the translation. In order to create such consistency, the words being translated are not translated literally. If that were the case, there would be no easier task than translation.

Until the twentieth century, the word "translation" was used only to refer to the translation of historical, philosophical, literary, and artistic works. The terms "translator" are used in Turkic peoples, "dolmetechen" in German, and "interpret" in English and French. The same can be said of the theory of translation.

Nowadays, the practice of translation (regardless of the type of translation) is based on science. Of course, intuition has a place and weight in the creative process. Science allows translation to be complete and reliable.

Translation, or rather true translation, is the skill with which a work is being rewritten. When translating a book, the translator re-feels, understands, and conveys the author's feelings and thoughts to the people of the language being translated as a new work. When the level of a translator who translates a book rises to the level of the author, logically the translator who translates 100 books becomes a "treasure trove of knowledge." For this reason, our forefathers were practically encyclopedic scholars, even though they wrote more in certain fields and less in others, and they pushed the field at least a few steps forward in whatever field they wrote.

Translation is the creative assimilation of the artistic and scientific beauty of another language for its people, demonstrating the strength and power of the new language means turning into an art event. Working as a translator, mastering the language at a professional level, is an almost unexplored, unique and delicate



enough issue. The translation skills are one of the most common types of creative skills in the world. Due to the misuse of a single word in a text or a scientific or artistic work, the meaning of the sentence changes completely. Why take months to translate a single work? Does it take so long? This is definitely one of the questions that is of interest to all of us. Indeed, as noted above, it is a very delicate matter. Of course, technology and science are advanced today, but sometimes they can be weak. In today's article we will talk about this issue of complexity.

This is how the originality, subtlety and secrets of the art of translation are revealed. One of the most complex and important factors in translation is the transformation of words.

In one language, except for the equivalent that corresponds to another language, the rest can express a different meaning. For example, in English, the word "close" is translated from Uzbek as "to close", "to hide", and also means "close", "not burning", "next to". The word "slip" translates to "sleep soundly," "get things done quickly," "go the wrong way," "a piece of paper," "a small mistake," and "avoid something." That is, they are polysemantic and can have many meanings, it should be noted that one word in English has a maximum of 23 meanings. The translator must use his / her skills to use the appropriate, appropriate word translation based on the context. In the process of translation, polysemous words are given one meaning in one language and other meanings in another.

Another most difficult problem facing translators is how to find lexical equivalents for objects and events which are not known in the receptor language. Usually, there are a number of problems and difficulties in translating Uzbek traditions. Because some words in Uzbek do not have the exact equivalent or exact meaning in English. They are called cultural words and phrases. If a word or a phrase is unknown in the receptor language the translator must find the ways of substitution without distorting the meaning of it.

Our investigation showed that Uzbek cultural words may be translated into English by the following ways:

For example, "Nahorgi osh" - "Morning Plov" (One of the old and binding ceremonies of Uzbek nationality is morning plov. The big plov is cooked for hundred of guests when a child is born, during a circumcision event, in honor of a man returning from the military service, in the early morning of a wedding day), The day before ceremony beginning in the evening they solemnize "sabzi tugrar" (carrots shredding) rite, (which usually neighbors and near relatives come to. After finishing "sabzi tugrar" ritual, all participants are invited to sit at the table.)

In this case, the meaning of the word is well understood. Due to the lack of accurate translations in "Chopon", "Karnay", "Surnay", definitions are used to explain them ("Chopon" - "Chapan" (traditional men's robes), "Karnay", "Surnay" - Uzbek national musical instruments ). The following is an English translation of several realia words:

<b>realias</b>	<b>Meaning</b>
Fotiha toyi	engagement ceremony
Non sindirish	engagement
Qiz oshi	Several days prior to the wedding party the «kiz oshi» ceremony («girls only party») is held in the bride's house, to which the bride invites her close friends and relatives.
Kelin salom	daughter's-in-law greeting (Young daughter-in-law, dressed with a bright headscarf on her head that covers her face, goes to the guests to greet all with the bows. Bride is obliged to greet each of them by bowing lowly. The daughter-in-law bows for a reason - the gifts should be presented to her. )
Beshik to'yi	Beshik Tuyi (wooden cradle) is a ritual celebration related to the first putting the baby into the cradle.
Sunnat toy - Khatna Qilish	Circumcision is another ancient Uzbek ceremony adopted after accepting Islam (Sunnat Tuyi). This ceremony is held for boys at ages 3, 5, 7, 9 but nowadays this aging is not strict and one can do this ceremony when needed.

The semantic structure of languages differs greatly from one another. Care must be taken in translating units that come in the form of phrases and have a figurative meaning. Take, for example, the phrase "breaking bread." In this case, a compound gives a single meaning and is used in a figurative sense. Translated into English, it translates as "bread crumbing", which at first glance is structurally correct, but the meaning is far from the original. For this reason, it should be translated as "engagement".

Another example is one of the Uzbek national traditions "oyoq bosdi". The word is in the form of a phrase, which in this case poses a problem in expressing the exact meaning in translation. The translation can be translated as "to step on", but

the meaning is completely different. In professional translation, the meaning of the word is taken into account, which is why it is translated as "pressing the foot".

The translation process should take into account the semantic and structural features of the phrases. It is recommended to translate the horse first, because no matter what the definition is, everyone identifies the horse, and the horse represents the most important meaning in the sentence. The next task of the interpreter is to distinguish the groups of meanings in the sentence. In most cases, the order of the free combinations of English and Uzbek can be compatible in both languages:

"Kelin o'tirmayapti" - "The bride is not sitting";

"Kelin ovqat yemayapti" - "The bride is not eating soup";

"Qiz bazmi" - "Girl's party";

"Hina qo'yar" - "Put henna";

"Qiz bekitdi" - "The girl hid";

"To'qqiz tovoq" - "Nine plates";

"Isiriq puli" - "Incense fee".

It is no secret that it is a real skill to use words in their proper place. It is up to us to translate without making mistakes in the matter of translation. Translation means the creative mastery of the artistic beauty of another language for one's own people, the transformation of a work into an artistic event of that language, demonstrating the power and might of the new language.

Working as a translator, mastering the language at a professional level, is almost extensive is an unexplained, peculiar, and delicate enough matter. The profession of translator is one of his most creative vessels in the world. Masso much is written (spoken) about translators in the media for both are usually different, often misconceptions, about this profession. It is the responsibility of legal, technical or medical texts that require a thorough knowledge of the Uzbek language. The main problem of translation is to fully understand the text in front of the translator and requires a thorough understanding. In the absence of such a requirement, the translation is mainly mechanically words belonging to a particular language will be replaced by words used in another language, and this work would have already been done by the computer. And to this day, there would be no need for a translator. Translation is a creative endeavor that involves intuition, personal experience, understanding of the meaning behind the text, and so on.

Each type and appearance of translation translates to the stage of comprehension of the original text has unique features and characteristics. At the same time, the translator strives to comprehend, to understand and feel, to realize its artistic value. Defines how it is formed methodologically, translation text, what level of sensitivity, specific word, sentence, phrase, paragraph etc. determines how it should be translated.

What is translated, even the smallest ideological unit, word or sentence, whether it is a major scientific or artistic work, a monograph, a novel, takes on a new meaning in the presence of another language. Gradually, this new national environment leads to the emergence of qualitatively original ideas, thoughts, genres,

images, which, in turn, lead to a completely unified dictionary, science, literature and art. will lead to the emergence of works.

The re-creation of image tools in the translation process and the word in it the problem of selection requires excellent skill from the translator. —The translator works hard to recreate the work from another language, the mother tongue, absorbs, then chooses an alternative word depending on the nature of the text, that is the meaning of the words, the tone, the form, the stylistic alternative, the original idea as complete as possible, burns with the anxiety of expression, writes Ghaybulla Salomov.

Word choice plays an important role in translation. An interpreter is the original in translation, if he can feel how skillfully the author has chosen the word also makes the word so convincing.

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## FUNDAMENTALS OF LEXICOLOGY

*Abstract: This article deals with the lexicology object and its links with other linguistic affiliates, two approaches to language learning, linguistic analysis, and perspectives of contemporary English linguistics.*

*Key words: lexicology, vocabulary, vocabulary, lexicon, mental lexicon, idioms, grammar, phonetics, word life, morphology, etymology, phraseology.*

Lexicology derives from two Greek words *lexis* "word" and *logos* "learning". It is a branch of Linguistics dealing with the vocabulary system of the language. It studies the total sum of all the words that the language possesses. Thus, this science studies the properties of the words as the basic units of the language.

The word can be defined as a structural and semantic entity of the language system. The word is simultaneously a semantic, grammatical and phonological unit. Lexicology studies various lexical units: words, variable word-groups, phraseological units, and morphemes which make up words. The word as well as any linguistic sign is a two-faced unit possessing both form and content or in other words sound-form and meaning.

The term *vocabulary* means the total sum of words that there are in the language. The size of the vocabulary of any language is huge. No person can learn or know all the words of the language. Individual people possess their own total vocabulary consisting of all the words they know. Another word used to denote vocabulary is the term *lexicon*. In modern Linguistics three main meanings of the term *lexicon* are distinguished:

- the vocabulary which a speaker of a language has in his or her head, that is, *mental lexicon*;
- the set of *lexemes* of a language and the processes which are related to them;
- the set of *lexical items* of a language;

Distinction is made between *General Lexicology* and *Special Lexicology*. *General lexicology* is a part of *General linguistics*. It is concerned with the study of vocabulary and its basic units, irrespective of the specific features of any particular language. It works out basic notions and methods of vocabulary study. Within the frames of *General Lexicology* many notions, such as the notion of the word, the notion of the meaning, the notion of the context, and the notion of system relations are investigated. *Special lexicology* is the lexicology of a particular language (English, Russian, German, French, etc.). It describes words and vocabulary of one particular language. Every *Special Lexicology* is based on the principles of *General*

Lexicology. Special Lexicology is further subdivided into Diachronic / Historical and Synchronic / Descriptive. Historical Lexicology deals with the evolution of any vocabulary, the origin of words, their change and development.

The subject matter of Descriptive Lexicology is the vocabulary of a particular language at a given stage of its development. It studies mainly the structure and specific functions of words. [1]

There are different aspects or branches of Lexicology. Any language is the unity of different aspects: grammar, vocabulary, and sound system. As Lexicology is the science that deals with vocabulary systems, it is definitely connected with all the rest of the aspects. Lexicology is linked with phonetics since the latter is concerned with the study of the sound-form of the word. There is a close rapport between Lexicology and Grammar. Grammar is concerned with various means of expressing grammatical relations between words as well as with patterns according to which words are combined into word-groups and sentences. Lexicology is bound up with Stylistics since there are problems of significance, vocabulary stratification, style treated in the frames of both the branches. The structure of words is studied by morphology.

Ways of coining new words is the object of word-building, meaning of words, their relations in vocabulary became the object of semasiology. Set- expressions and idioms are studied by phraseology, the origin of words, their development in the language are dealt with etymology and the behaviour of words in speech is considered by contextology. [2]

Two Approaches to Language Study There are two principle approaches in linguistic science to the study of language material: synchronic and diachronic. With regard to Special lexicology the synchronic approach is concerned with the vocabulary of a language as it exists at a given time. It's Special Descriptive lexicology that deals with the terms and vocabulary units of a particular language at a certain time.

The diachronic approach in terms of Special lexicology deals with the changes and the development of vocabulary in the course of time. It is Special Historical lexicology that deals with the evaluation of the vocabulary units of a language as the time goes by. The two approaches shouldn't be set one against the other. In fact, they are interconnected and interrelated because every linguistic structure and system exists in a state of constant development, so that the synchronic state of a language system is a result of a long process of linguistic evaluation, of its historical development. Closely connected with the Historical lexicology is Contrastive and Comparative lexicology whose aims are to study the correlation between the vocabularies of two or more languages and find out the correspondences between the vocabulary units of the languages under comparison.

Methods of Linguistic Analysis Every science has certain methods of investigation at its disposal. The process of scientific investigation may be subdivided into several phases:

❖ Observation is the basic phase of all modern scientific studies including linguistics. In other words, we deal with the inductive method of query. The key

role of the opening phase of linguistic analysis is that the statements of fact must be based on study, not on not proved authority, logical conclusions or personal preferences.

❖ Classification is the second phase that comes after study. Every lexicological research is based on collecting linguistic examples. At this stage of linguistic analysis the stored facts, the collected data, and empirical material undergo some grouping.

❖ Generalization is the third stage of the linguistic analysis at which the set of data and their sorting must finally lead to the formulation of a hypotheses, rule, or law.

❖ Verification is the phase of linguistic analysis that leads to the results of the scientific investigation. While doing research, any linguist encounters all the phases of investigation. To finish his goal the linguist uses different methods and procedures. They are contrastive analyses, statistical analyses, method of immediate constituents, distributional analyses, transformational analyses, componential analyses, and method of semantic differentiation. [3]

Contrastive analysis is aimed at finding out similarities and differences in both related and non-related languages. For instance, contrastive analysis is applied in language teaching when we deal with such a event as linguistic interference. It was empirically shown that the mistakes which are made by foreign language students can be often the result of differences in structural patterns between the target language and the language of the learner. This naturally implies the necessity of a detailed comparison of the structure of a mother tongue and a foreign language. Contrastive analysis can be carried out at three linguistic levels: phonology, grammar and lexis. Statistical analysis is generally referred to as one of the principal branches of linguistics. Insights derived from statistical accounts of the vocabulary can be useful to the solution and explanation of exact problems linked with the qualitative and quantitative language use. Statistical inquiries have considerable value because of their relevance to certain problems of the selection of vocabulary items for the purposes of language usage and language teaching. During the day we usually pronounce about 48 000 words. We can survive in the alien environment using only 500 different words of the foreign language. It means that if we do not wish to waste time on committing to memorize vocabulary items, which are never likely to be useful to the learner, we have to select only lexical units that are usually used by a native speaker. In Modern Linguistics the issue of Basic / Nuclear English was investigated. Basic English was a project designed to provide a basic minimum vocabulary for the learning of general English. The project involved a word list of 850 words, the description of their functions and the connections between them. Statistical regularities can be observed only if the phenomena under analysis are sufficiently numerous. Thus, the first requirement of any statistic investigation is the size of the sample material.

The Perspectives of Modern English Lexicology Lexicology has its own main aims and tasks. Modern English lexicology investigates the problem of word structure and word formation, the classification of vocabulary units, description of

the relations between different lexical layers of English vocabulary. As a science it has both theoretical and practical use. The theoretical value of Lexicology stems from the theory of meaning which was first developed within the philosophical science. The relationship between the name and the thing constitutes one of the key questions of Gnostic theories. The research carried out in the frames of Lexicology meets the needs of many different sciences, such as lexicography, literary criticism, and foreign languages teaching. Modern English Lexicology aims at giving a systematic description of the Modern English word-stock. [4]

Modern English Lexicology forms part of the Theoretical Course of Modern English. It is inseparable from its other component parts, i.e., Grammar, Phonetics, Stylistics, the Course of History of the English Language.

Moreover, the Course of Modern English Lexicology is of great practical importance because it is aimed both at summarizing the practical material already familiar to the students from foreign language classes and at helping the students to develop the skills and habits of generalizing the linguistic phenomena.

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## HUMAN ECOLOGY

*Abstract: Human ecology is an interdisciplinary science about the interaction of people with living and nonliving components of the environment at the organismic, population-species, biogeocenotic and biosphere levels. Human ecology arose at the junction of several sciences and is interconnected with such sciences as biology, demography, sociology, hygiene, toxicology, geography, philosophy, etc. The subject of human ecology is the human environment (natural and social), its features. This science investigates the adaptation of people to environmental factors, as well as the structure and conditions of existence of anthropogenic ecosystems. One of the tasks of ecology is to study the forms of anthropogenic activity and its consequences for living systems. In addition, she studies artificial space ecosystems and the influence of space factors on the human body. Attention is also paid to the ecological aspects of chronobiology and chronomedicine. Sections of human ecology are medical ecology, social ecology, environmental psychology.*

*Key words: Medical ecology, Human ecology, integral science, environmental factors*

Medical ecology is a complex, integral science dealing with the problems of the impact of the human environment on the state of his health and the occurrence of pathology, as well as the use of environmental factors in order to prevent, treat diseases and restore health. Its tasks include the study of the types and forms of the impact of environmental factors, the mechanisms of their action on the human body. Special attention is paid to ecological, or environmental, diseases; the role of environmental factors in the occurrence of malformations, malignant tumors, occupational and other diseases. Medical ecology studies the types of environmental pollutants and the ways of their entry into the human body, diseases resulting from the impact of man-made pollution, for example, minamata disease, "yellow" children, etc. One of the tasks of medical ecology is to assess the degree of risk of environmental pollution at the organismic and population-specific levels in the present and the future, to study the ways and possibilities of self-purification of ecosystems, as well as to develop methods for monitoring the cleanliness of the human environment, principles and methods of conservation and restoration of nature. In addition, medical ecology studies the recreational significance of environmental factors, the recreational possibilities of various natural and anthropogenic ecosystems. Social ecology studies the patterns of interaction between human society and individual groups of people with nature, develops the ecological foundations of rational nature management, methods of nature protection

and optimization of the human environment. Environmental Psychology 150 is a multidisciplinary science that studies environmental factors that affect the psyche, human behavior and the consequences of such an impact. And also researches and applies abiotic and biotic factors for the restoration of mental state, as well as for the treatment of people with mental disorders and mental illnesses.

**Purpose:** To study the structural units of the biosphere and biogeocenosis, environmental factors, and their parameters. Show the main features of the habitat of modern humans and anthropogenic ecosystems. To note the importance of environmental factors in human life, to analyze the types of human adaptation and the main ecological types of people.

**Biogeocenosis** - Study and disassemble the main components of biogeocenosis, pay attention to their interaction with each other. Note that a person is directly or indirectly closely related to many biogeocenoses.

For each organism there is a certain combination of environmental conditions that is optimal for its growth, existence and reproduction. On both sides of this optimum, biological activity gradually decreases until, finally, its conditions become those in which the organism cannot exist at all. The range of environmental conditions required to maintain a population is much narrower than the range required for the survival of an individual. For the prosperity of a human population, in addition to maintaining the existence of individual individuals, conditions are necessary to ensure growth and reproduction, including social and psychological ones. Give examples of changes in the number and composition of human populations under the influence of anthropic environmental factors.

Individual organisms of a population can react to the same environmental factor in different ways, which is due to the genetic diversity of individuals. Adaptation is a true adaptation of the body to changing environmental conditions, which occurs without exceeding homeostatic abilities. Compensation (pseudo-adaptation) is the adaptation of the body to changing environmental conditions, due to the appearance of tension in the body's systems, which exceed the limits of homeostatic capabilities.

Decompensation is a clear change in the body, leading to a decrease in vitality and fertility.

The pyramid on the diagram reflects the quantitative ratio of individuals in the population exposed to a low-intensity factor (for example, small doses of antibiotics acting on the bacterial population).

Disassemble and sketch in the sketchbook. Draw up similar charts for medium to very high environmental impacts. Explain why there are: antibiotic-resistant bacterial strains; insects resistant to insecticides and give examples of the biological reactions of organisms in human populations under the influence of stress factors.

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## **INNOVATIVE METHODS OF TEACHING ENGLISH**

*Annotation: This article contains information and recommendations on innovative methods of teaching English and the importance of foreign languages in the education system. The article contains views on the development of attention to foreign languages in our country.*

*Keywords: foreign language, innovation, method, style, education system, vocational education, technology, vocabulary, skill.*

Today, foreign language skills are becoming an integral part of vocational education. Experts in various fields have a high level of cooperation with foreign partners, so they have a high demand for language learning. In modern society, foreign languages are becoming an important part of vocational education. Such knowledge is first acquired by people in schools, colleges, high schools, and later in institutes, training courses, or by familiarizing themselves with basic information sets that help them learn a foreign language independently. Today there is a large collection of teaching materials for people with different levels of language skills. Success in achieving this goal depends on the practical methods and skills of teachers. The ability to use information technology and modern teaching methods helps to quickly understand new materials. By combining different methods, the teacher will be able to solve specific curricula. In this regard, teachers and students need to become familiar with modern methods of teaching foreign languages. As a result, they develop the skills to choose the most effective ways to achieve their goals. Using a variety of teaching and learning methods can be effective. Teaching takes place in small steps and is based on the student's existing knowledge system. As time goes on, there is more and more innovation in every field. There are also different styles of language teaching. When teaching English, it is best to use step-by-step instructions, depending on the age and level of the learner. Students are divided into groups based on elementary education, intermediate education, and advanced education. A special program will be developed by the teacher for each stage.

At the initial stage, the emphasis is on pronunciation. According to Harmer, the first requirement for those who know the native language during the conversation is pronunciation. At the beginning of the learning process, the teacher should focus on the student's pronunciation. Although grammar and vocabulary are important, it is useless if the speaker mispronounces them. Native speakers can also understand speech with grammatical errors if the speaker pronounces the words correctly. Therefore, in teaching, the main focus is on pronunciation. In this case, the use of different audios of native speakers gives good results. The teacher should

teach the correct pronunciation of letters and words during the lesson. There is also a strong emphasis on oral and reading skills in the early stages. If we look at the types of speech activities in foreign language teaching, the following tasks should be performed in their teaching:

- a) Create a reading mechanism;
- b) Improving oral reading techniques;
- c) Teach them to understand what they are reading.

At the elementary level, the emphasis is on reading aloud. Reading texts are also becoming more and more complex, from the simplest to the simplest. However, it should be noted that although the work in the early stages is mainly focused on the development of oral skills, it does not solve the problem of developing oral speech in English. She is only in the process of preparing for a real oral presentation. In addition, reading words beautifully and fluently increases a student's love of learning the language.

In addition, students will be introduced to The Present indefinite Tense, The Past indefinite Tense. , Are required to be familiar with verb tenses such as The Future indefinite Tense and to be able to use verb forms vividly in these tenses. Students will learn that nouns are used in the singular and plural, that suffixes "s" or "es" are added to the third person singular form of a verb in the present indefinite tense, and that interrogative, negative, and imperative forms of sentences are also introduced at an early stage. during the study period.

In the middle stage of teaching English, the focus should be on using techniques that help to increase thinking, speaking, and initiative in reading and understanding larger texts. Students will be given homework assignments. Exercises to check comprehension of the text are given and can be expressed as follows:

Answer the question on the text Samarkand:

Why Samarkand is called like this?

Where is the ancient centre of the city?

How many population is there?

Question-answer exercises are used to strengthen the student's speech, improve memory, and repeat. New words from the text are memorized. Questioning and answering will help you to memorize the words and use them in your speech. In addition, a variety of games in the classroom can increase a student's interest in language learning and speed up learning. In the Hot Ball game, students form a circle and say one of the new words to each other on the ball. Participants do not repeat each other's words, are expelled from the game if they repeat or stop speaking. That's the way to go. In the middle stage, grammar is taught in more depth than in the first stage, and students are given exercises and tests based on the rules of grammar.

Computer and phone language learning programs are also great for elementary and middle school language learning. Examples include Talk (English speaking practice), Daily English, Learn English (English master), How to speak real English. These programs are designed to include all sections of reading, listening, and testing. Recording new words on a phone dictaphone is another great

way to repeat in your spare time. Also, showing more English subtitles and cartoons is an effective way to teach the language.

At the higher level, independent work plays a special role, especially in a foreign language. The requirements for this course are different from those of the previous stages. The lesson is no longer based on oral speech, because at this stage most of the language material is studied passively (receptively). That is, reading comprehension plays a key role. Texts are also large in size, and language material is complex. Reading, speaking, listening exercises are held regularly. When organizing a lesson, a separate day is set for Reading, a separate day for Speaking, and a special day for Listening. Homework is also more complex than previous steps. Speaking lessons include a 2-minute talk with a topic. Alternatively, text cards will be distributed to students. Each student gives their opinion on the topic on the card of their choice. The speech requires the use of previously used phrases, phrases, introductory words, new words, synonyms. Homework can be used to prepare additional text topics using the press, periodicals, media, and online materials. Students will be interested to learn about interesting research and scientific discoveries.

In conclusion, modern language teaching is aimed at forming a more cultured individual who has the skills to self-analyze and systematize new knowledge. Innovative methods are an integral part of modernizing the entire system. With this in mind, teachers can become acquainted with the most advanced approaches and then combine them and use them in their work to achieve significant growth in the education system. Many organizations are moving to a new level, using multimedia capabilities to send and receive information. The use of computers and other devices determines the success of the whole educational process.

Adequate attention should be paid to the development of speaking skills and social resilience in educational training. In addition, the success of any lesson in education depends in many ways on the proper organization of the lessons. The lesson should be based on the creative collaboration of teacher and student. Only then will students be able to think independently and develop their will.

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## **MARKETING RESEARCH ON THE USE OF VACCINE MEDICINES IN THE REPUBLIC OF UZBEKISTAN**

*Annotation: This article provides information on marketing research and news, analysis of the use and application of vaccines in the Republic of Uzbekistan.*

*Keywords: COVID-19 vaccine, World Health Organization, World Health Assembly, immunization system, national vaccination program, "Nukus-farm", "Zamin-farm", "Kosonsoy-farm", "Syrdarya-farm", "Boysun-farm", "Bostanliq-farm", "Parkent-farm", pharmaceutical network.*

**Introduction:** A vaccine is a drug designed to build immunity against an infectious disease. The vaccine is made from weakened or killed microorganisms or their antigens obtained by genetic engineering or chemical means. Scientists, doctors, manufacturers and sponsors around the world are working to develop the COVID-19 vaccine. The World Health Organization is coordinating the activities of the participants in this process. The modern concept of vaccination was introduced in the late 18<sup>th</sup> century by the British physician Edward Jenner. By 1900, there were two human vaccines against the virus - smallpox and rabies, and three bacterial vaccines against typhoid, plague. Vaccines against whooping cough, diphtheria, tetanus, tuberculosis, polio, measles and other infectious diseases have been developed in the last century. In 1979, the World Health Assembly declared victory over smallpox. This achievement is one of the greatest public health victories in history.

Over the past year and a half, more than a dozen regulations have been adopted to develop the pharmaceutical industry and ensure the cheapness and free circulation of medicines and medical devices. The system of public administration in the pharmaceutical industry has been revised, and the Agency for the Development of the Pharmaceutical Industry under the Ministry of Health of the Republic of Uzbekistan has been established. Free economic zones "Nukus-farm", "Zamin-farm", "Kosonsoy-farm", "Syrdarya-farm", "Boysun-farm", "Bostanliq-farm" and "Parkent-farm" were established.

UNICEF has donated 16 vehicles to the Ministry of Health of Uzbekistan as part of a joint immunization program in Uzbekistan. The vehicles are designed for the regional branches of the Sanitary-Epidemiological Surveillance and Public Health Service and will be used to further improve monitoring and assistive supervision across the country. With financial support from the Global Alliance for Vaccines and Immunization (GAVI), UNICEF purchased these vehicles to support the Ministry of Health in strengthening its national immunization program. UNICEF has also assisted the Ministry of Health in strengthening the national vaccination program by building vaccine depots at the national, provincial and district levels, and purchasing, installing and transporting refrigerators, freezers and

refrigerators. In addition, an information system has been developed to manage the logistics of vaccines. The project is expected to significantly improve the national vaccination system. UNICEF prioritizes the fair distribution of vaccines. During the COVID-19 pandemic and the ongoing supply of COVID-19 vaccines (COVAX), a fair distribution of vaccines is critical. "I am confident that these vehicles, along with other equipment provided for the cold chain, will make a significant contribution to improving the health of children across the country," said Jeffrey Ijumba, UNICEF Deputy Country Director for Uzbekistan. "Fair distribution of vaccines for children has become an urgent task, and the assistance provided today and the vehicles delivered to the provinces are an important step in ensuring the delivery of quality vaccines in all regions of the country."

Methods: Five projects worth \$ 41.7 million are being implemented in the region. Measures are being taken to establish public pharmacies in the country. In particular, work has begun on the construction and placement of 75 public pharmacies in Surkhandarya region under a public-private partnership. At the same time, the study showed that insufficient measures are taken to ensure the timely, quality and complete implementation of the adopted legislation, and the lack of initiative on the part of the heads of the responsible bodies. In particular:

- first, the formation of directorates of free economic zones is not provided, specific sources and mechanisms for financing their activities are not identified, the issue of allocating land plots for the location of production facilities is not resolved;

- secondly, the Republican Council for Coordination of Administrative Councils of Free Economic Zones and Small Industrial Zones does not take sufficient measures to effectively organize the work of free economic zones and attract investment;

- thirdly, the lack of developed transport, road and engineering-communication infrastructure of free economic zones does not allow to establish high-quality pharmaceutical production facilities in their territory. 'is carried out without regard to labor;

- fourthly, the legal order of establishment and operation of public pharmacies in terms of public-private partnership is not established, their location is not approved, which leads to untimely fulfillment of tasks assigned to the Ministry of Health of the Republic of Uzbekistan to organize the activities of such pharmacies. brought about;

- fifth, the process of introducing modern information and communication technologies to account for the movement of socially important drugs and medical devices in pharmacies, as well as to inform the public about the location of pharmacies, the range and prices of medicines is slow;

- sixth, the research activities of the pharmaceutical industry do not meet modern requirements, insufficient attention is paid to the training of qualified specialists;

- seventh, there is no effective system for testing existing scientific developments in practice, and insufficient measures are being taken to introduce



them into production and implement new innovative projects in the field of development of medicines and medical devices.

### **Types of vaccines and their classification.**

Vaccines:	Classification:
Corpuscular vaccines	Corpuscular vaccines contain weakened or killed microbes (virions).
Chemical vaccines	Chemical vaccines are made from antigenic components derived from microbial cells. In doing so, antigens that determine the immunogenic properties of the microorganism are isolated.
Recombinant vaccines	Genetic engineering techniques are used to produce these vaccines, which incorporate the genetic material of a microorganism into antigen-producing yeast cells. After the yeast is grown, the required antigen is isolated, then cleaned and a vaccine is prepared. An example of such a vaccine is the hepatitis B vaccine, as well as a vaccine against the human papilloma virus.
Live vaccines	Live vaccines are prepared on the basis of strains of harmless attenuated microorganisms. Vaccine strains multiply in the vaccinated person and cause the vaccine to become infected. In most vaccinated people, the vaccine infection passes without obvious clinical signs and leads to the formation of stable immunity. Live vaccines include: measles, rubella, polio, tuberculosis, and foot-and-mouth disease vaccines.

**Results:** Currently, children and adults at risk are vaccinated free of charge by the state against many serious infectious diseases in the country, depending on the system and epidemiological situation. As a result of the measures taken, paralysis has not been reported in Uzbekistan in recent years, and the incidence of asthma, measles, typhoid and hepatitis B among children has sharply decreased.

**Analysis:** Vaccination is carried out in clinics or vaccination centers by a specially trained health worker under the supervision of a physician. Before vaccinating a child, his body temperature is measured and he is asked what diseases he is suffering from; the doctor will carefully examine the child to determine if it is possible to vaccinate him. Children who have recovered from cardiovascular or central nervous system diseases or have chronic diseases should be vaccinated after undergoing appropriate medical examination. A strong reaction can sometimes occur when a child is vaccinated, so he or she should be monitored by a doctor for

some time after vaccination. The vaccine may have local and general effects, such as slight redness, swelling, pain, fever, and general malaise at the vaccinated site. If the vaccinated child is very upset, has a high fever, it is necessary to consult a doctor immediately. Vaccination information for children or adults is recorded in their medical records. Parents need to know what vaccinations have been given to their children and when they should be given, as well as to ensure that the vaccines are given on time, as timely vaccinations can be very beneficial.

Discussion: Today, prevention is one of the most effective measures to prevent the emergence and spread of infectious diseases. Special prophylaxis (vaccination) means that the population resists this or that infection through prophylactic vaccination. Over the past 40 years, prophylactic vaccination has played an important role in the fight against infectious diseases such as measles, diphtheria, pertussis, polio, mumps, hepatitis B, measles, tuberculosis, influenza, mumps and tetanus. Professor Egamberdi ESHBOEV, Chief Research Fellow of the Tashkent Research Institute of Vaccines and Serums, said: "Thanks to the use of special prophylactic methods, the main infectious diseases have been completely reduced from the face of the earth, even eliminated. All this was done in exchange for the use of the vaccine. Chickenpox (natural smallpox) disappeared without a trace, and diseases such as polio, measles, whooping cough, diphtheria, and typhoid were reduced to a minimum. Indeed, vaccines, immunosuppressants and immunoglobulins are important in the prevention of any infectious disease, i.e. in cutting the pathway. The most important of these is the vaccine."

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## **INFLUENCE OF ELECTROCHEMICALLY ACTIVATED WATER-BASED FOOD PRODUCTS ON THE QUALITY OF WAX WORMS**

*Annotation: The article presents the results of experiments on feeding waxworms on the basis of electrochemically activated water in different nutrient media.*

*Keywords: fruit peel, bee nectar, biological method, poacher, large wax moth, electrochemically activated water, pH, artificial nutrient medium.*

One of the urgent tasks today is to introduce advanced technologies in industry, people and agriculture, and on this basis to increase the share of the country in economic indicators. One of the factors that reduces the yield of agricultural crops is pests. Today, there are more than 80,000 species of pests worldwide, of which 10,000 species cause enormous damage to plants. It is estimated that more than 30 percent of the world's agricultural crops are destroyed each year by pests. Therefore, protection of plants from them is one of the urgent issues. In particular, the widespread use of biological methods in the protection of plants from pests, scientific research to improve the efficiency of bioproducts used is important. At present, more than 900 biofactories and biolaboratories in the country breed large waxworms, which are used to produce environmentally safe and highly effective biological agent for agricultural pest control - poaching [1]. A number of scientific studies have been conducted on the feeding and reproduction of large wax moth larvae in biolaboratory conditions. Artificial food medium has been prepared by foreign and domestic scientists on more than 20 recipes. First, the American scientist M.H. He raised a large wax moth in an artificial feeding environment by Haydak. [2]. D. Beck and R.G. Young found an increase in larval growth with a small amount of beeswax [3, 4]. American researcher A. Balazs proposed bee wax and water to modify the food prepared by M.H. Haydak [5]. R.H. Dadd studied bee wax and its composition in detail and proved that beeswax promotes larval growth and serves as a metabolic source of water in artificial nutrient media. In 2014-2020, we used electrochemically activated water to propagate large waxworms in biofabricated environments in a variety of artificial nutrient media, based on experiments with food recipes recommended by H.R. Mirzalieva and UHQITI scientists used in Uzbekistan [9, 10, 11, 12, 13.].

**Table 1****Feed species for the reproduction of large wax moths**

<b>№</b>	<b>Kh.R.Mirzalieva recipe</b>	<b>№</b>	<b>“O’HQITI” recipe</b>
<b>1</b>	100 g pasta 200 g sugar 480 g corn flour 20 g of margarine 180 ml. sut 20 g of milk yeast	<b>2</b>	900 g of corn flour 250 g. sugar 150 g. merva 70 g. margarine 327. ml. water 300 g. apple peel 3 g. yeast

Experiments on the study of normative conditions and feeding of large wax moth worms on the basis of electrochemically activated water consisted of 3 options and were conducted in 4 repetitions. In this case, option 1 was the current method, and the feed was treated with ordinary tap water. In option 2, the food prepared on the basis of the recipe of OHQITI was treated with electrochemically activated tap water ( $\text{pH} = 10 \pm 0.5$ ), and in option 3 the food prepared according to the recipe of H.R. Mirzalieva was treated with electrochemically activated tap water ( $\text{pH} = 10 \pm 0.5$ ). To determine the emergence of worms in the experiment, 3 samples (a total of 300 out of 100 in each sample) were taken from the total number of eggs laid by the butterflies in one batch. The eggs were first placed flat on a filter paper placed on a Petri dish. The development and viability of the worms, as well as the condition of the fungi and butterflies, also served as successors to the first worms to emerge. For their development, the required air temperature (30-33 $^{\circ}$ S) and relative humidity of 75-80% are created in the laboratory.

Qualitative indicators of worms fed in two different nutrient media were studied. According to the results of the experiment, the number of worms in 100 eggs in 1 control variant was 86.75 (86.75%), the number of fungi was 70.5 (81.2%), the number of butterflies was 60.25 (85.5%), the development of insects stage was 58.1 days (eggs - 9 days, worms - 26.4 days, fungi -9.9 days, imago 13.1 days). In 2 variants, the number of worms per 100 eggs according to the recipe of OHQITI was 88.25 (88.25%), the number of fungi was 73.25 (83%), the number of butterflies was 64.5 (88.05%), the stage of development of the insect was 57, 8 days (eggs - 9 days, worms - 26 days, mushrooms - 9.8 days, imago - 13 days). In 3 variants, according to the recipe of H.R. Mirzalieva, the number of worms per 100 eggs is 89.25 (89.25%), the number of mushrooms is 72.75 (81.51%), the number of butterflies is 63.25 (86.94%). ), the developmental stage of the insect was 57.8 days (eggs - 9 days, worms - 26.3 days, fungi - 9.8 days, imago 12.7 days).

**Table 2**

**Effect of electrochemically activated water-based foods on the quality of waxworms**

№	Experiment options	Number of eggs obtained (pieces)		Number of worms hatched from eggs (pieces)		Number of mushrooms (pieces)		Number of butterflies, (pieces)		Insect development stage, day			
		Pieces	Pieces	%	Pieces	%	Pieces	%	Pieces	%	egg	larva	mushroom
1.	The current method of control (pH=7±0,5)	100	86,7 5	86,7 5	70,5	81,2	60,2 5	85,5	9	26	9,8	13, 0	
2.	Electrochemically activated tap water "O'HQITI" recipe (pH=10±0,5)	100	88,2 5	88,2 5	73,2 5	83,0 0	64,5	88,0 5	9,0	26, 0	9,8	13, 0	
3.	Recipe for electrochemically activated tap water H.R. Mirzalieva (pH=10±0,5)	100	89,2 5	89,2 5	72,7 5	81,5 1	63,2 5	86,9 4	9,0	26, 3	9,8	12, 7	

"O'HQITI" recipe The output of worms from 100 eggs (option 2) was 1.5% higher than the control option, the number of fungi was 2.8%, the number of butterflies was 2.45% higher. The survival rate of worms was found to be 1.5% higher and that of fungi 1.11% higher. Mirzalieva's prescription also showed that the results were higher than the control option.

On the basis of electrochemically activated tap water in the reproduction of large wax moth *ЎХҚИТИ* ва and The recipes recommended by X.R.Mirzalieva were more effective than the control option. This can be explained by the fact that the alkalinity of the medium in electrochemically activated tap water (pH = 10 ± 0.5), low overall hardness and low content of chloride and sulfate ions in it led to an increase in nutrient content.

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## THE METHOD OF THE RUSSIAN LANGUAGE AS A SCIENCE

*Annotation: This article examines the issues of effectiveness in teaching the Russian language. When presenting each section, the features of teaching the Russian language are briefly and easily disclosed, special attention is focused on the most difficult problems*

*Key words: Russian language, methodology, teaching, efficiency, science*

The methodology of teaching the Russian language is among the pedagogical sciences. It can be called applied science, since it, based on theory, is designed to solve the practical problems of education, training and development of students.

Like any other science, the methodology of the Russian language has its own subject. The subject of its study is the process of mastering the native language in the learning environment (mastering speech, writing, reading, grammar, phonetics, etc.). The methodology of the Russian language is designed to study the patterns of the formation of skills in the field of language, the assimilation of systems of scientific concepts in grammar and in other sections of the science of language. The results of this study form the fundamental basis for solving problems: on the basis of the known patterns, it is necessary to develop an optimal system of language teaching. This system (or, rather, these systems) should provide each student with the necessary minimum of skills and knowledge of the language. At the same time, the methodology takes into account a number of social requirements for teaching: it provides such a structure of teaching that would maximally contribute to the communist education of students, the development of their thinking, and would also be effective, fairly economical.

By tradition, speaking about the tasks of the methodology as an applied science, they call its three tasks:

What to teach? The answer to this question is the development of the content of education - programs in the Russian language, the creation of textbooks and various teaching aids for students, their continuous improvement, checking the availability and effectiveness.

How to teach? In accordance with this question, teaching methods, methodological techniques, systems of exercises, recommendations for the use of certain types of assignments, manuals, sequential systems of practical work of students, lessons and their cycles, etc. are being developed.

Why so and not otherwise? This implies a study of the comparative effectiveness of methods, justification of the choice of a method, experimental verification of recommendations, etc.

The methodology of the Russian language studies the levels of knowledge, skills and abilities of students at different stages of education, finds out the reasons for success or failure in learning, examines typical mistakes - speech, spelling, etc., finds ways to eliminate and prevent them. Time suggests its tasks to methodology, as well as to pedagogical science as a whole. So, today in the methodology of the Russian language there is an active search for such methods and techniques that would ensure maximum cognitive activity and independence of schoolchildren in the educational process; the best development of students' thinking and speech; the strength of the acquired knowledge, abilities and skills, etc.

Language teaching takes place in preschool institutions, in primary and secondary schools, in technical schools (for example, in pedagogical schools), in universities. The tasks of teaching the native language at all these levels of education, of course, cannot be the same. But the basic requirements of science are the same: everywhere the subject of science is the process of mastering a language, regardless of the level of education, the methodology studies the objective laws of mastering a language, develops training systems, tests them, etc.

But each step has its own characteristics. So, the methodology of preschool education is oriented in the field of the native language mainly on the development of the speech of children.

The methodology of primary education - the Russian language, which interests us first of all, has its own specific features. In all its sections (except for the development of students' speech), she cannot rely, with rare exceptions, on some foundation laid earlier. This is the reason for its very name - "methodology of primary education." Let's name the main sections of the method:

"Methods of teaching literacy", ie, elementary reading and writing. The problem of teaching children to read and write has always been extremely acute not only in pedagogy, but also in social life, since the literacy of the people is their weapon in the struggle for liberation, for political consciousness, for culture. The enormous successes of the method of teaching literacy in the USSR are generally recognized.

"Reading technique". The task of the "Reading" subject in primary grades, as you know, is, first of all, to equip children with the skill of sufficiently fluent, correct, conscious and expressive reading. Primary school is designed to prepare the student for the transition to the middle school, both as a reader and as a reader.

"The technique of grammar and spelling." It includes teaching elementary writing and calligraphy, the formation of grammatical concepts, the first spelling skills - when there is still no sufficient grammatical basis.

"The development of students' speech." This section is unique in elementary school. For the first time, children become aware of language, speech as a subject of study - analysis and synthesis; they master speech, which is caused not by the situation itself, but by an act of will: they are placed in conditions when they need to think over, plan, talk not only about what they really want to say, not only about what is interesting; they master written speech, which, as you know, differs from



oral not only in its graphic form, but also in vocabulary, syntax, and morphological forms.

The technique should also ensure the further enrichment of the children's vocabulary, the development of their syntax, their coherent speech.

The methodology of the Russian language, like other pedagogical sciences, affects the interests of tens, hundreds of millions of people. It is known how much grief a "deuce" brings for a dictation, for an essay.

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## **IMPROVING THE DRAINAGE SYSTEM OF HIGHWAYS USING PLASTIC MATERIALS IN RESPONSE TO TODAY'S DEMAND**

*Annotation: The article describes the plastic materials entering the world market today and their advantages in use today, the areas of application and convenience today. The planning processes for improving the drainage system using raw materials that are economically cheaper and of better quality than the concrete drainage system are explained and calculated.*

*Keywords: Plastic, low weight, installation, smooth inner surface, Corrosion, chemical resistance, convenience, advantages, Water supply, polyethylene, metal-plastic, special grades, engineering.*

Introduction: Cast iron, steel, concrete: these building materials are slowly and almost irreversibly becoming a thing of the past. Instead, new favorites are plastic pipes. The triumph of plastics began in the first half of the twentieth century with the invention of the method of industrial polymerization of ethylene. The first polyethylene pipes were the result of this process. In addition, this product turned out to be so good that the rolling pipe market shook and fell under plastic pipes for water supply, heating and sewage. Over time, interest in plastic only increased. And new players have emerged around the world: polyvinyl chloride and then polypropylene pipes. Closer to our time, metallic polymers have also emerged - plastic pipes reinforced with aluminum foil. As a result, the modern range of rolled tubular products made of structural polymers is distinguished by simply extraordinary diversity.

The main part: Today, plastics based on natural resins (rosin, shellac, bitumen, etc.) have long been known. The first plastic celluloid was made from an artificial polymer - nitrocellulose (cellulose nitrate), which began production in 1872 in the United States. The production of materials based on In the 1930s, the production of thermoplastics, polyvinyl chloride, polymethylmethacrylate, polyamide, polystyrene was established in the former USSR, USA, Germany and other industrialized countries. However, the plastics industry only began to develop after World War II. In the 1950s, polyethylene plastics began to be produced in

many countries. In addition, about 10 companies in Uzbekistan process plastic. Among them are Tashkent Plastics Plant, Ahangaran Building Materials Plant, Jizzakh Plastics Plant. It is widely used in construction for plastic flooring and other finishing works, sealing of buildings, hydro and thermal insulation, production of pipes, sanitary ware. The first plastic, parquet, was invented in 1856 by Alexander Parks, a Birmingham metallurgist.

Properties: Plastic has a low density (0.85-1.8 g / cm<sup>3</sup>), very low electrical and thermal conductivity. Melts during heating. Resistant to moisture, bases and acids. Polypropylene is a unique product whose invention has expanded the use of plastic pipes - thanks to special varieties of PP plastic, these products have stopped the fear of high temperatures and have the ability to withstand significant pressure without any reinforcement. Polyvinyl chloride is the most durable type of polymer. PVC pipes and the material made of them have a high degree of durability. In addition to the individual qualities mentioned above, water supply pipes - plastic, metal-plastic and copolymer - also have all the properties of all polymers. Shelf life Materials made from it have a service life of at least 50-60 years without repair. Many do not change their environment even under the influence of the external environment, as a result of which polymer products are finding their place not only in everyday life, but also in industry.



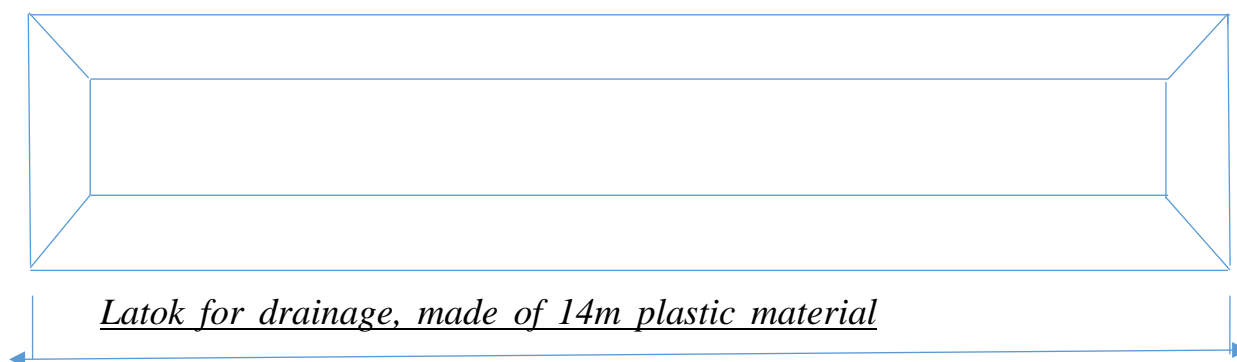
*For the preparation of 1 piece of tray for 90 thousand soums*

Types and properties of products made of plastic material. Over the past 20 years, metal pipes for laying water pipes have been significantly squeezed out by emerging competitors — plastic water pipes are confidently taking their place in this market. Represents a whole series of products in which different polymeric materials are used in the manufacture of plastic pipes, and this unites them. Their popularity is due to ease of installation, high performance and durability.

Advantages of plastic products: Ease of installation and the ability to lay in different configurations and optional road conditions, and high speed. The important thing is the service life, the manufacturers declare a service life of at least 40-50 years. Resistant to corrosion, chemical resistance. We can say that the smooth inner

surface of the pipe is resistant to liquid flow. Plastic pipes are characterized by good sound insulation, through which the movement of liquids is almost inaudible. The installation can be laid in a variety of conditions, including the ground. The low weight of the products makes it very easy to fasten. Plumbing plastic pipes do not require additional surface treatment. Plastic is an excellent dielectric that is not affected by stray currents, which are the main cause of damage to metal pipes. The plastic drainage system allows bonding of different polymers. During the transition to cement concrete pavements, construction began in Uzbekistan, the demand for Portland cement in the production of road construction materials, especially high-efficiency products meets modern requirements [2]. That is why we need to switch to modern and cheap plastic materials.

There are many advantages of plastic slats instead of semi-concrete slats, one of the main ones is that the weight of slats made of plastic materials is much lighter than our concrete slats. This is just an indicator of the length, which makes it much more convenient in terms of length. Concrete slabs are limited in length, ie we can make them 6-8 meters, but we can face a number of inconveniences in terms of weight and installation, including plastic. quite convenient and purposeful.



Conclusions: The development, design, construction and operation of the road transport sector, [1] is growing rapidly today, so I believe that the drainage system of modern highways should be modern, and therefore I think it would be expedient to use trays made of plastic materials, as in today's developed countries, instead of cement-concrete trays, which are considered obsolete. This is because, first of all, we can tell you about the low cost of economic recognition and ease of use and the convenience of the repair process. Depending on the conditions of our roads, the convenience of using a plastic trowel will increase. We can apply it in parallel with the way we are building today. It is possible to use 8 m of cement concrete slabs. Our plastic formwork can be used on a voluntary basis, depending on the condition of the road. Of course, the ability to pass water from the place where we all know, and of course, the connection is also more convenient and preferable in plastic trays. So I came up with ideas, and to see them flush it out, it's really fun.

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## **REGISTRATION AND EVALUATION OF STUDENT LEARNING**

*Annotation: The article provides information on how to control student learning and how to assess students' knowledge.*

*Keywords: control of students' knowledge, control methods, oral control, written control, tests, quizzes, exams.*

Monitoring student learning is a key part of the learning process. His task is to determine to what extent the goal of teaching has been reached. Because control of students' knowledge in high school has a teaching nature, control methods are closely related to other teaching methods.

The functions of teaching, upbringing and development are also performed during the control of students' knowledge. The importance of teaching is that the student will have the opportunity to constantly improve their knowledge and skills. The educational importance of controlling students' knowledge is enormous. Regular examinations teach the student to work systematically, to apply the acquired knowledge and skills in practice.

Students develop responsibility, purposefulness, self-discipline, overcoming difficulties and other spiritual qualities. In the control of students' knowledge, special attention is paid to the importance of their development. Students' thinking ability, analysis, synthesis, comparisons, generalizations, clarity entries are also controlled separately.

Forms of monitoring chemistry learning outcomes vary. Depending on the organization of this control — individual, frontal, group, and differentiated, or executed — it can be verbal, written, experimental.

There are also types of control in didactics that depend on the didactic function: before teaching a topic. During the course, quarterly or semi-annually, at the end of the year

Control methods.

1. Verbal Control and Self-Control Methods;
  - a) individual request; b) frontal interrogation; c) oral records; g) oral examination; d) programmed request; e) verbal self-control.
2. Methods of written control and self-control:
  - a) written control; b) written expenses; c) written examination; g) programmed written work; d) self-monitoring in writing.
3. Practical-laboratory control and self-control methods:
  - a) control and laboratory work; b) control using EXM;
  - c) solving experimental problems; g) self-monitoring with the help of practical and laboratory work.

Questioning is the main form of taking into account students' mastery. A system of specially selected questions indicates that the teacher is following the students in a systematic way.

Material from previous and non-previous lessons will also be requested. Such feedback allows the learner to deepen and expand their knowledge. In order to save time, a "short question" is conducted. They are pre-recorded on special cards.

Control written work.

Control writing is an economical means of taking into account students' knowledge, which allows them to check the mastery not only of individual students, but also of the whole class at the same time.

The "one-pass written assignment" lasts 10 to 15 minutes - this control can be included in the diary.

Judgments about the quality of educational work are made based on students' mastery. Three forms of student learning are used: daily time-by-time and final forms.

All three form a holistic system of accounting for school learning.

The final step in taking chemistry into account from time to time is for some teachers to characterize each student and the whole class. On the basis of such a record, a general conclusion is made about the annual mastery of students.

After a topic is covered, or at the end of the term, a written checklist on that topic is conducted throughout the course.

This work is structured in several variants (2, 3, 4, etc.) to ensure that the students' control work is done independently. The ease and difficulty of the questions should be approximately the same. Checking and evaluating how the work is done plays a big role in terms of education. Based on the teacher's analysis of the most common mistakes, the teacher not only evaluates the students' answers, but also draws appropriate conclusions to further improve the teaching of chemistry.

Not only theoretical knowledge, but also the ability to use chemical language, graphics, quantitative calculations, but also the ability to experiment - to use the most commonly used equipment, to perform the most important chemical operations, to use a chemical experiment in testing students' learning and skills. there is also the task of developing skills.

At the end of the quarter and at the end of the year, the most important experimental skills of students are checked and evaluated. This also plays a big role in terms of education. Experimental problem solving can be used to test skills.

The test can be used to monitor the knowledge of high school students. Usually the test is held outside of class time and students are divided into two or three groups. The teacher prepares the questions and issues in advance and gives them to the students. Students who master the lessons well, respond frequently, can be exempted from the test to reward them.

Maturity Certificate Exam.

The purpose of the maturity test is to test the depth of students' knowledge, their level of ability to think independently, their ability to connect knowledge with life, theory with practice. What the reader should know:

- a) have a concrete idea of substances and their changes
- b) know the basic concepts and laws of chemistry and explain them in concrete material
- c) knowledge of the history of the most important discoveries and inventions, issues related to the life and scientific activity of chemists
- g) be able to use chemical language
- d) be able to do simple experimental work, solve quantitative problems.

\ The term test is derived from English and when translated into Uzbek means to check, research, test. The test is a short, standard, and usually time-limited test. Test questions are created to conduct such new and convenient tests. Each question has five answers marked with the letters A, B, C, D, E, and one of them is correct. The questions are structured on the principle of “choosing the right one out of many” and “from simple to complex” and based on a rigorous school curriculum.

Some teachers may have planned to take the exam based on two theoretical questions, the third of which is a test. However, based on such an approach, it is not possible to fully assess the level of student mastery. The teacher must carefully choose one of the two methods in agreement with the students.

It is a good idea to make a punch card out of thicker paper of the same size to keep track of the students' answers.

This means that a punch card must be prepared in advance for the class. Students mark their correct answers on these punch cards.

To calculate the correct answer, you need to take a punch card, mark the correct answers in the form of a cross circle, and prepare a "template" by cutting them out with scissors. The template should be the same size as the reader punch card and fall on top of it. Determining the correct answer A “template” is placed on top of the three punch cards, so many crosses appear on the template.

In schools equipped with a personal computer, test runs can be conducted using machines. To do this, the options of test tasks, their correct answers, assessment criteria are entered into the machine memory, and it is enough to pass the "test" of the student.

Qualitative indicators of mastering.

Assessment of mastery is an important tool for improving the quality of student work. Students' mastery of chemistry is measured by three indicators: a) the volume of knowledge and practical training; b) quality of education and training; c) forms of identification of knowledge and learning.

The quality of knowledge is characterized by concreteness, comprehensibility, systematicity, accuracy, thoroughness.

The form of knowledge and learning identification is also important in characterizing students' mastery.

It is very predictable that students will be put into mastering chemistry; depending on the specific circumstances, they may be deepened and clarified; the teacher may increase or decrease these grades somewhat in order to motivate students to do better. For example, the reader to the oral answer:

- a) knows the material with full answers to the questions;



b) clearly knows the definition and expression of chemical concepts;  
c) be able to apply their knowledge in solving practical problems;  
g) consistently describe the material;  
d) answers the main and additional questions independently, such student is given a grade of "5".

If a reader:

a) is well prepared for practical work and follows the instructions clearly;  
b) understands and performs all experiments consciously;  
c) accurately perform all chemical experiments and obtain accurate results from the whole work;  
g) if he is able to observe correctly, draw the right conclusions, perform experiments independently, the practical work of such a student is given a grade of "5".

If a reader:

a) gives correct answers to all questions in the written work;  
b) questions related to concrete and theoretical materials responds perfectly and clearly;  
c) narrates consistently and completely competently, he the student's written work is rated "5".

Monitoring the results of students' acquisition of knowledge, skills and abilities is of didactic importance in the learning process. Its purpose is to compare the actual learning outcomes with the learning objectives. Control is carried out in different forms, types and methods, and different tasks are included in the means of control.

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## **EFFICIENT USE OF HOUSEHOLD RESOURCES IS ONE OF THE MEANS OF INCREASING THE LIVING STANDARDS OF THE POPULATION**

*Resume: The article argues that the efficient use of the household is one of the means of improving the living standards of the population.*

*Keywords: household, economy, frugality, productivity, standard of living*

The study of the living standards of the population occupies an important place, both in domestic and foreign statistics. Therefore, in order to obtain detailed information about the material and cultural standard of living of the population, statistics provide a large-scale survey of its budgets.

Budget statistics allow us to study income, expenses and consumption of the population, as well as to characterize the production of gross output in personal subsidiary plots according to budget research data. It also examines the indicators of personal consumption of families and indicators of the level of consumption of non-food products.

Statistical accounting and reporting, reflecting the totality of mass phenomena and processes, characterizing them from the quantitative side, identifying certain economic patterns, serve as an important source of analysis. Statistical methods are the main means of studying massive, repetitive phenomena, play an important role in predicting the behavior of economic indicators.

Household statistics of the population is one of the branches of socio-economic statistics that studies the standard of living of the country's population and, mainly, its material situation. Household survey materials characterize changes in the structure of income and consumer spending of the population, the level of income, expenditure, consumption, etc. different groups of the population, make it possible to identify differences in these levels depending on the composition of the family, the employment of its members; show the role of individual sources in the formation of income, the dependence of consumption on the level of income; allow you to track changes in consumer demand; characterize the differentiation of the population by income level, etc.

It is used to substantiate priority measures in the field of determining the effectiveness of measures for social protection of the population, especially its low-income strata during the transition to a market economy.

Household data are widely used by statistics in various economic calculations: consumer price indices, national income and its distribution,

calculating real incomes of the population, compiling a balance of production and use of agricultural products, and many others.

Household cash income consists of cash receipts, which are generally renewable in nature, and accrue to the household or individual members of the household on a monthly basis. Household cash income is derived from the following main sources: wages and salaries of employees and other related income from employers, net income from self-employment, income from entrepreneurial activities, income from personal investment (rent, interest, dividends), royalties and commissions fees. Household cash income also includes alimony, pensions, scholarships, benefits, and other regular cash assistance. Withdrawal from savings, loans taken or repaid loans received, etc. - even if used for consumption purposes, they are not considered household income.

Household expenditures include consumption expenditures and non-consumption expenditures.

Non-consumption expenses include income tax and other direct income, pension and social security contributions and similar premiums, remittances, gifts and similar transfers made by the household or individual members. Additions to savings, amounts invested or loaned out, loan repayments, and other financial transaction costs are excluded.

Consumer expenditure includes all current expenditure on goods and services for use by a given household or individual members. Consumer spending does not include direct taxes, seniority pensions and other types of social insurance, savings bank deposits, housing cooperatives contributions, life insurance premiums, accrued money transfers, and expenses to non-residents. household members, and loan repayments. Also excluded are costs that are investment in nature, gratuitous cash transfers and donations. Education, medical and other services received free of charge are not included in consumer spending.

So, having considered all the above issues, we can say that the standard of living of the population of Uzbekistan is constantly changing. But if you look at the tendencies of this change, you can see a clear decline in the standard of living of the population of Uzbekistan in recent years.

Based on the above, we will draw a number of conclusions:

First, in spite of the fact that both income and expenses of the population are growing every year, the difference between income and expenses is decreasing. This is far from having a positive effect on the well-being of the population of Uzbekistan.

Secondly, the economic and statistical analysis of the living standards of the population of Uzbekistan has several branches, the most important of which is the statistics of households of the population. The indicators studied in this industry are used in the study of measures for the social protection of the population of Uzbekistan.

Thirdly, with the help of economic and statistical analysis, it is possible to study the provision of the population with social benefits, that is, whether there are enough health workers, medical institutions in a particular region of Uzbekistan,

and whether there is the necessary number of recreation facilities, theaters, museums necessary to maintain a high cultural level. the level of the population of Uzbekistan.

Lastly, the economic and statistical analysis of the living standards of the population of Uzbekistan is carried out in order to improve certain living conditions of the population. But, at the present time, in the current unstable economic situation, it is becoming more and more difficult to do this.

Providing agricultural enterprises with labor resources and their rational use, increasing labor productivity and, on this basis, raising wages is the most important condition for the successful development of agriculture and its transformation into a highly efficient and highly productive industry.

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## **GEODESIC WORK IN THE PROCESS OF DESIGN TO ENSURE TRAFFIC SAFETY ON ROADS**

*Annotation: This article deals with the role and importance of geodesy in the design of longitudinal profiles on highways and the design of cross-sections.*

*Keywords: Red line, black line, horizontals, working height, interpolation.*

### Introduction

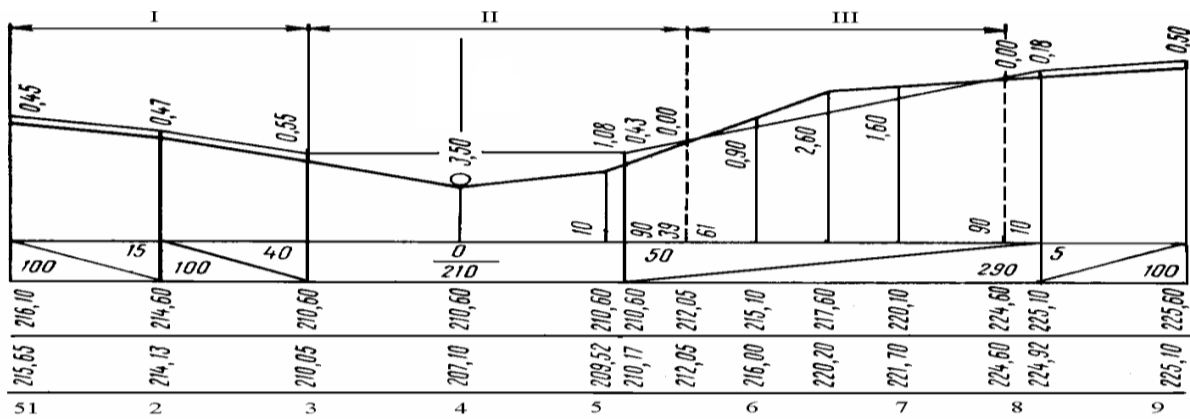
As far as we know, the most effective and safe roads are highways. But highways also have their drawbacks. Such deficiencies not only have a major impact on road safety, but can also pose a serious risk to the vehicles, drivers, passengers and pedestrians involved. We know that highways are not always smooth and smooth. In mountainous areas, there are problems such as passes, ravines, dams, snow and avalanches. In urban areas, there are problems such as congestion and pedestrian traffic. Geodetic work is a great help to road engineers in solving these problems and finding solutions to them [1].

### Materials and methods

In the preparation of this article, the methods of project analysis, study and nationalization of foreign experience, study and orientation of technology opportunities, logic and generalization methods were used, and a proposal to implement measures based on the geography of the region. was given.

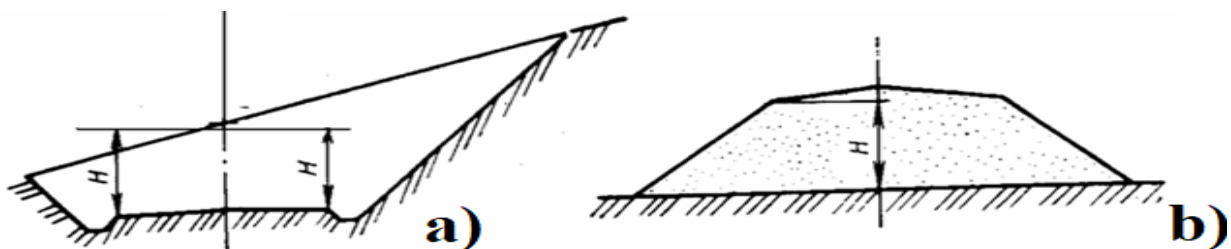
### The main part

Road design is based on more complex calculations. The design process is divided into two parts. These are field work and chamber work. Field work is mainly a section of project exploration work, which is geodetic work. The projection of the road axis in the vertical plane in the plane of the drawing is called the longitudinal profile of the road. The longitudinal profile describes the verticality of some sections of the road, measured by the longitudinal slope, and its location relative to the ground. Longitudinal slope is one of the most important indicators of the transportability of roads. The natural slopes of the place often exceed the permissible values required for efficient use of cars. In such cases, the slope of the road is flatter than the slope of the ground, for which part of the soil is cut off on the ascents, or, conversely, the soil is poured into the passages from the lower parts of the relief. When designing a highway, it is first necessary to determine their horizontality through the levels. When counting using levels, the longest distance should not exceed 100 meters [2].



**Figure 1.** Location of the track in the longitudinal profile:  
I - path in "zero" characters; II - in the lift; III - in the carving

Areas where the road surface is lower than the ground surface as a result of soil cutting are called carvings, and sections of the road that pass over the artificially poured soil above the ground are called elevations. These elevations and carvings determine soil consumption and road strength when designing a road cross-section. The difference between the road surface markings and the roadside markings, which determine the height of the lift or the depth of the carving, is called the working mark. Fracture areas of the longitudinal profile, which are formed when the slope changes, cause some inconvenience for movement: convex areas on the road obscure the front part of the road, and large areas with a relatively small curvature radius of curvature. when driving at high speed, the front axle of the car becomes lighter and it becomes impossible to control it; Due to the sudden change of direction in the fractured areas, there is an impulse that disturbs the passengers and tightens the suspension. Therefore, the broken areas of the longitudinal profile are smoothed by inserting the connecting vertical curves, and the smoothed broken areas of the longitudinal profile are indicated by a dotted line. Numbers in parentheses represent working symbols in the absence of vertical curves, and numbers without parentheses represent real characters [3].



**Figure 2.** Working mark of the footpath: a - in the carving; b - in the lift

The profile is first made in a graphite maker, then manually filled in with information about soils, artificial structures, location details, and more. To make the longitudinal profile clearer, vertical distances (characters) are set on a larger scale

than horizontal characters. For flat roads, the vertical scale is 1: 500 (5 m per 1 cm) and the horizontal scale is 1: 5000 (50 m per 1 cm).

### Results

When designing roads, longitudinal slopes that do not exceed the allowable height, the height of the road surface above the sources of moisture (groundwater and in some places surface water ponds) to create a favorable water-heat regime for the ground foundation, as well as The height of the footing above the level of snow cover (ensures that the road is not covered with snow) should be considered. The arches work on compression, with the strength of the reinforced concrete giving good results [6]. Determining the position of the road surface relative to the ground in a longitudinal profile is called designing a longitudinal profile or drawing a project line.

The following must be ensured during the project line:

- smoothness of the longitudinal profile, allowable longitudinal slope, sufficient visibility - these allow cars to travel at high speeds;
- drainage of water from the bottom of the road;
- the project line is not in the form of a saw; when the project line is in the form of a saw, the "lost ascents" lead to slopes, and then to the ascent of the road section, when passing, the car engines do useless work;
- roads must pass through the elevation signs indicated when passing through checkpoints, such as the elevation signs at the beginning and end of the route adjacent to the existing road.

### Conclusion

There are many different ways to design a highway. However, regardless of the method used, geodetic work is performed when the designer performs the work. There are two ways to draw a project line: design methods can be as wrapping and cutting lines. In the design of the curve, the design line is drawn as parallel to the ground as possible, except for the rule of thumb in the low-lying areas of the terrain and in the vicinity of sharply curved areas of the longitudinal profile of the surface. Designing as a curb in flat and low-lying terrain allows for the creation of a well-drained footpath. The full use of geodesy in the design will make a significant contribution to safe traffic on highways and increase traffic speed.

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### **XALQ OG`ZAKI IJODI ELEMENTLARINING INGLIZ TILI DARSLARIDA QO`LLANILISHI**

*Annotatsiya: Ushbu maqolada xalq o`g`zaki ijodi elementlarining ingliz tili  
darslarida qo`llanilishi va uning ahamiyati, muhimligi haqida so`z yuritiladi.*

*Kalit so`zlar: maqol, ertak, topishmoq, til o`rgatish*

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### **APPLICATION OF ELEMENTS OF FOLK ORAL CREATIVITY IN ENGLISH LANGUAGE LESSONS**

*Abstract: This article discusses the use of elements of folklore in English  
lessons and its importance.*

*Keywords: proverb, fairy tale, riddle, language teaching*

Xalq qo`shiqlari matal va masallari, maqol va hikmatlari, ertak dostonlari asrlarning samarasi, xalq donoligining, so`z san`atining injulari sifatida vujudga kelgan. Chet tili darslarida ertaklar, maqollar va topishmoqlardan foydalanish tili o`rganilayotgan mamalakatning xalqi xayoti va madaniyati bilan ham bevosita tanishtirib boriladi desak mubolag`a bo`lmaydi.

Maqol xalqning ko`p asrlar mobaynida ijtimoiy –iqtisodiy, siyosiy va madaniy xayotida to`plagan tajribalari, kuzatishlari asosida yuzaga kelgan ixcham, chuqur mazmunga ega bo`lgan og`zaki ijod janrlaridan biridir. Maqol atamasi arabcha “qovlun”- gapirmoq, aytmq so`zidan olingan bo`lib, aytilib yuriladigan ifoda va iboralarga nisbatan qo`llaniladi.[1, 91 B]

Maqol o`z tabiatiga ko`ra xalqaro janr hisoblanadi. Dunyoda o`z maqollariga ega bo`lmagan xalqning o`zi yo`q. chunki har bir xalq hayotiy tajribalarini maqollar shaklida avlodlarga qoldiradi. Shuning uchun ham turli xalqlar og`zaki ijodida mazmun va shakl jihatidan bir biriga yaqin hamda hamohang maqollar ko`p uchraydi. Chunki har bir xalq hayoti va tarixida juda ko`p o`xshshliklar, umumiyliklar mavjud. Aynan shu umumiylikdan ingliz tili o`rgatish jarayonida foydalanish esa o`rganuvchining ona tili va o`rganilayotgan til o`ratsidagi to`siqni yengishda yordam beradi. Misol uchun:

A friend in need is a friend indeed-Do`st kulfatda bilinadi

There`s no place like home-O`z uying o`lan to`shaging

Til o`rgatish jarayonida xalq og`zaki ijodi namunalaridan foydalanish o`rganish jarayonini nafaqat rang-baranglashtiradi balki o`z oldimizga qo`ygan masalalar yechimiga ham xizmat qiladi. Ko`p maqollar ohangdosh va rifmikaga egadir. O`rganishning boshlang`ich bosqichida biz ulardan fonetik mashqlar sifatida, ma`lum bir tovush ustida ishlaganimizda foydalanishimiz mumkin. Misol uchun :

[e]-tovushi Best defense is offense-Eng yaxshi himoya bu hujum

[s]-tovushi Speech is silver but silence is good. Gapirish kumushga teng, sukut oltinga.

Maqollar va matallar umumlashgan xususiyatiga ko'ra, taqlid san'atini o'rgatishda chet tilini o'qitishning barcha bosqichlarida, fikrni tasvirlash va uni qisqa shaklda bayon qilishda foydalanish mumkin.

All that glitters is not gold-Hamma yaltiragan narsa ham oltin emas

A little knowledge is a dangerous thing-Oz bilim xavfli narsa.

Topishmoqlar xalq og`zaki ijodining kichik va ommabop hamda xalqaro janrlaridan biri hisoblanadi. Bu janr yosh avlodni hayotni bilishga, borliqdagi narsa buyumlarning xususiyatlarini yodda saqlab qolishga o`rgatadi. Qadimda topishmoqlar cho`pchak, topmashoq, matal, bayt, jumboq, topar kabi nomlar bilan yuritilgan. Bolalarga chet tilini o`rgatishda, o'qitishda topishmoqlar eng qiziqarli va ko'ngil ochar vositalardan biri hisoblanadi. Jumboqlarni yechish aqllilik, zukkolik va mantiqni rivojlantirish uchun ular yaxshi mashq bo'lishi mumkin.[2] O'qituvchilar ingliz tilidagi topishmoqlardan - ko'pincha yangi o`rganilgan so'zlarni mustahkamlashda, ingliz tilidagi polisemantik so'zlarga e'tiborni jalb qilishda, shuningdek ba'zi grammatik hodisalarni tasvirlash uchun foydalanadilar. Sinfda bolalar uchun ingliz tilidagi jumboqlardan foydalanishda, ularga yorqin rasmlar ilova qilinadi va ingliz tili darslarida topishmoqlar turli o'yinlar uchun asos bo'lib xizmat qilishi mumkin.

Masalan, ingliz tilidagi ranglar mavzusini tusuntirib berayotganda, mavzu oxirida siz bolalar bilan turli xil ranglarni eslatib, bir nechta jumboqlarni o'rgatishingiz mumkin: Misollar:

I am purple, yellow, red, and green

The King cannot reach me and neither can the Queen.

I show my colors after the rain

And only when the sun comes out again. (A rainbow)

Beqasamdan yo`li bor,

Osmon-falakda chiqar.

(Kamalak)

Ingliz tilidagi otlarni (artikllar, ko'plik) o'rganishning murakkab jarayonlaridan biri bu sanaladigan va sanab bo'lmaydigan ot turkumidir. Bunday otlarning farqini tushuntirgandan so'ng, o'qituvchi odatda inglizcha otlarni hisoblash va hisoblash mumkin bo'lmagan misollarini so'raydi. Va bunday otlarga misol sifatida va o'rganilgan mavzuni mustahkamlash uchun siz bir nechta jumboqlarni o'rgatishingiz mumkin.

Clean, but not water,

White, but not snow,  
Sweet, but not ice-cream,  
What is it? (Sugar)  
Choyga solsam erib ketar,  
Lazzatini berib ketar.M  
(Shakar)

Chet tili darslarida maqol va topishmoqlardan foydalanish chet tilini o'rganishga bo'lgan qiziqishni uyg'otadi, o'quvchilarning faolligi va dars samaradorligini oshirishning ajoyib usuli hisoblanadi, chunki ular o'yin va raqobat elementini tilni egallash jarayoniga kiritishga yordam beradi.

**Foydalanilgan adabiyotlar ro'yxati:**

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**ON SOME ISSUES OF TEACHING CONVERSATIONAL ENGLISH**

*Annotation: In this article modern approaches of investigation of the characteristics of native speaker performance in conversation is considered, which is impossible to do without knowing the social cultural sphere, as well as national-cultural specific ways and basic types of activities of teaching speaking English have been reviewed.*

*Key words: the functions of conversation, national-cultural specific, fluency activities, a psychological barrier.*

Different cultures talk about different things in their everyday lives. Native speakers very aware of what they should and should not talk about with specific categories of people in their own language, but rules may be different in a foreign language. Both teachers and students need to develop a sense of “taboo” subjects if they are to avoid offence.

Good conversationalists use stress and intonation to keep conversations going. A fall on words like “O.K.” or “So”, often serves to show that we are about to change the subject. A rise on “really” is a way of showing interest. All of these are important signals and it is worth pointing these out to students when they occur so that they start listening for them. A wide voice range is also more likely to keep a listener interested than a monotone. This can be difficult for students whose native language has a narrow voice range and for these students additional sensitively training may be needed. Students also need to realize that the wrong intonation could lead to misunderstanding. For example, researchers found that Pakistani ladies who were serving in the canteen of Heathrow often got a hostile reaction by pronouncing the word with a falling intonation, rather than the rise which would be polite in British English. While it is true that speakers do not use as much gesture as people in some other cultures, e.g. Italians, they do use their hands to emphasize a point. The positioning of the body also has an effect on the listener, sitting on the edge of a seat may be seen as being aggressive. Slumping in it is a sign of boredom and even where do not mean it this may be how it comes across. In some cultures people also stand very close to those they are talking to and many Americans report discomfort when faced with Middle-Easterners who tend to value proximity and touch.

Body language is a complicated area, but it is worth observing your students and giving them feedback on how they appear to others.

Teachers need to be aware of the characteristics of native speaker performance in conversation if they are to teach conversation effectively they also need to consider which of the functions of conversation are most relevant to the

students. They will vary according to level and needs, but most general the purpose of the students would be to use English in order to:

- give and receive information;
- collaborate in doing something;
- share personal experiences and opinions with a view to building social relationships.

There are 4 basic types of activities of teaching speaking:

- 1<sup>st</sup> -controlled activities to give students confidence and support .
- 2<sup>nd</sup> -awareness activities to increase sensitively in students to what they are aiming at.
- 3<sup>rd</sup> -fluency activities to give students the practice they need **to use** English for communication.
- 4<sup>th</sup> -feedback tasks to allow students to reflect on their own performance so that they become aware of areas in which they have to improve.

In most conversation programs we would expect a mixture of all of these activities from the start, geared to the needs of the students.

When we think about the mix the following considerations apply:

It may be necessary to introduce fluency activities gradually, students who are used to highly controlled patterns of interaction, where it is the teacher who initiates all the language exchanges and judges whether they are correct or not may find that fluency activities pose a considerable threat because they are not used to the freedom involved.

It is also unlikely that any one lesson will consist entirely of one type of activity. It is always best to aim for variety of task type.

Normal conversations proceed so smoothly because we co-operate in them. There were four maxims or principles which develop co-operative behavior established.

1. The maxim of quality.

Make your contribution, one that is true specifically:

- a) Do not say what you believe to be false
- b) Do not say anything for which you lack adequate evidence

2. The maxim of quantity.

Make your contribution just as informative as required and no more.

3The maxim of relation.

Make your contribution relevant and timely.

The maxim of manner.

Avoid obscurity and ambiguity.

Readers will realize that these maxims are often broken and when this happens, native speakers work harder to get at the underlying meaning, example:

-How did you find the play?

-The lighting was good.

By choosing not to be as informative as required B. is probably suggesting the play is not worth commenting on. A lot of the material written English as a foreign language is deliberately free of such ambiguity. This means that students

have problems later in conversational situations where the maxims are not observed. Systematic listening practice using authentic discourse may be one solution.

Ask any student of English as a second language (ESL) what it is that he or she wants from the language class experience and nine times of ten the answer will be “more conversation, practice”. We have thought about this request frequently and have wondered just what our students mean.

If the students are living and studying in the United States, don't they have plenty of opportunity to practice their English? Isn't the free conversation experience waiting for them daily just out of the classroom door?

We have come to believe that one conversation groups fail it is neither the fault of the activities presented nor due to the lack of creativity of energy expended on the part of the teacher. Hours are spent conscientiously developing and designing activities and topics to cue exciting and effective conversation among the students our hearts are in the right place! Rather the problem lies with unrealistic expectations. We put a room full of strangers into a circle and we expect them to act as close friends before they even know or trust each other. We expect them to be well versed in the dynamics of group process such as turn talking/ interrupting active listening etc. We expect them to know how to deal with the more vocal members and draw out the more timid or self-conscious ones. They are expected to know how to conduct themselves as a cohesive entity with no previous experience of self-direction in the classroom. Too often we give them topics that are too hot to handle topics that require a great deal of personal disclosure.

Many students have to overcome a psychological barrier before they are prepared to speak in the foreign language. Some students find speaking in the classroom situation a threat because there is always an audience and consequently prefer the anonymity of one-to-one encounters outside. Others on the other hand who quite happily contribute in the sheltered environment of the classroom, experience considerable problems in building up the courage to use the language outside the class.

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## INORGANIC PHOSPHATE AND PRINCIPLES OF FLUORESCENCE

*Abstract: Fluorescence spectroscopy has become one of the most prevailing high-sensitivity applications for the detection and quantification of molecules. The fluorescence phenomenon studies the emission of light from excited singlet states, or the luminescence, of any molecule. These molecules absorb radiation at specific wavelengths. As this occurs, molecules become electronically excited and electrons are promoted from the ground state ( $\mu G$ ) to the excited state ( $\mu E$ ). As electrons transition back down to the ground state, energy in the form of photons is released to form immediate emissions.*

*Keywords: Förster resonance energy transfer (FRET), dihydrogen phosphate, monohydrogen phosphate, sodium 4-styrenesulfonate, Fourier-transform infrared spectroscopy (FTIR), carboxymethyl cellulose.*

Förster resonance energy transfer - FRET Förster resonance energy transfer (FRET) is a technique that relies on the transfer of energy from a donor fluorophore to an acceptor fluorophore. The non-radiative transfer between these fluorophores is called, FRET pairs. FRET is an effective tool used to measure the distance between the donor fluorophore to that of the acceptor fluorophore. FRET occurs when the emission spectra of the donor fluorophore and the absorption spectra of the acceptor fluorophore are apart by a distance less than 10 nm and are overlapped by 30%. When a ground state acceptor fluorophore is near an excited donor fluorophore, the excited state energy is transferred. This transfer of energy leads to increased emission fluorescence intensities of the acceptor while the donor excited state lifetime and fluorescence intensity decrease. This energy transfer is a product of dipole-dipole interactions. Alongside dipole interactions, resonance energy transfer relies on donor quantum yields, donor and acceptor fluorophore distances and spectral overlap.

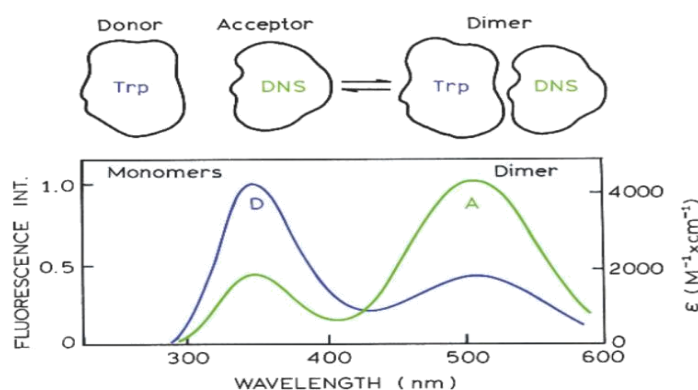


Figure. Energy transfer between tryptophan donor emission with dansyl acceptor absorption.

Tryptophan (Trp) donor and dansyl group (DNS) acceptor monomers form dimers used to calculate donor-to-acceptor distances. (Copyright © Springer Nature) [1]

### Fluorescence dyes for inorganic phosphate detection

Selecting fluorophores for specific sensors requires a variety of considerations. An example would be identifying the overall net charges of prospective probes. When targeting specific molecules with anionic or cationic properties, receptors or binding sites on the fluorophore should possess high affinity for the target species. Although there are challenges to designing probes for molecular specificity, nonetheless, there have been successful methods to achieve optimized conditions for electrostatic and hydrogen-bond interactions.

In the preparation of developing an inorganic phosphate sensor, the molecular species must be understood. Inorganic phosphate has a molar mass of 94.97 g/mol. The ion forms a tetrahedral arrangement, comprising of a phosphorus central atom and four surrounding oxygen atoms. Phosphate possesses three pKa values, pKa1 = 2.148, pKa2 = 7.198 and pKa3 = 12.35. Under specific pH conditions, inorganic phosphate exists as phosphoric acid, dihydrogen phosphate, monohydrogen phosphate and phosphate (tribasic).

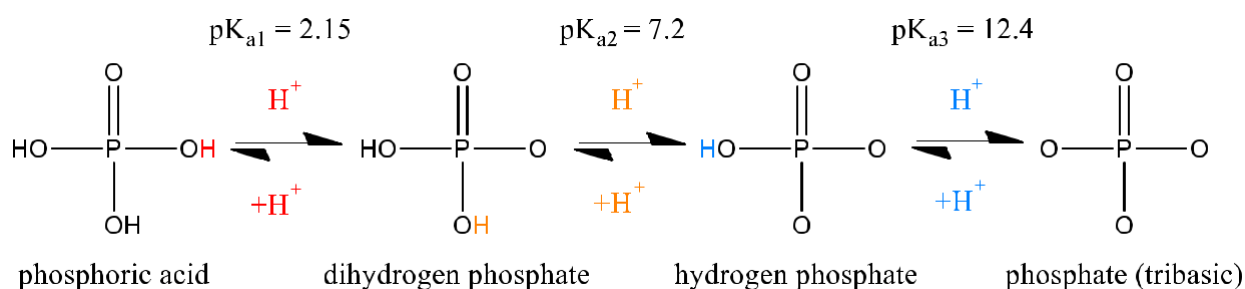


Figure . Molecular structures of phosphate species with pKa values.

### Methods:Survey for potential inorganic phosphate sensors

Propidium iodide and quinacrine mustard dihydrochloride hydrate spectral properties: 15 μM propidium iodide in tris buffer (0.1 M, pH 7) and varying concentrations of inorganic phosphate (Pi) (150 μM – 266 μM) using K<sub>2</sub>HPO<sub>4</sub> were titrated and fluorescence emission was monitored at 632 nm upon excitation at 493 nm. The same procedure was repeated in propidium iodide 0.1% carboxymethyl cellulose (CMC) or 0.1% poly(sodium 4-styrenesulfonate (PSS).

An identical protocol was followed for 18 μM quinacrine mustard dihydrochloride hydrate (QM), in tris buffer (0.1 M, pH 7), 0.1% CMC or 0.1% PSS. The fluorescence emission at 500 nm was monitored upon excitation at 436 nm.

Sephadex LH-20 for QM binding complex and spectral properties:



Sephadex LH-20 was hydrated in MilliQ and transferred to Econo-Column® (1.5 x 10 cm, Bio-Rad, Mississauga, ON, Canada) and washed thoroughly with MilliQ. 20 mM QM was applied to the packed column. The column was washed thoroughly with 400 mL of MilliQ and was resuspended five times. 250 µL of Sephadex LH-20-QM, 500 µL of tris buffer (0.1 M, pH 7) and 100 µL of varying Pi concentrations (0 mM – 1.25 mM) were added to five separate microcentrifuge tubes (Axygen®). All tubes were vortexed for 1 minute and centrifuged at 2000 rpm. 500 µL of supernatants was monitored for QM fluorescence ( $\lambda_{ex}$ : 436 nm,  $\lambda_{em}$ : 500 nm). An identical protocol was conducted using QM (20 µM, 700 µL) and calcium phosphate ( $Ca_3(PO_4)_2$ , 0.5 g and 1.0 g) in the place of Sephadex LH-20-QM.

Synthesis, laser ablation and FTIR of cellulose-phosphate using filter paper for binding complex: Following pre-existing synthesis methods, 1 cm Whatman® filter paper disks were washed generously and subjected to the basic synthesis conditions for cellulose-phosphate. Controlled samples were made without the addition of sodium trimetaphosphate (STMP). Cellulose and cellulose-phosphate disks were mounted onto microscope slides and subjected to laser ablation (70 secs, 50%, 20 Hz) using PhotonMachines 193 nm short pulse width Analyte Excite excimer laser ablation system (Isomass Scientific Inc., Calgary, AB, Canada). Samples were also characterized with Fourier-transform infrared spectroscopy (FTIR) using the Bruker Alpha FTIR Spectrometer (Plantinum-ATR attachment) (Bruker Ltd, Milton, ON, Canada).

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## **IMPACT OF CLIMATE CHANGE ON WATER RESOURCES MANAGEMENT IN UZBEKISTAN**

*Abstract: This article discusses the impact of climate change on water management in Uzbekistan and the basics of water management and planning with the participation of stakeholders. The information is also intended for researchers, science teachers and a wide range of professionals interested in water management and efficient use in Uzbekistan.*

*Keywords: water resources, climate change, temperature, management, guidance, need, precipitation, snowfall, strata, water flow.*

Water resources management must ensure that the needs of society and nature for water of the required quality and quantity are met on a regular basis in all areas of space and time - on an operational, annual, multi-year and long-term scale. In other words, water management is about maintaining a balance between water resources and the needs for them.

Global warming is affecting all aspects of water resources management in Uzbekistan, from urban and agricultural water supply to flood management and aquatic ecosystem protection. Rising temperatures, loss of snow cover, increasing and frequency of flood events, and rising sea levels are the main effects of climate change, which has a broad impact on water resources management. Reducing emissions from climate change is an important step we need to take, but water resources managers and elected officials must now act to adapt to the effects of global warming that have already occurred or are imminent.

To fully understand the concept of water resources management, it is necessary to pay attention to its broad and narrow content. Water management - in the broadest sense - is the full range of political, legal, socio-economic, technological and other functions for the use and protection of water resources. In the political, social, economic and legal spheres of water management, activities are carried out with the participation of all participants of the water complex, ie water consumers and water users, which lead to fair, efficient and environmentally friendly results.

Climate change can affect many areas where water resources managers play an active role. The key is to change the observed temperature and precipitation regimes, increasing the global sea level and its associated effects.

The increase in temperature is expected to vary depending on the amount of precipitation and low snowfall. Such a shift in precipitation affects the origin and timing of runoff, which results in less runoff from spring snowmelt and more runoff

from winter rainfall, especially from high or mountainous areas. These shifts have already been noted in some parts of Uzbekistan.

Precipitation changes are expected to vary across Uzbekistan, with some areas receiving more and others less. There may also be changes in the seasonal pattern and extreme levels of precipitation. Depending on the location, these possible changes are a cause for concern as droughts and floods, which have been identified experimentally, will occur more frequently and will be more severe in future climatic conditions.

Sea levels change over time, mainly in response to global climate change. In the twentieth century, the world average sea level rose to an average of  $1.7 \pm 0.5$  mm / year, a figure that was slightly higher between 1961 and 2003. Recent climate studies have noted global warming during the twenty-seventh century and predicted that global warming will continue or accelerate in the twenty-first century and possibly beyond. Changes in sea levels affect the coastal and estuarine regions, the erosion of sandy beaches increases, and saline water seeps into the coastal and estuarine layers. All or all of these changes can occur gradually or suddenly. The temporary onset of such changes is important for future action.

Many water supply sources are already isolated, water quality has deteriorated and is often insufficient to support endangered species. Climate change is exacerbating water problems, leading to water shortages for people and the environment, and making it increasingly difficult to meet the needs of both. Currently, implementing measures to improve water quality and supply, protect aquatic ecosystems, and improve flood management not only makes sense, but early action will help reduce the future impacts associated with climate change. Today, even if greenhouse gas emissions are reduced, there is already overheating in the “pipeline” that will cause additional effects. Adaptation is not a solution to climate change, but given the importance of our water resources, urgent action is needed to prevent social impacts.

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## **EFFECTIVE USE OF PEDAGOGICAL VIEWS OF ABDULLA AVLONI IN EDUCATIONAL PROCESS**

*Annotation: the pedagogical views of Abdulla Avloni, a prominent scientist and literary critic, based on the link between education and the study of the personality of the child, the study of the kollektiv and the personality, teaching and teaching; showed the connection of pedagogy with other disciplines, paving the way for the Coordination of school, family and extracurricular education. Abdulla Avloni devoted many years of pedagogical activity and many pages to the problem of creating a harmony of public and personal interests in education. In this harmony, he saw human happiness and the essence of education. He knew that training in a team was a method that was common to all and at the same time gave everyone the opportunity to develop.*

*In the course of this article, we will consider the effectiveness of the educational process on the basis of pedagogical views of Abdulla Avloni, as well as several pedagogical technologies and interactive techniques in the formation of skills to attract students to the lesson.*

*Keywords: pedagogical diagnostics , correction, method of conversation, patriotism, pedagogical technologies, pedagogical methods, "school flower", expressive reading.*

One of the famous representatives of the Uzbek national culture at the end of the XIX beginning of the XX century is an enlightened poet, playwright, journalist, scientist, state and public figure Abdulla Avloni. He was born on July 12, 1878 in the family of the Weaver Miravlon brother in the sniper neighborhood of Tashkent. His childhood was spent on the crooked streets of the Mirabad district, among the children of railway workers, most of whom were Russian. He studied at the old school in the pupil, then in the madrasah (1885-1886). He was engaged in independent reading. He studied Arabic, Persian, Russian. Orenburg, Kazan, watched gazeta-magazines, which went out in Tbilisi. In a short period of time, he became known as an enlightener and became one of the active manifestations of ijgimoi-cultural mobility in the country. One of the most important changes in the cultural life of Turkestan in the early 20th century was a change in schoolwork.

As Abdulla Avloni predicted in his time: "If pedagogy wants to educate a person in every possible way, then it is necessary that a person learn in every possible way", in fact, since in the process of education, teachers are responsible for the formation of youth upbringing and their cognitive potential, first of all, the formation of communication skills between the reader. In attracting students to the

lesson, of course, requires a great pedagogical skill from the teacher. . While we are studying the pedagogical actions of Abdulla Avloni in the field of education, we can also see that the girls in his school also sit side by side with the children and study .In one of the numbers of 1910 years of the " Newspaper of the Turkistan region", the same year, 23 May, at the Avlonian school, he touched on the exam held in the presence of several scribes, fathers of the shogird people and many spectators, and reported that one young shogird-girl was fascinated by everyone with her own mind and upbringing.

We recognize Abdulla Avloni not only as a pedagogue, but also as a literary scientist. His early poetic works were published in the books " literature or national poems "(I, II, III, Gujuzlar)," Maktab Gulistoni "(1916)," Mardikorlar ashulasi "(1917) and "Sabzavotlar" (1914), as well as works published in the pages of the time press. They were propagated knowledge, condemned ignorance and ignorance, the socio-moral foundations of the old system, thought about the free and happy times. In this respect, the poems of Avlani in this period are in harmony with Hamza, the train of the Anbar horse. Avlony widely used finger weight in literature. He wrote poems adapted to national tunes and enriched the possibilities.

"To bring the ability of man to perfection is in the means of upbringing. A child turns out to be a happy person, if he is well-educated, preserved from corrupt behavior and is big, accustomed to his beautiful people. If an ill-mannered, morally corrupt person grows up, turns out to be an ignorant, ignorant rasvoi man who does not take heed, does all sorts of corrupt deeds."Therefore, pedagogical diagnostics and correction are of great importance in researching and finding solutions to the problems of pedagogical theory and practice. In my opinion, the teacher only gives knowledge in the course of the lesson and at the same time gives training in his own actions, mimics and colloquial, polite.

To the teacher who has such qualities, the young people who are self-schooling, too, will be able to morning, besides listening to him, he will be able to explain his thoughts silently.

It is known to us that education is a process conducted under the guidance of specially trained people, which develops cognitive abilities that arm students with knowledge, skills and abilities, content their worldview. It would not be a mistake to say that pedagogical technologies and interactive techniques implemented by the teacher in the process of ser content increase the activity of students, teachers in relation to the educational process. In particular, in the process of the lesson, it is necessary to approach scientifically not only with the exposure or speech fictions, but also to conduct the educational process on the basis of interactive methods, which will lead to the intensification of the lesson.

In particular, Abdulla Avloni in the textbook " Ikkinchi muallim" created special poems for expressive and memorizing. The poet paid special attention to the structure, musicality of such poems, the regularity of rhymes, stands. As a rule, such poems are absorbed by the author, as well as the reader's feelings.Hence, poems aimed at expressive reading are sonorous, playful, put on the reader's feelings the task of teaching poetry-beauty, artistic speech to feel. Abdulla Avlani pays special

attention to the method of expressive reading, as in the lower classes of the school, in aesthetic education of students, in the cultivation of their oral speech. Therefore, this method of textbooks "Birinch muallim" and "Ikkinchi Muallim" of the author is much more widely used in jadid schools and has been repeatedly reprinted. It can not be overemphasized if we say that through this he not only has achieved the development of the circle of the culture of speech, but also through such a method, the emergence of thinking, observation, mimic movements in the reader, the descent of himself in a daring lesson, and the memorization of such prose in poetry, in turn, creates a basis for. I think that it is very effective to use the following techniques in educational conditions, in pedagogical direction, in carrying out the course process:

1. Method of pedagogical observation.
2. Method of conversation.
3. Survey method.
4. Interview method.

It would not be a mistake to say that these methods coincide with Abdulla Avlani's views. Abdulla Avlani's textbooks are of great importance in the cultivation of children's oral speech by the method of conversation, teaching artistic vocabulary. A number of forms of expressive reading are given in the Avlani complexes "Literature or national poems" and "School Gulistan" – such beautiful texts as Declaration (individual reading), reading as chorus, reading as roles. It should be noted that some poems in the literary complex ("Who is the Noma", "What is in us a lot") serve to teach readers the elementary forms of expressive reading. In these poems, a bitter irony, a tone of hatred stand in the center of attention of readers. Such collective reading, in turn, leads to the formation of such concepts as mutual closeness, harmony, communion among students, as well as the emergence of close interdependence.

Having didactic and pedagogical views, Abdulla Avlani did not only limit himself to the elementary forms of reading in his textbooks, but also did serious work, at the same time, at that time, to spread knowledge, to call the people to master science. In 191-1911-ies, representatives of the "Grammofon" society in Riga came to the cities of Central Asia and recorded on plastic the classical status and songs of famous hafizs among the Uzbek, Kazakh, Tajik, Kyrgyz peoples. On this occasion, the Masterpiece performed by the famous artist Mulla Toychi Toshmuhamedov (1868-1943) is also written on plates. A great enlightener poet of his time, a pedagogue. Avlani also used technical means of teaching the people of that period in order to promote science and education. First of all, Abdulla Avlani uses technical means in order to attract Uzbek children to school, disseminate enlightenment among the people, create first examples of expressive reading.

Abdulla attaches special importance to the unity of education and training in Avldani. Behind the intellectual upbringing, which is an expression of human intelligent activity, achieves great honor and perfection, in this place the breadth of the thinking circle of the teacher, the high level of knowledge in all respects are decisive in the education of students. The development of the ability to think leads to a work with the mind: it teaches students to distinguish between good deeds and

bad deeds, to master the good deeds that are necessary for a perfect person, to stay away from bad deeds that lead a person to error.

Abdulla Avlani also wrote many poems and parables for children. In these works, the poet aims to expand the circle of thoughts of children of school age, instilling in them love for school and book, labor, nature, Motherland. In these poems, the poet describes the motherland in simple and sincere Egypt that not only in the middle of those tenth years, but also children of today's school age can get great aesthetic pleasure from them. In fact, starting from the definition of the poet Vatan, "from the mountains make deposits, from the Lands make grains... The air is very pleasant, there are deserts stone, sand.

In conclusion, I can say that such views of Abdulla Avloni and the methods that led to the process of the lesson lead not only to the growth of communicative abilities in the student, to the establishment of emotional communication between the pupils, to the solution of problematic situations, to work in a group, to listen to the opinion of others. The use of pedagogical innovations, the use of integrated processes, the use of interactive techniques are insufficient in the formation of students as spiritually competent, with a high intellectual potential, independent and free-thinking, creative. It will be necessary to take into account the inner world of the personality of the reader. That is, I think it is necessary to be able to count on his personal opinion, to notice the abilities in him, to positively influence the increase in his vocabulary.

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## **TIN/CR/AL<sub>2</sub>O<sub>3</sub> AND TIN/AL<sub>2</sub>O<sub>3</sub> HYBRID COATINGS STRUCTURE FEATURES AND PROPERTIES RESULTING FROM COMBINED TREATMENT**

*Abstract: New experimental results on the structure and the element and phase composition of hybrid coatings, which were deposited on a substrate of AISI 321 stainless steel using a combination of plasma detonation, vacuum arc and subsequent high-current electron beam treatment (HCEB), are presented. We found that an increase in energy density intensified mass-transfer processes and resulted in changes in aluminum oxide phase composition ( $\gamma \rightarrow \alpha$  and  $\beta \rightarrow \alpha$ ). Also we observed formation of a nano-crystal structure in Al<sub>2</sub>O<sub>3</sub> coating.*

*Keywords: hybrid protecting coatings, plasma jet, vacuum-arc deposition, electron beam treatment, adhesion, nano- and micro-hardness, wear and corrosion resistance.*

### **1. Introduction**

Traditional methods of surface modification, which are applied now in practice (physical, chemical, electro-chemical and mechanical ones [1]) as well as more advanced methods such as ion implantation, ion-assisted deposition of thin films, plasma technologies and electron-beam treatment [1 - 4] in some cases cannot result directly in a desired effect. In this connection, solving the concrete industrial problems arising in sheep building and chemistry, for instance [1, 5, 6], one has to combine such methods of surface modification, which allow the production of hybrid coatings possessing the definite operation properties [1, 7]. An oxide-aluminum ceramics and the coatings on titanium and tungsten carbides and nitrides [1, 8 - 10] base possess a number of unique properties, which are able to provide



corrosion protection, high hardness and mechanical strength, low wear, and good electro-isolation properties. Additional treatment of these coatings by high current electron beams (HCEB) in the regime of partial melting results in ablation of surface impurities (e.g. carbon-, oxygen- and nitrogen-compounds) and activation of the coating surfaces. Melting of the surfaces and their high-rate cooling result in the formation of nano- dispersed and metastable phases, as well as amorphous layers. Deposition of a TiN-layer, also showing high-melting temperature, hardness and corrosion resistance, additionally allows the decrease of the surface porosity of the oxide coatings and the enhancement of the protective action.

## 2. Experimental

### 2.1. Preparation of samples

The protecting hybrid coatings TiN/Cr/Al<sub>2</sub>O<sub>3</sub> and TiN/Al<sub>2</sub>O<sub>3</sub> were formed on the substrate of austenite stainless steel AISI 321 (18wt.% Cr; 9wt.%Ni; 1wt.%Ti; 0.3wt.% Cr; Fe the rest; 0.3mm and 2 mm thickness). The aluminum oxide coating (45 to 60µm thick) was formed using a high-velocity pulsed-plasma jet from the facility "Impulse-5".

This technology applied for production of the protecting coatings is relatively new and based on electromagnetic acceleration of burning products from gas mixtures (propane, oxygen and air). Approaching such an electric conducting layer the aluminum oxide powder is quickly heated and accelerated in the flow of pulsed plasma. At the moment when the pulsed plasma jet is ejected from the plasmatron the electric circuit is shorted between an eroding electrode and the substrate surface. In this shorted system a pulsed magnetic field in which temperature of the plasma-powder flow was increased for the second time, was formed. Evaluation of the pulsed plasma flow technological characteristics (temperature, velocity and power density) for the opted operation plasmatron regimes was performed using the method described in [13] by solution of a two-dimensional non-stationary problem of detonation wave distribution in an electric field between two coaxial electrodes.

### 2.2. The characterization of the coatings

The element composition of TiN/Al<sub>2</sub>O<sub>3</sub> and TiN/Cr/Al<sub>2</sub>O<sub>3</sub> coatings was studied by back-scattering (BS) using the accelerating facility UPK-2-1 (Nuclear Physics Institute, Almaty, Kazakstan) under 0.8 and 1.5MeV proton beam energy and by scanning electron microscopy with micro-analysis (REMMA-102 microscope with WDS-2 and EDS adapters (Selmi, Sumy, Ukraine).

Detailed studies of the detonation-produced aluminum oxide coating micro-structure were performed by the transmission electron microscope PEM-125 with 125kV accelerating voltage (Selmi, Sumy, Ukraine). Very thin foils of various coating thicknesses were manufactured from the samples. Then one their edge was polished electro-chemically. Using ion etching, we reached that thickness which allowed us to study micro-diffraction of various regions.

X-ray analysis of the hybrid coatings was performed by the DRON-2.0 facility (S-Peterbourg, Russia) with Cu k<sub>α</sub> emission. Additional studies of the hybrid coating surface phase composition were performed by a low-angle scattering using the X-ray diffraction meter D8 Advance (Bruker AXS, Germany) in Cu k<sub>α</sub> emission.

To decode and interpret the obtained diffraction patterns, we applied the licensed data base PCDFWIN containing information about more than 150 000 compounds, and a package of programs for data treatment Diffrac. Plus 80000 compounds. Microhardness measurements were performed by the PMT-3 (St-Peterbourg, Russia) facility by the Vickers's diamond pyramid under 0.1 to 0.15kg indentation loads to the transversal cross-sections.

### 2.3. Investigation of Corrosion Behavior Using Electrochemical Techniques

The corrosion resistance of the prepared coatings was investigated using electrochemical techniques. An AUTOLAB Potentio-Galvanostat (ECO CHEMIE, Netherlands) and Princeton Applied Research corrosion testing cell were used for the electrochemical measurements. A saturated calomel electrode used as a reference electrode and a graphite one as an auxiliary electrode for all measurements.

The tests in 0.5 M H<sub>2</sub>SO<sub>4</sub> solution were carried out in the potential region — 1000 to +1500 mV at ambient temperature. Five rapid scans (scan rate = 25 mV/s) followed by one slow scan (scan rate = 0.25 mV/s) were performed on each specimen. The rapid scans allow investigations under constant conditions of the material surface and corroding medium, whereas slow scans lead to predictions of the general corrosion behavior of the material. In all cases the sample surface exposed to the corroding medium was 1cm<sup>2</sup> [22 - 24]. The above-mentioned experimental conditions were also applied for the corrosion tests in HCl and NaCl solutions, whereas the scanning region was from -300 to +1700 and from -1000 to + 1000 mV, respectively [25].

## 3. Results and Discussion

Application of the combined technology for protecting coating deposition was accompanied by a number of features of the produced surface structure. Plasma-detonation deposition of the aluminum oxide powder included the coating formation by a successive placement of fully or partially melted powder particles of Al<sub>2</sub>O<sub>3</sub> [1]. Studies of morphology features of the AISI 321/Al<sub>2</sub>O<sub>3</sub> surface (Fig.1) demonstrated that the ceramic coating represented an alternation of non-uniformly distributed hills and valleys. It seems to be due to the fact that in the process of gas-thermal coating deposition the heavier powder fractions (of 44 to 56µm diameter) of various melting states, mass, and motion rate in the plasma flow formed the coating matrix. The powder with 27 to 44µm particle size was melted most strongly and impacting the surface particles filled the valleys or was splashed depending on their velocity. As a result of high-rate solidification a surface with a highly developed relief was formed. 2000 times magnification failed to demonstrate the regions with in-melted powder particles.

Plasma detonation deposition of an aluminum oxide powder layer provided formation of surfaces with higher wear resistance. As one can see in the Figure TiN/Cr/Al<sub>2</sub>O<sub>3</sub>/steel321 coating had essentially lower wear, but the lowest one was found in TiN/Al<sub>2</sub>O<sub>3</sub>/steel321 after electron beam treatment with double surface melting under 35J/cm<sup>2</sup> current density.

We assume that decreased roughness of the hybrid coating after electron beam treatment resulted in wear decreasing together with grain grinding occurring

in the protecting coating. Taking into account the fact that destruction character and wear intensity were mainly determined by mechanical properties of a contact surface [10, 16], in the coatings we performed studies of nano-hardness. Figure 13 shows results of measurements by nano-indenter. As one can see in this Figure, the coating had essentially higher hardness – about 9GPa. This hardness value is closer to  $\gamma - \text{Al}_2\text{O}_3$ , which was mixed with TiN film.

#### 4. Conclusions

In such a way, the performed studies of surface phase composition in the process of plasma detonation deposition of metal ceramics ( $\alpha - \text{Al}_2\text{O}_3$ ). We observed a number of phase transformations in aluminum oxide (like  $\alpha \rightarrow \gamma$  and  $\alpha \rightarrow \beta$ ). Restoration of  $\alpha$  – phase (corundum) was realized by thermal annealing of the surface by an electron beam. Element analysis of TiN/Cr/ $\text{Al}_2\text{O}_3$  and TiN/ $\text{Al}_2\text{O}_3$  coatings demonstrated that basic composing elements were titanium, nitrogen, carbon, oxygen and aluminum. Surface melting by a concentrated energy flow stimulated mass transfer processes. We observed essential saturation of near surface region by aluminum and oxygen ions with simultaneous motion of titanium and nitrogen ions towards the coating bulk. We stated that electron beam annealing of a surface provided uniform distribution of titanium ions and partial sealing of inhomogeneities of the surface morphology.

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Table.1

Sample series	Deposited coatings	Additional treatment
I	$\text{Al}_2\text{O}_3+\text{Cr}(0.1-0.2 \mu\text{m})+\text{TiN}(0.5-1.2 \mu\text{m})$	-
IB	$\text{Al}_2\text{O}_3+\text{Cr}(0.1-0.2 \mu\text{m})+\text{TiN}(0.5-1.2 \mu\text{m})$	HCEB
II	$\text{Al}_2\text{O}_3+\text{Cr}(0.1-0.2 \mu\text{m})+\text{TiN}(2-3 \mu\text{m})$	-
IIB	$\text{Al}_2\text{O}_3+\text{Cr}(0.1-0.2 \mu\text{m})+\text{TiN}(2-3 \mu\text{m})$	HCEB
III	$\text{Al}_2\text{O}_3+\text{TiN}(0.5-1.2 \mu\text{m})$	-
IIIB	$\text{Al}_2\text{O}_3+\text{TiN}(0.5-1.2 \mu\text{m})$	HCEB
IV	$\text{Al}_2\text{O}_3+\text{TiN}(2-3 \mu\text{m})$	-
Uncoated steel		

## **SOILS OF THE KOKAND OASIS AND THEIR ECOLOGICAL RECLAMATION**

*Annotation: This article describes the soil-ecological conditions of the Kokand oasis and the impact of erosion processes on the changes occurring in them, including soil fertility, and measures to combat them. Also, based on statistical data, the processes of soil erosion, development of planting system, proper accounting of soil potential, increase of productivity of irrigated lands, development of complex measures on wide use of organic fertilizers, creation of artificial forests, improvement of meliorative-ecological condition and salinization were analyzed.*

*Key words: oasis soils, erosion processes, soil fertility, chemical polymers, soil salinity, precipitation, deflation, environmental problems, anthropogenic factors.*

Introduction. Reforms and measures in the agricultural sector in recent years have also focused on the efficient use of irrigated land and the development of agricultural productivity by increasing soil fertility. It also uses more than 20 million hectares of agricultural land, including 3.2 million hectares of irrigated land, to grow food and raw materials for the economy.

Despite the small area of irrigated land, the population growth rate is very low. The main reason for this is that in the 1980s and 1990s, an average of 90,000 hectares of new land was developed in the country per year, but in recent years, due to water shortages, this figure is 5-6 thousand hectares. As of 2020, there are 4.3 million hectares of irrigated land in the country, of which 44.7% of irrigated land is at various levels, including 31.0% weak, 11.9% average, 1, 9 percent are declining due to high salinity and poor reclamation, and are being phased out of agriculture [1]. It should be noted that in the irrigated gray-oasis cultivated soils of the country, the level of groundwater is about 3-5 m, which is directly involved in the re-salinization of soils with different levels of mineralization.

The diversity of landscape complexes in accordance with the natural conditions and geosystems of the Fergana Valley in accordance with the latitudinal and altitude zoning, well-developed agriculture from ancient times and the strong development of nature due to human activities, the most densely populated In all areas of the valley, which are clearly separated from the regions, there are favorable natural geographical conditions for the development of agro-economic and various industries and recreation systems of agriculture [2; 54-87 p.]. The topic of this article is the measures taken to prevent the impact of natural and anthropogenic processes on the soils of the Kokand oasis and their reclamation, ecological condition and fertility.

Goals and objectives of the work. The purpose of the study was to study the soils of the Kokand oasis and their reclamation, the impact of anthropogenic processes on its fertility, as well as the study of effective practices in this area. The main purpose of the research is to determine the impact of anthropogenic processes on the decline and development of oasis soils due to salinization, erosion, reduced biodiversity, to study and analyze their ecological status, to reveal current problems such as oasis soils and their reclamation.

The main part. The history of irrigated agriculture in the Kokand oasis covers a long period of time, during which time there have been significant changes in soil cover, the process of soil formation has shifted from the automorphic regime to the formation of semi-hydromorphic soils. . According to him, the soils of the oasis have a unique morpholito-genetic structure and agrochemical, agrophysical and reclamation properties.

Many years of scientific research by local soil and erosion scientists have shown that the fertile soils cultivated over a large area in the Kokand oasis have been left under sandy loam due to wind erosion. According to their analytical calculations, there are about 10 thousand hectares of such lands in the oasis, which contain 2 - 3% humus and 40 - 50% water-resistant granules - at a depth of 50 - 70 - 100 cm from the structure and the earth's crust. buried in sand. However, if this soil layer is overturned in the plantation plow, it is recommended to take measures in autumn to make the oasis soils resistant to wind erosion and fertile [3; 48-94 p.].

A large area of the Kokand oasis consists of light-colored and gray-brown soils and sandy desert soils reinforced with bushes, the mechanical composition of such soil types is permeable and washed away without water accumulation on the surface. The flow is much slower. The reason it does not wash out is that the topography is flat. However, the wind can easily dust and blow away these soils, and the deflation of the Kokand wind is noticeable in the areas where the oasis soils are scattered. In particular, during our field research, we witnessed a 100-hectare cliff 80 meters long, 5 meters wide and 2 meters deep. In the formation of such a cliff, we witnessed the loss of about 300-400 cubic meters of soil cover, the removal of a 1-centimeter-thick layer of 90 hectares of land, resulting in the loss of 1,200 m<sup>3</sup> of soil cover.

The sharp decline in the area of fences and trees planted to prevent wind erosion is paving the way for the development of erosion. In particular, the risk of erosion is further exacerbated by the fact that the area of the western and central parts of the oasis is shrinking every year due to the inadvertent felling of shrubs in the enclosures and woods established to strengthen the mobile sands [5; 89-108 b].

The reasons for this can be directly attributed to the rapid population growth in the Kokand oasis (Table 1). According to him, issues such as soil and environmental degradation in the oases have not yet been sufficiently studied in practice [4; 44-47 p.].

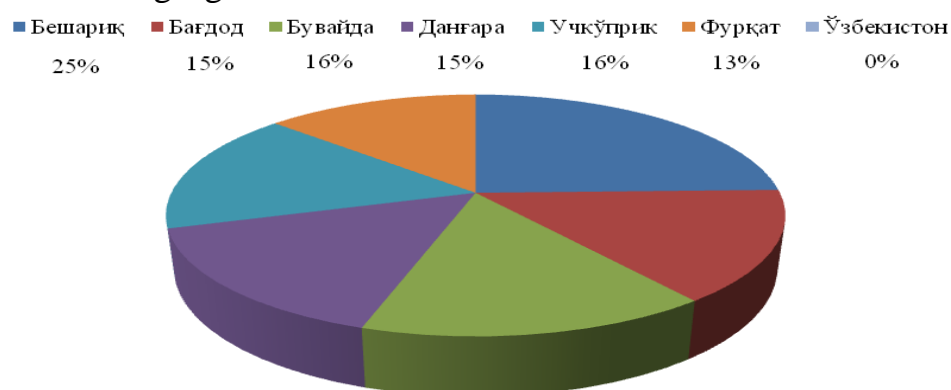
Table - 2

**Population growth in the Kokand oasis index (1989–2019)**

Districts name	Population, thousand people			
	1989 year	1999 year	2009 year	2019 year
Besharik	140.9	181.2	208.1	224.6
Baghdad	108.0	174.8	193.3	210.4
Buvayda	111.2	178.9	206.4	222.2
Dangara	87.3	144.1	158.0	170.1
Three bridges	113.9	183.3	206.6	224.4
Furqat	-	97.1	107.6	115.8
Uzbekistan	142.6	194.5	217.3	234.3

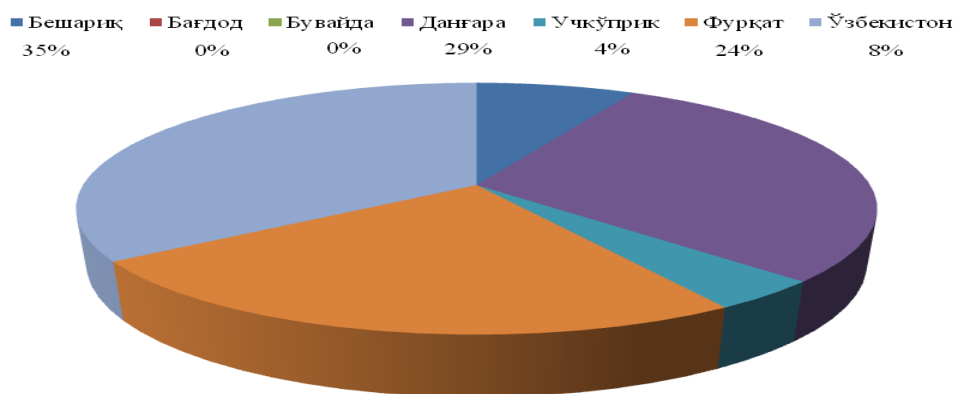
*The table was compiled by the author using data from the Fergana regional statistics office.*

It is known that the Fergana Valley is one of the most densely populated regions in the country. As can be seen from the table, the Kokand oasis differs from other oases in the valley in that it has the fastest population growth. Lithological-geomorphological, mechanical composition of soil, water and air regime, physical, agrochemical and chemical-biological properties of arable lands due to the development of agriculture on irrigated lands, pastures and meadows, as well as the use of arable lands for various purposes. zgartaradi [6;85-86p.]. Also, in the middle and lower sloping micro-zones of the Kokand oasis, where mineralized groundwater lies close to the surface, moderately and strongly decomposed irrigated meadows, swamp-meadows and swampy soils and saline soils are well developed. [7;54-68p.]. The salinization and swamping process is very active in these soils, which can be seen in the following figures.

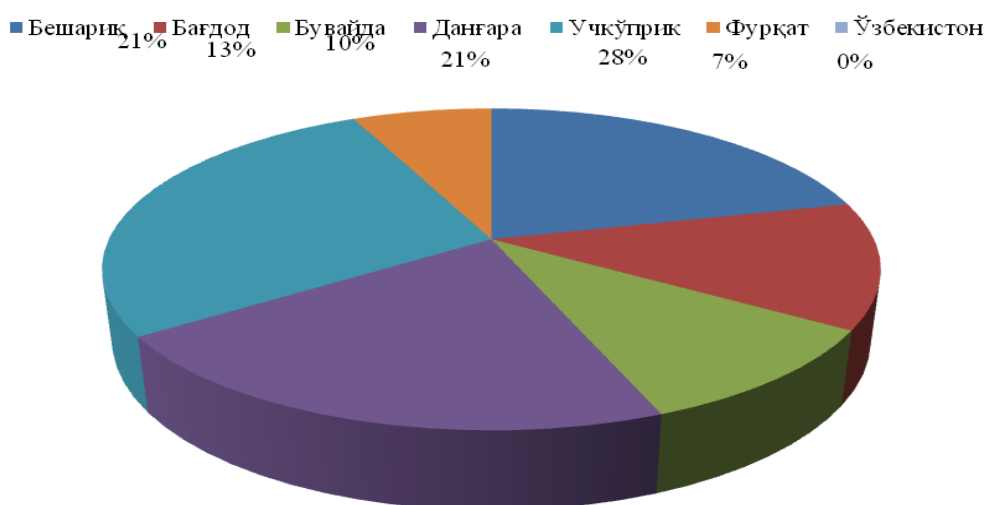


**Figure 1. Saline and weakly saline soils**





**Figure 2. Average salinity of soils**



**Figure 3. Strongly saline soils**

Development of a set of measures to increase soil fertility by users of all agricultural lands of the Kokand oasis, especially the widespread use of organic fertilizers, as well as the detection, assessment, monitoring of soil degradation and all the negative effects on soils. it is expedient to carry out systematic work on elimination [6;32-36p.].

**Conclusion.** The results of field research in the Kokand oasis showed that the development of lands without taking into account the specific features of arid areas, the washing of soil layers over large areas, various manifestations of erosion, rising groundwater levels, sho caused processes such as rtob and salinization. Therefore, the development of arid lands, land and water use should be based on the latest achievements of science and technology, as well as the positive impact of human activities. To do this, it is important to implement the following recommendations:

— As the properties, properties and composition of the soils of the Kokand oasis formed as a result of irrigation are the result of human activities, it is necessary to study and analyze them in detail;

— Adequate implementation of comprehensive measures for the widespread use of organic fertilizers by agricultural land users is needed;

— The mechanical composition of the soils of the Kokand oasis is prone to wind erosion due to the presence of sand and dust particles, and in irrigated agriculture it is important to develop and implement measures to combat and protect against deflation;

— During the irrigation process, the groundwater level in the soils of the Kokand oasis rises and this process makes the soils saline to varying degrees. This requires proper design of vertical and horizontal drainage systems, rehabilitation of existing irrigation and land reclamation systems.

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## **DETERMINING THE EFFICIENCY OF THE USE OF UNDERGROUND WATER IN IRRIGATION OF TARIK**

*Annotation: According to the article, heavy sandy soils of Bukhara region were irrigated 3 times from groundwater in the experimental field planted with millet under conditions of groundwater level 2.0–3.0 m. Seasonal irrigation norms - 2850–2980 m<sup>3</sup> / ha. formed. Irrigation was determined when the marginal field moisture capacity (ChDNS) in terms of soil moisture was 70-70-65%. The results of experiments conducted to study the effect of irrigation using groundwater on the growth, development and yield of millet are presented.*

*Keywords: millet; water shortage; irrigation rate; seasonal irrigation rate; groundwater; mineralization; vegetation period.*

Rational use of water resources is one of the most important issues in the development of the world economy. In particular, during the years of water scarcity, special attention is paid to increasing the water supply of irrigated lands. In this regard, groundwater is widely used for irrigation in arid and semi-arid countries. About 1/3 of all land is irrigated by groundwater, including the total irrigated area in the United States

46%, in Iran 59%, and in Libya, groundwater irrigation is used entirely. In Russia, only 0.43 km<sup>3</sup> / year is used for irrigation and pasture irrigation, which is only 4% of the total groundwater abstraction. In this regard, special attention is paid to research work on the protection of water resources around the world [1].

At the conferences on water problems in the world, it is important to improve the methods of increasing the water supply of irrigated lands, the implementation of comprehensive measures for the protection of water bodies, as well as the rational use of land and water resources. In this regard, it is important to develop new

approaches to increase water supply in times of water scarcity in order to maintain productivity. One of the important tasks in the study is the development of groundwater irrigation technology to increase water supply in the years of water shortage in Vobkent district of Bukhara region.

At present, measures are being taken in the country to rationally use water resources and increase the water supply of irrigated lands. The Action Strategy of the Republic of Uzbekistan for 2017-2021 states “Further improvement of reclamation of irrigated lands, development of reclamation and irrigation networks, introduction of intensive methods of agricultural production, first of all, introduction of modern water and resource-saving agro-technologies, use of high-efficiency agricultural machinery” [1] function is defined. In this regard, one of the important tasks is to increase water supply using groundwater.

In order to eliminate these problems, the President of the Republic of Uzbekistan PF-3932 of October 29, 2007 "On measures to radically improve the system of land reclamation", PF-5330 of February 12, 2018 "On measures to radically improve the system of public administration of agriculture and water management" "On measures to regulate the rational use and accounting of groundwater resources in 2017-2021", No. PQ-2954 of May 4, 2017, "On measures to regulate the rational use of groundwater resources in 2017-2021", PF-5418 of April 17, 2018 and on measures to radically improve the system of public administration of water resources ”[2].

In Uzbekistan, millet is grown as a primary and secondary crop. Cultivation of millet as a secondary crop allows to grow grain twice a year. In particular, the low planting rate, rapid ripening, the presence of short-day plants further increase its value. In the dry, hot weather of Uzbekistan, replanted millet gives high yields. It is the most drought and heat tolerant of replanted cereals [5].

One of the most pressing problems in grain growing in the country is the creation of drought-resistant, fast-ripening millet varieties capable of yielding two crops a year and improving the technology of their cultivation as a secondary crop on irrigated lands.

The purpose of the study.

It consists of determining the laws of formation of the quantity and quality of groundwater in Bukhara region during the years of water shortage and the development of comprehensive measures for its use in the national economy.



**Figure 1. View of the experimental field**

The objectives of the study are as follows:

- generalization of long-term changes in the balance of water resources, to determine the efficiency of water resources in the current conditions on the basis of research;
- establishment of the existing water-salt balance in the areas of groundwater located at different depths;
- assessment of the possibility of transferring vegetative irrigation to full supply of withdrawal water and conducting field experiments on the technology of their use;
- development of reclamation measures to prevent negative consequences of the use of drainage water in irrigation;
- determination of water consumption for filtration along the length of the field and their distribution.

Field experiments on the basis of the project DITDP 2.1.11.2 "Use of collector-ditch and groundwater for irrigation in the areas of their formation (2013-2015) in order to increase the water supply of irrigated lands" [3] Groundwater level in Vobkent district of Bukhara region 2.0 Science-based irrigation procedures for irrigation of millet from groundwater at a depth of 22 m as a secondary crop in alluvial, mechanically heavy sandy soils with a mineralization of 3.0 m, mineralization 1.0–3.0 g / l, its growth and development and the effect on productivity was studied [4,6].

The total irrigation rate for repeat crop - millet for the experimental plot was calculated according to the formula SN Ryjov:

$$m = (W_{\text{HB}} - W_{\phi}) \cdot 100 \cdot \gamma \cdot h + k, \text{ m}^3/\text{га}$$

here:  $W_{\text{HB}}$  – minimum moisture capacity of soil, % by mass;

$W_{\phi}$  – actual moisture of the soil before irrigation, % of mass

1. – bulk density of soil, g / cm<sup>3</sup>;

h – calculated layer depth, m;

k – water consumption of evaporation during irrigation, relative to the moisture deficit in the calculated layer (10%) [3].

Irrigation and general irrigation norms given from the vertical ditch well and irrigated with ditch water are given in Table 1.

Table 1

**Irrigation and general irrigation norms in the experimental and control field**

Options	ChDNS			General irrigation standards
	70 %	70 %	65 %	
Arik water	900	1000	950	2850
Retractable water	950	1050	980	2980

In the experimental field planted with millet, at the beginning of the vegetation, the bulk density of the soil was 1.33–1.35 g / cm<sup>3</sup> in the 0–30 cm layer, 1.41–1.43 g / cm<sup>3</sup> in the 30–50 cm layer below the plowed layer, and 0–100. cm layer was 1.39–1.40 g / cm<sup>3</sup>. Towards the end of the growing season, in the irrigated variant, the bulk density of the soil is 1.34–1.35 g / cm<sup>3</sup> in the 0–30 cm layer, 1.42–1.43 g / cm<sup>3</sup> in the 30–50 cm layer, and 0. - 1.40–1.41 g / cm<sup>3</sup> in the 100 cm layer. An increase in the bulk density of the soil by 0.01 g / cm<sup>3</sup> was found to be the lowest compared to other options.

Based on the study of the order of irrigation of watermelon crops in heavy sandy soils by groundwater according to the ancient mechanical composition of Bukhara region, the following conclusions were drawn:

Replanting crops are common in southern regions with high air temperatures, through which it is possible not only to strengthen the fodder base, but also to further accelerate grain production;

It was based on the introduction of water-saving methods and technologies to overcome water shortages and the use of technology for irrigation from vertical ditches. In Bukhara region, 967 vertical ditches are operated, the mineralization of extracted water does not exceed 1.5 g/l in 40%, and the rest is 2.0-2.5 g/l, which allows them to be irrigated both naturally and by mixing. allows you to use;

According to the mechanical composition of the farm "Muhammad Ahad" in Vobkent district, field experiments on the transfer of irrigation of agricultural crops at the expense of completely withdrawn water in heavy sandy soils showed that 30 hectares of land can be irrigated simultaneously with water from one well. The technological implementation of this method is very simple, as the water from the well is supplied directly to the irrigated fields through internal irrigation networks, thus allowing this technology to be used on other farms as well;

In the use of strongly mineralized waters, it is necessary to calculate additional irrigation norms to eliminate soil salinization, soil fertility and crop yields, especially in the autumn-winter period. Forecast calculations based on the improvement of the water balance model show that increasing the irrigation rate by 1.15-1.25 times compared to the use of fresh water from groundwater with a mineralization of 1.5-2.5 g / l will stabilize the reclamation situation. .

Millet is a highly promising crop that can yield 20-40 tons of green mass per hectare and can easily replace annual grasses;

The optimal sowing period of millet is much longer than that of other crops, but too early as well as late sowing leads to a decrease in field germination of seeds. Therefore, when planted as a secondary crop, it is necessary to determine the period during which it is possible to obtain an optimal high yield.

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## **THEMATIC CONTROL OF STUDENTS' KNOWLEDGE AS AN EFFECTIVE PROCESS OF TEACHING CHEMISTRY**

*Abstract: The relevance of this work lies in increasing the effectiveness of the educational process and obtaining objective information by the teacher about the course of educational and cognitive activities of students. The teacher receives this information in the process of monitoring the educational and cognitive activity of students.*

*Key words: valence, chemical element, electrons, formulas, affects, hydrogen bond.*

The properties of chemical elements and the simple and complex substances formed by them are periodically dependent on the charge of the nucleus of the atoms of these elements.

So the theory of the structure of atoms made it possible to clarify the formulation of the periodic law and reveal its essence more deeply.

Determination of the patterns of distribution of electrons by energy levels made it possible to clarify the essence of the phenomenon of periodicity: with an increase in the charge of the nucleus of atoms, similar properties of elements are periodically repeated, the atoms of which have the same number of valence electrons.

Valence refers to an important concept in chemistry. The word "Valencia" (from the Latin "Valentia") originated in the middle of the 19th century. During the completion of the chemical-analytical stage of the development of chemistry. At present, the number of covalent bonds by which a given atom is connected to other atoms usually determines the valence of chemical elements.

Valence is the ability of an atom of a chemical element to form a certain number of chemical bonds.

Valence is the ability of atoms of one element to attach a certain number of atoms of another element.

Valence and valence capabilities are important characteristics of a chemical element. They are determined by the structure of atoms and change periodically with an increase in the charges of the nuclei.

What do you think the concept of valence means? (students' opinion). Valence means opportunity - a means, a condition necessary for the implementation of something; possible - one that can happen, acceptable.

The valence capabilities of atoms are the permissible valences of an element, the entire range of their values in various compounds.



Since the valence of an atom depends on the number of unpaired electrons, we will consider the structures of atoms in excited states, taking into account the valence capabilities. Let us write down the electron diffraction formulas for the distribution of electrons over orbitals in a carbon atom.

The periodic change in the valence of elements and, consequently, their properties is due to the fact that with an increase in the charges of atomic nuclei, elements with a similar electronic structure, for example, lithium Li, sodium Na and potassium K, are periodically repeated; beryllium Be, magnesium Mg, etc.

In a periodic sequence, the atomic radii of these elements increase. So, for example, in the 2nd period from the element of lithium Li to the element of fluorine F there is a gradual decrease in atomic radii, and from the element fluorine F to the element sodium Na - a sharp increase in atomic radii. This phenomenon is explained as follows.

When passing from lithium Li to fluorine F, the charges of the atomic nuclei of these elements gradually increase. In this regard, in the series, the force of attraction of the outer electrons to the nucleus gradually increases and the sizes of atoms decrease. And with the transition from the fluorine element F to the sodium element Na, the subsequent electron is placed on the third energy level farther from the nucleus. Therefore, the size of the atoms of the sodium element Na increases greatly.

The size of atoms, in turn, affects their properties. So, for example, the atoms of the elements lithium Li, sodium Na, potassium K have the largest dimensions in comparison with the atoms of other elements in the same periods. In this regard, the outer electrons in the atoms of alkali metals are farther from the nucleus, are less attracted to it and can be easily removed. This explains why alkali metals are electron donors, i.e. strong reducing agents. With the transition in periods from typical metallic elements to halogens, the sizes of atoms decrease, the force of attraction of outer electrons to the nucleus increases, which leads to a decrease in reducing and an increase in oxidizing properties.

In the periods of the periodic system, from left to right, the numerical values of electro negativities increase, and in groups from top to bottom, they decrease. Since the type of bond depends on the difference in the values of the electro negativities of the connecting atoms of the elements, it is impossible to draw a sharp boundary between the individual types of chemical bonds. Depending on which of the limiting cases, the chemical bond is closer in nature, it is referred to as ionic or covalent polar.

**Ionic bond.** An ionic bond is formed by the interaction of atoms, which differ greatly in electronegativity. For example, typical metals - lithium Li, sodium Na, potassium K, calcium Ca, barium Ba - form an ionic bond with typical non-metals, mainly halogens.

It should be borne in mind that when even alkali metals interact with such electronegative elements as oxygen and sulfur, an ionic bond in the full sense of this concept arises. So, for example, in compounds Li<sub>2</sub>O, Na<sub>2</sub>S, there is not an ionic, but a covalent strongly polar bond.

In addition to the halides of the most active metals, the ionic bond is characteristic of alkalis and salts, which include oxygen atoms and active metals. For example, sodium hydroxide Na OH and sodium sulfate Na<sub>2</sub> SO<sub>4</sub> only bonds between sodium and oxygen atoms are ionic. The rest of the bonds are covalent polar. In a dilute aqueous solution, alkali and salts dissociate as follows:

Strong electrostatic attraction forces exist between the ions. Therefore, ionic compounds have relatively high melting points.

Covalent non-polar bond. When atoms with the same electro negativities combine, molecules with a covalent non-polar bond are formed. Recall that such a bond, for example, exists in molecules of gaseous substances consisting of the same atoms: H<sub>2</sub>, F<sub>2</sub>, Cl<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>. In these cases, chemical bonds are formed due to common electron pairs, i.e. when the corresponding electron clouds overlap, due to the electron-nuclear interaction, which occurs when atoms approach each other.

Hydrogen bond. The bond between the hydrogen atoms of one molecule and the strongly negative elements (O, N, F) of another molecule is called a hydrogen bond.

The question may arise: why exactly hydrogen is able to form such specific chemical bonds? This is due to the fact that the hydrogen atom has a very small radius and when a single electron is displaced or given up, hydrogen acquires a relatively strong positive charge, which acts on electronegative elements in the molecules of substances. Let's look at some examples. We are used to depicting the composition of water by the formula H<sub>2</sub>O, but it would be more correct to denote the composition of water by the formula (H<sub>2</sub>O)<sub>n</sub>, where n is 2, 3, 4, etc., since individual water molecules are connected by hydrogen bonds, which are schematically depicted by dots:

The hydrogen bond is much weaker than the ionic or covalent bond, but stronger than the intermolecular interaction.

The formation of hydrogen bonds explains why the volume of water, in contrast to the volume of other substances, increases with decreasing temperature.

When studying organic chemistry, the following question arose: why are the boiling points of alcohols much higher than those of the corresponding hydrocarbons? It turns out that a chemical interaction also occurs between the molecules of alcohols with the formation of hydrogen bonds:

You already know that D.I. Mendeleev studied the process of dissolving alcohol in water. He came to the conclusion that during dissolution, chemical processes also occur simultaneously, for example, the interaction of alcohol molecules with water molecules:

The hydrogen bond is characteristic of many organic compounds (phenols, aldehydes, carboxylic acids, etc.). Due to the hydrogen bond, the secondary structure of proteins, the double helix of DNA, is formed.

While studying inorganic chemistry, you acquired the first understanding of solutions and the process of dissolving substances in water. It was also mentioned there that when substances are mixed with water, both homogeneous systems (a characteristic property of solutions) and heterogeneous ones are formed, i.e.

suspensions and emulsions. Many disperse systems are known. They differ depending on what kind of particles (solid, liquid, gaseous) and in what medium (liquid, gaseous) they are distributed. The teacher must be able to make the learning process not only effective, but also interesting for children. Systematic control of students' knowledge and skills is one of the main conditions for improving the quality of education. Skillful mastery of various forms of control of knowledge and skills by the teacher helps to increase the interest of students in learning, prevents lagging, ensures the active work of each student. Control for students should be educational, and therefore, it will be both developing and educating.

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## **TOPICAL ISSUES OF THE METHODOLOGY OF TEACHING INFORMATICS**

*Abstract: The article discusses topical issues of teaching methods of informatics.*

*Key words: informatics, programming, methodology, Internet, programs.*

The global processes of the formation of an automated information society create opportunities for human development and effective solutions to many economic and social problems. However, only those members of society who will possess the necessary knowledge and skills of orientation in such an information space will be able to fully use these opportunities. Therefore, one of the central tasks of secondary education is to provide the younger generation with an opportunity to comprehensively improve information culture and its worldview level. An important role in solving this problem belongs to the school course of computer science. Therefore, it is relevant to research and analyze the priority problems of the course of informatics and its future prospects.

Before talking about the problems and prospects of teaching computer science in secondary school, it is necessary to discuss the main problem - this is the awareness of schoolchildren of the importance of computer science as an academic subject, as well as a clear description of the industry and its goals. The Internet, social networks, blogs, electronic libraries, e-books and digital audio-video photos, mobile phones, instant messaging, IP - telephony, handheld computers and communicators create an idea for the modern schoolchild that about 20 years ago we were in an absolute information vacuum, in which, apart from barriers (social, geographic, political), nothing else existed.

Informatics is a general educational subject and it is necessary to approach it from the systemic positions, which are dictated by the specifics and tasks of secondary general education. The difficulty of its perception lies in the fact that the objectives of the course relate to other subject areas of knowledge - physics, mathematics, astronomy, etc., due to which the study of computer science has an interdisciplinary nature. In this regard, another problem arises, which manifests itself in the absence of a sequence of studying educational blocks that is optimized in terms of content on the basis of intra-subject connections. This leads to irrational use of limited time resources.

In addition, the subject of study of computer science is a whole civilization - informational. Nowadays, children not only need to know about the existence of a computer, not just have an idea about it, but be able to work on it, be able to use this technique . Informatics is not a science about objects or processes, but about methods, means and technologies of their automation, creation and functioning. An essential point that affects the fundamental nature of the science of informatics is that the object of its study is not goals, but patterns. This subject provides not only its in-depth study, but also the practical application of knowledge, skills and abilities to modernize their own learning, as well as optimize the study load.

One of the main problems of education for children is also a sharp change in the leading activity from play to educational (especially for younger students). The formation of educational activity very often does not coincide with the child's play needs, and is very painfully perceived by him. At this stage, it is necessary to organize a smooth transition from a predominantly playful activity to an educational one, using, if possible, playful didactic computer technologies.

The modern view of information activity as a type of creative activity, which requires, in addition to developed logical and systemic thinking, the ability to think resourcefully and productively, orients the computer science teacher to the development of fantasy and creative imagination of students.

In computer science lessons, a systemic perception of the world is formed, an understanding of the unified information connections of various natural and social phenomena, systems thinking develops, the level of which is largely determined by the ability to quickly process information and make informed decisions based on it, which requires additional opportunities from schoolchildren, and from teachers - application of all new methods and teaching aids.

The content of the school course in computer science, to a certain extent, must meet the modern level of development of science and the requirements of society. The development of computer technology, primarily personal computers and their software, is happening so rapidly, and its expansion into all spheres of human activity is so all-encompassing that there is a need for the training and retraining of specialists who can qualitatively teach computer science to children using new information technologies. as well as introduce children to the complex world of modern computer science.

The emergence of new computer technologies also have a significant impact on the expansion of the number of educational topics within the framework of teaching computer science. Computer technologies are developing so rapidly that, no matter how hard education tries to keep up with these technologies, it will be at least one step behind them.

However, in this regard, the problem arises of the ambiguity of the boundaries of school and university computer science courses, which have common themes - for example, teaching the technology of working with a package of office documents. The use of these technologies is often central to the curriculum of not only universities, but also educational schools.

In the context of rapid technological and social changes, which are a sign of the 21st century, the focus of the education system on the assimilation of the knowledge system by schoolchildren, which was justified for several past decades, no longer corresponds to the modern social order, which includes the presence of a system of key competencies among specialists capable of successful self-realization. learning throughout life and in the process of supporting the development of society.

There are a number of other problems, such as insufficient quantitative and qualitative characteristics of the software, which is intended to constantly support the learning of students of the corresponding age group; insufficient number of hours to organize a full-fledged study of the subject, compliance with sanitary and hygienic standards, etc.

The solution of these problems and unsolved tasks is impossible without improving the teaching methods of informatics based on the principles of continuity and consistency in learning.

Informatics increasingly influences the processes of further development of society. It becomes the dominant factor that determines the general potential of society and the prospects for its development. Informatization of society is the most important component of modern civilization, which is characterized by a high level of information and communication technologies and developed information structures. Informatics is being transformed from an essentially technical science into a fundamental science about information and information processes in nature and society.

The general educational and practical importance of the school computer science course will continue to grow steadily and rapidly. The course is acquiring great humanitarian potential. He already plays a significant role in preparing the younger generation for fruitful activities in the information society.

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**ОЗИҚ-ОВҚАТ МАҲСУЛОТЛАРИ БИЛАН БАРҚАРОР  
ТАЪМИНЛАШДА МЕВА-САБЗАВОТЧИЛИК ТИЗИМИНИ  
РИВОЖЛАНТИРИШНИНГ ИЛМИЙ-НАЗАРИЙ АСОСЛАРИ**

*Аннотация: Мақолада республикада мева-сабзавотчилик соҳасини ривожлантиришнинг ҳозирги ҳолати назарий ва амалий жиҳатдан таҳлил қилинган, Ўзбекистонда мева-сабзавот маҳсулотларини етиштириш афзалликлари ва имкониятлари илмий жиҳатдан ёритилган.*

*Kalit so'zlar: qishloq xo'jaligi, meva-sabzavot, qishloq xo'jaligi sektori, dehqonchilik, tayyor mahsulotlar, jahon standarti.*

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**SCIENTIFIC AND THEORETICAL FUNDAMENTALS OF  
DEVELOPMENT OF THE FRUIT AND VEGETABLE SYSTEM IN  
SUSTAINABLE SUPPLY OF FOOD PRODUCTS**

*Abstract: The article presents theoretical and practical analysis of the current state of development of the fruit and vegetable sector in our country, the advantages and opportunities of fruit and vegetable products in Uzbekistan are disclosed in the scientific aspect.*

*Keywords: agriculture, fruits and vegetables, agricultural sector, agriculture, finished products, world standard.*

Ҳозирги қишлоқ хўжалигида ўтказилаётган изчил иқтисодий ислохотлар аҳолини сифатли озиқ-овқат маҳсулотларига талабни тўлароқ қондириши ва бу соҳадаги таъминотни тубдан яхшилаб жаҳон андозаларига тенглаштириш энг долзарб масалалардан бири ҳисобланади. Ўзбекистоннинг аграр соҳасида амалга оширилаётган иқтисодий ислохотларнинг ҳозирги босқичида фермер хўжаликларининг барқарор ривожланишини таъминлашда рақобат муҳитини шакллантириш орқали уларни рақобатбардошлигини ошириш, маҳсулот етиштиришда талаб ва таклиф мувозанатига эришиш, ички ва ташқи бозорда самарали фаолият юритувчи механизмларни кенг кўламда жорий қилиниши долзарб вазифалардан ҳисобланади.

Шу боисдан, республикада мева-сабзавотчилик соҳасидаги мавжуд муаммоларни ҳар томонлама ўрганиш ва уни янада ривожлантириш

бўйича тавсиялар тайёрлаш долзарб масалалардан бири ҳисобланади. Мева-сабзавотчилик қуйи тармоғининг иқтисодий самарадорлигини ифодаловчи муҳим кўрсаткичлардан бири экин турлари бўйича ҳосилдорлик даражасидир. Аграр тармоқда ишлаб чиқаришни модернизациялаш, техник-технологик янгилаш, суғориладиган ерларнинг мелиоратив ҳолатини яхшилаш, уруғчилик-селекция ишларини сифат жиҳатдан янги босқичга кўтарилиши ва инновацион ғояларни жорий этиш борасида олиб борилган тизимли чора-тадбирлар натижаси ўлароқ ўтган давр давомида сабзавотлар, картошка, полиз экинлари ҳамда мева ва узумлар ҳосилдорлигида сезиларли ўсиш юз берди.

Маълумотларга кўра 2016 йилда 2012 йилга нисбатан картошка ҳосилдорлиги 195,7 центнердан 228,1 центнерга ёки 16,6 фоизга ошган, сабзавот ҳосилдорлиги 263,7 центнердан 291,7 центнерга ёки 10,6 фоизга ошган, ва полиз экинлари ҳосилдорлиги 187,3 центнердан 212,4 центнерга ёки 13,4 фоизга ошган. Қишлоқ хўжалиги мева-сабзавот маҳсулотлари ҳосилдорлиги ошган. Мева-сабзавотдан юқори ҳосил олингани, соҳада ишлаб чиқариш ҳажми кескин кўпайгани қишлоқ хўжалиги мева-сабзавот етиштириш тармоғидаги туб сифат ўзгаришларнинг самарасидир

Мева-сабзавотчилик Ўзбекистон қишлоқ хўжалигининг йирик тармоғи сифатида агросаноат мажмуасининг қуйи тармоғини акс эттиради. Бу соҳа ўз ичига мева-сабзавот етиштирувчи хўжаликлар, илмий тадқиқот институтлари, уларнинг филиаллари, уруғчилик тажриба станциялари, мева-сабзавотларни қайта ишлаш корхоналари ва уларни сотиш билан шуғулланувчи бир қатор савдо ва экспорт компанияларини ўз ичига қамраб олади. Бозор иқтисодиётига ўтиш ва иқтисодий ислохотларни чуқурлаштириш шароитида мева-сабзавотчилик тармоғида ишлаб чиқариш самарадорлигини юксалтириш бевосита ушбу тармоқ тараққиётини тизимли тарзда комплекс амалга ошириш услубиёт ва усулларини такомиллаштириш билан бевосита боғлиқдир. Республикамиз мустақилликка эришгандан сўнгги даврда мева-сабзавотчилик тармоғида бозор муносабатларини жорий этиш борасида босқичма-босқич иқтисодий ислохотлар амалга оширилди. Хусусан, сўнгги йиллар давомида мева-сабзавотчилик тармоғида юз бераётган ўзгаришлар асосан қуйидагилардан иборат ҳисобланади:

- мева-сабзавотчиликни ривожлантиришни аграр иқтисодиётни модернизациялашнинг устувор йўналишлардан бири сифатида тан олинishi;
- мева-сабзавотчиликни ривожлантиришга ажратилаётган ерларнинг кенгайиб бораётганлиги;
- мева-сабзавот маҳсулотларини етиштиришда илғор технологияларни жорий этиш кўламининг ортиб бораётгани;
- мева-сабзавот маҳсулотларини сақлаш ва қайта ишлаш борасида йирик давлат дастурларининг амалга оширилаётгани ва ҳоказо.

Бугунги кунда мева-сабзавот маҳсулотлари етиштиришга республикамизда давлат тамонидан алоҳида эътибор берилиб, мева-



сабзавотчилик тармоғидаги иқтисодий муносабатларга давлатнинг ўрни сезилиб турмоқда. Бозор муносабатлари шаклланиши шароитида мева-сабзавотчилик тармоғидаги иқтисодий муносабатларнинг маркази ва унинг харакатлантирувчи кучи асосини деҳқон ва фермер хўжаликлари эгаллайди. Демак, бундан хулоса қиладиган бўлсак, тармоқдаги иқтисодий муносабатлар шаклланишининг дастлабки ва энг асосий бўғини бу мева-сабзавот маҳсулотлари етиштириш бўғини ҳисобланади. Ушбу хулосага таянган ҳолда назаримизда, мева-сабзавотчилик соҳасидаги иқтисодий муносабатлар тизимини куйидаги йўналишлар ва хўжалик, иқтисодий алоқалари доирасида гуруҳларга ажратиш мумкин

1. Мева-сабзавотчилик хўжаликларида маҳсулот етиштириш, уларни сотиш, ресурслар таъминоти, хизматлар бозоридаги тизимлар ўртасидаги иқтисодий муносабатлар тизими. Бу ерда асосан мева-сабзавотчилик хўжаликлари билан, давлат бошқарув идоралари ўртасидаги мева-сабзавот маҳсулотлари етиштириш маҳсулотни сотиш, нав яратиш ва уларни оптимал ҳолатларда жойлаштириш масалалари юзасидан пайдо бўладиган иқтисодий, ташкилий ва ҳуқуқий муносабатлар тизими асос қилиб олинади.

2. Мева-сабзавотчилик хўжаликларининг маҳсулот ишлаб чиқариш борасидаги ички иқтисодий муносабатларни тизими. Бунга мева-сабзавотчилик хўжаликлари доирасидаги маҳсулот етиштириш, уни сотиш, ресурслар ва хизматларни харид қилиш юзасидан фаолиятни бошқариш ва уларни режалаштиришнинг ташкилий-иқтисодий тизими киради. Санаб ўтилган иқтисодий муносабатлар тизимлари ўз ўрнидаги янада кичикроқ ва мураккаброқ бўлган иқтисодий муносабатлар тизимидан ташкил топган бўлиб, унинг асосини мева-сабзавот етиштирувчи хўжаликларнинг моддий манфаатдорлиги тизими ташкил этиш лозим. Бундан хулоса қиладиган бўлсак, мева-сабзавотчилик тармоғининг бозор шароитидаги барқарор ривожланиши, мева-сабзавот етиштирувчи деҳқоннинг манфаатини тўлиқ ҳисобга олиш бевосита боғлиқдир. Чунки барча шароитлар тенглиги шароитида, етиштирилган мева-сабзавот миқдори, сифат кўрсаткичлари, таннархи, нарх шаклланиши омиллари (истеъмол хусусиятлари), натижада жамият учун келтирилган фойда миқдори айнан дастлабки бўғин ҳисобланган маҳсулот етиштириш жараёнида шаклланади. Хомашёнинг сифатли қайта ишланиши оралиқ маҳсулотлар ва шунингдек тайёр маҳсулот сифатида ҳам аксини топади. Янги технологиялар жорий этилиши ҳисобига тайёр маҳсулотларни сифатини, истеъмол хусусиятлари ўзгартириш мумкин, аммо, биогенетик жараёнлар маҳсули бўлган, етиштирилган мева-сабзавот сифатини яхшилаш мумкин эмас.

Республикамизда сўнгги йилларда етиштирилаётган мева-сабзавот маҳсулотларининг сифатини оширишда, жаҳон бозори истеъмолчиларнинг талабларига мослашиш борасида бир қатор ишлар амалга оширилмоқда. Мева-сабзавотчилик тармоғидаги иқтисодий муносабатларнинг қанчалик бозор иқтисодиёти талабларига мос ҳолда ташкил этилиши даражаси, мева-сабзавотчилик соҳаси иқтисодий

ривожланиши ва маҳсулот етиштириш иқтисодий самарадорлиги даражасини белгилаб беради.

Бозор шароитида мева-сабзавот маҳсулотлари ишлаб чиқариш ҳажми ва сифати ортиши энг аввало етиштирилаётган маҳсулотларга бозор талабининг мавжудлиги билан белгиланади. Шунингдек, маҳсулотнинг сифати, етиштиришга сарф қилинган ресурслар миқдори бозоридаги талаб ҳажми ўзгаришига туртки беради. Шу боисдан ҳам мева-сабзавотчилик хўжаликларида мева-сабзавот навларининг тезпишарлиги, ҳосилдорлиги, истеъмол сифати юқори бўлган ҳар бир ҳудуднинг табиий-иқлим шароитларига мос келадиган ички ва ташқи бозор талабига жавоб бера оладиган навларини илмий асосланган жойлаштириш зарурати тобора ортиб бормоқда. Қишлоқ хўжалиги соҳаси иқтисодиётини эркинлаштириш ва модернизациялаш жараёнида тармоқларни ривожлантириш мутаносиблигига эришиш, мамлакат ички бозорида қишлоқ хўжалиги маҳсулотлари бозорини мустаҳкам ривожлантириш, қишлоқ хўжаликлари маҳсулотларининг экспортини кучайтириш, пировард натижада мамлакат иқтисодиётининг барқарор ўсишини таъминлайди. Қишлоқ хўжалиги соҳасида иқтисодий ислохотлар давр талабларига мос равишда амалга оширилиб, унинг асосий мақсади - мамлакат ички бозори (аҳолининг истеъмол озиқ-овқат маҳсулотлари, sanoat корхоналари учун эса хомашё маҳсулотлари) ва жаҳон бозори талаблари (хомашё ва тайёр маҳсулот сифатида) асосида етиштирилишига қаратилмоқда. Бу тадбирлар мамлакат раҳбарияти ва ҳукумати томонидан қабул қилинаётган тадбирлар орқали иқтисодий қўллаб-қувватланиб, тегишли дастурлар ва чора-тадбирлар аниқ мақсадли ва тизимли бўлишига эришилмоқда.

Аммо амалга ошириладиган тадбирларга қарамай, республикамизда қишлоқ хўжалиги хомашёсини қайта ишлаш даражаси аҳолининг ва иқтисодиёт тармоқларининг тайёр озиқ-овқат товарларига бўлган талабига, мавжуд имкониятлар ва ресурсларга мос келмаётганлиги, кўплаб қайта ишлаш корхоналарининг ишлаб турган қувватлари маънавий ва жисмоний жиҳатдан эскириб кетганлиги, уларни яқин ва узоқ йилларга мўлжалланган янгилаш ҳамда модернизациялаш тадбирларини ишлаб чиқилиши талаб этилмоқда. Бу ҳолатлар пировард натижада ишлаб чиқарилаётган озиқ-овқат товарлари турларининг чекланиб қолишига, маҳсулот сифати эса ошиб бораётган талабларга жавоб бермаслигига сабаб бўлмоқда.

Таҳлиллар кўрсатишича, аграр соҳани рақобатбардошлигини ошириш шароитида мева-сабзавотчилик ва узумчилик соҳаси аҳоли бандлигини таъминлашда самарали тизим сифатида агросаноат мажмуаси (АСМ) тармоқлари ўртасида етакчи ўрин тутади. Шунингдек, ушбу соҳа қишлоқ хўжалигининг экологик жиҳатдан, атроф-муҳит тозаллигини таъминлаш ва келгуси авлодларга соф ҳолда етказишда ҳам самарали соҳа ҳисобланади. Шу билан бирга, иқтисодиётни модернизациялаш шароитида мева- сабзавот ва узум маҳсулотларини етиштириш, истеъмол ҳажми ва турларини кенгайтиришнинг аҳамияти ортиб бормоқда. Аммо мева-

сабзавот ва узум маҳсулотлари бозорида хилма-хил умумий иқтисодий манфаатлар ва алоқаларнинг аксарияти мақбул тартибга солинмаган. Шу боис, юқорида қайд этилган омиллар мева-сабзавотчилик ва узумчилик қўйи мажмуасида инновацион ва замонавий технологияларни жорий қилиш, диверсификациялашни кучайтиришни тақозо этади. Ушбу жиҳат эса республика иқтисодиёти ривожланишининг устувор йўналиши ҳисобланиб, илмий-амалий аҳамиятга эгадир.

Узбекистонда етиштирилаётган мева-сабзавотларнинг рақобатбардошлик жиҳатдан устунлиги уларнинг ўзига хос таъми ва экологик тозаллиги билан боғлиқ. Масалан, узумнинг маҳаллий сортлари таркибида шакар моддаси миқдори 30 %дан ошади, помидор таркибида қуруқ моддалар улуши 5,5%дан юқори бўлиб, бу кўрсаткичлар Европа мамлакатларидаги ушбу маҳсулотларни етиштирувчи корхоналар кўрсаткичлардан анча юқори.

Узбекистон мева-сабзавотчилик мажмуаси рақобат афзалликлариغا яна қуйидагилар киради:

- ҳўл мева-сабзавотлар ва полиз маҳсулотлари, шунингдек, қайта ишланган мева-сабзавот маҳсулотлари ишлаб чиқариш ва жаҳон бозорида сотиш имкониятини берувчи табиий-иқлим шароитлари;

- мева-сабзавот маҳсулотлари сифат даражаси, хусусан экологик тозаллигини таъминловчи ер ресурсларининг мавжудлиги;

- малакаси ва интизоми нисбатан юқори бўлгани ҳолда ишчи кучининг арзонлиги;

- илмий салоҳият ва амалий тадқиқотлар даражасининг юқорилиги;

- нисбатан инфратузилманинг ривожланганлиги (транспорт коммуникацияси, электрлаштириш даражаси).

Узбекистон Марказий Осиё ва қўшни минтақалар орасида мева-сабзавот етиштириш ҳамда улардан қайта ишланган маҳсулотларни ишлаб чиқариш, экспорт қилишда етакчи давлат ҳисобланади. Бу эса, мазкур минтақада рақобат афзаллигини вужудга келтиради. Фзбекистон ҳудудий жиҳатдан яқин мамлакатларга мазкур турдаги маҳсулотларни экспорт қилишда сарфлаётган транспорт харажатлари ушбу ҳудудларга индустриал мамлакатларнинг экспортда транспорт харажатларига нисбатан паст. Дарҳақиқат, Фзбекистон мева-сабзавотчилик мажмуаси маҳсулотларининг ҳудудий жиҳатдан яқин мамлакатлар бозорларида рақобатбардошлик даражасини оширишнинг улкан имкониятлари мавжуд. Узбекистон Марказий Осиё ва қўшни минтақалар орасида мева-сабзавот етиштириш ҳамда улардан қайта ишланган маҳсулотларни ишлаб чиқариш, экспорт қилишда етакчи давлат ҳисобланади. Бу эса, мазкур минтақада рақобат афзаллигини вужудга келтиради. Фзбекистон ҳудудий жиҳатдан яқин мамлакатларга мазкур турдаги маҳсулотларни экспорт қилишда сарфлаётган транспорт харажатлари ушбу ҳудудларга индустриал мамлакатларнинг экспортда транспорт харажатларига нисбатан паст. Дарҳақиқат, Фзбекистон мева-сабзавотчилик мажмуаси маҳсулотларининг ҳудудий жиҳатдан яқин

мамлакатлар бозорларида рақобатбардошлик даражасини оширишнинг улкан имкониятлари мавжуд. Фикримизча, ушбу имкониятлардан оқилона фойдаланиш мақсадга мувофиқ. Мева-сабзавотчилик соҳасидаги фаолият юритувчи агросаноат фирмаларининг мева ва сабзавотларни етиштириш, тайёрлаш, сақлаш, қайта ишлаш ва истеъмолчиларга турли кўринишларда (хўл мева, консерваланган, қуритилган ва ҳ.к.) етказиш билан боғлиқ бўлган ташкилий, иқтисодий ва технологик масалаларни ягона тизим доирасида мувофиқлаштириш, шу билан бирга сақлаш тизимини ривожлантириш имкониятлари юқорироқ бўлади.

Ўзбекистон мева-сабзавотчилик мажмуаси ривожланишининг ўзига хос хусусиятларидан бири бу иқлим шароитининг қулайлигидир. Республиканинг асосий ҳудудларида ўсимликларнинг вегетация давридаги умумий ҳарорат 40-45 сони ташкил қилади. Мазкур иқлим шароити мева ва узумнинг хилма-хил навларини турли муддатларда етиштириш ҳамда улардан ширага бой қуруқ мевалар, майиз ишлаб чиқариш имконини беради. Жумладан, кечпишар, баҳоргача сақланадиган олма, хўраки (ошхонабоб) узум навлари, шунингдек вино ишлаб чиқариш учун винобоп узумлар етиштириш имкони бор. Шунингдек, Ўзбекистон иқлимининг яна бир ўзига хослиги – вегетация даврининг узок муддатлилиги яъни, 180-250 кун давом этиши ва унинг эрта бошланишидир (февраль-март). Бу нафақат мева, узум ва сабзавотларнинг турли навларини етиштириш, балки қўшни мамлакатлар орсида мазкур маҳсулотлар ҳосилини анча эртарок йиғиб-териб олиш имконини беради. Шунинг учун ҳам соҳа олимлари томонидан турли даврларда синовлардан ўтган, сайқалланган юқорида келтирилган тажрибалар таклифлар, кўрсаткичлар ҳамда билимлар мева-сабзавотчиликка ихтисослашган фермер ва деҳқон хўжаликлари учун жуда муҳим ҳисобланади.

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## **ECOTOURISM OPPORTUNITIES IN THE BUKHARA REGION**

*Abstract: The fact that hundreds of thousands of scientists, poets and dignitaries grew up in Bukhara. This is a sign of the strong desire of people in this country to learn more about science, art, mentality, secrets of the people of this town.*

*Key words: Bukhara, Mohi-Khassa, Health tourism, Tudakul*

From historical sources it is known that Bukhara has been a center of science and culture since ancient times. The desire of Bukhara people to acquire knowledge is one of their main qualities. The fact that hundreds of thousands of scientists, poets and dignitaries grew up in Bukhara. This is a sign of the strong desire of people in this country to learn more about science, art, mentality, secrets of the people of this town.

If we turn to history, we can establish that the first groups of tourists traveled to those countries where there was a favorable climate and healing springs. In this regard, for the comprehensive and rapid development of the state and society, the creation of new tourist routes, the development of modern types of tourism and increase its attractiveness should play a key role. We have all the conditions for this. Bukhara region has great ecotourism potential and opportunities. Excursion activity has so far exclusively cognitive orientation. At the same time, the majority of natural recreational facilities in protected areas are located in exclusively picturesque places of Bukhara and, as a rule, are far from the negative impact of anthropogenic activities. This allows you to expand the range of their functional purpose. In particular, in our opinion, the environmental potential, along with the cognitive goal, can and should be used to improve the health of people. This is facilitated by the natural healing resources of vegetation, the cleanliness of the air basin, the micro-climatic features of places like Mohi-Khassa, Tudakul, Hot water, Zamonbobo, etc.

But we must also take into account the negative impact of tourism on the ecology of tourist centers. The tourism development policy, taking into account environmental impacts, is becoming increasingly relevant, and the World Tourism Organization offers many environmental programs. Therefore, in many ways contributed to public awareness, advocacy for the environment. Obviously, environmental issues in the future will worry more people than today. The increasing sensitivity of the environment stimulates significant efforts to protect and protect natural resources. Currently, the problem of environmental protection and its improvement occupy an important place in many studies. The environmental

impact of tourism can be positive and negative. Tourism cannot develop without interaction with the environment, however, with the help of tourism development management and clear planning, it is possible to reduce the negative impact and increase the positive. The negative impact of tourism, unfortunately, often prevails over the positive. In particular, it affects the quality of water in rivers, seas, lakes and air quality; Destruction of local and wild fauna by tourists. These are examples of only minor damage to the environment. The adoption in recent years in a number of countries of strict measures aimed at protecting nature, the creation of new national parks and reserves, attempts to scientifically determine the permissible loads on nature. All this is significant to preserve and improve the natural and geographical environment, to preserve and improve the natural and geographical environment. The greening of cities, the fight against noise and cleanliness are also to some extent the result of the requirements of tourism development.

For the development of tourism in the desert and rural areas, we offer an organized project for outdoor recreation, has great potential for the development of internal ecotourism. We can organize and develop the following types of tourism:

✓ Hunting tourism. You can organize fishing. Anyone who wants to take a physical vacation can come here and go fishing or swimming in the water on boats. Among the types of fish: carp, smelt, grass carp, roach and many others. From animals: jackals, turtles, snakes, deer and other creatures. Of the birds: there are ducks, storks, hawks, eagles and several other species.

✓ Another exciting sport is the organization of motorcycles and sand racing, which are not very popular in our country, and the organization of this sport can attract many riders and fans of this sport in our country.

✓ Health tourism. The source of hot water located here has sufficient opportunities for organizing health tourism.

The aim of our project is to create opportunities for the development of internal ecotourism in the country and for the population striving to further expand the ecotourism potential of desert territories and the development of many types of ecotourism in the field of the main tourism business. Unleash the potential of hot water underground source, which has great benefits for public health. To turn this place, located in a desert area, into a thriving ecotourism destination. This should stimulate the local economy and increase revenues.

Project Advantages:

1. Thanks to the project, it will be possible to turn the region into an ecotourism destination.

2. Domestic tourism will develop in the region, the flow of tourists will increase and local budget revenues will increase, while most of the local population will be occupied.

3. Environmental consciousness is formed among the local population, and there is intuition for the conservation of nature, animals, birds and other creatures.

4. As a result of the project, the efficient use of the ecotourism potential of the region will be established, which will lead to the creation of new tourist attractions

It is planned to further develop ecotourism in the Bukhara region, add and further develop new ecotourism routes. Performing the above tasks, we would make a significant contribution to the development of the ecotourism industry of our country in the world community. And there will be no harm from humanity to nature. Today we must clearly understand that nature needs protection from tourism. Many environmental imbalances are recognized too late. The occurrence of irreversible processes as a result of the destruction of the natural environment during its uncontrolled use for tourism purposes often leads to its death. She becomes lost for future generations. It would also allow increasing the level of internal ecotourism, creating a culture of ecotourism among our people, creating a number of amenities for foreign tourists and eliminating obstacles. By correcting some of the shortcomings and improving existing opportunities, we can reach the pinnacle of the development of the ecotourism industry in our ancient and eternal city.

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## **EVALUATION OF THE EFFECTIVENESS OF ORAL ANTICOAGULANTS IN TREATMENT AND PREVENTION ATRIAL FIBRILLATION IN THE BACKGROUND OF ISCHEMIC HEART DISEASE**

*Summary: Fibrillation remains one of the most important problems in modern cardiology. Over the last 20 years, the incidence of hospitalization with fibrillation has increased by 66% as a result of population aging and an increase in the prevalence of chronic heart disease. Fibrillation has a negative impact on hemodynamics, quality of life, and long-term prognosis. The prevalence of compartmental fibrillation in the general population is 0.4–1%, with up to 8% observed in people over 80 years of age. Approximately 60% of patients over 75 years of age with compartmental fibrillation are women. Fibrillation of the compartments is associated with an increased risk of stroke, heart failure (HF), and all-cause mortality, especially in women.*

*Key words: Fibrillation of the compartments, oral anticoagulants, chronic heart failure.*

The urgency of the problem. Treatment and prevention of thromboembolic complications remains a topical issue for modern medicine. Oral anticoagulants (OAC) are prescribed to reduce blood clots in the blood vessels and prevent them from forming. An important point in OAC therapy is the assessment of the risk of thromboembolism and primarily ischemic stroke. The prevalence of fibrillation has been steadily increasing in the last decade as a common heart rhythm disorder. In 2010, fibrillation was recorded in 33.5 million people worldwide. Fibrillation is the cause of the development of ischemic stroke in 25% of cases. In patients with fibrillation, the incidence of cardioembolic stroke and systemic thromboembolism is increased by 5 times. The use of anticoagulants in patients with fibrillation significantly improves the risk of thromboembolism. There are 3 levels of risk of fibrillation thromboembolic complications: low risk ischemic stroke less than 2% per year, moderate risk is 2-5% per year, high risk is 6% per year and more.

The purpose of scientific work. To study the efficacy and safety of oral anticoagulants (OAC) in the prevention of thromboembolic complications (TE) in patients with fibrillation on the background of ischemic heart disease.

Materials and research methods. Selection of patients for the study was carried out on the basis of the clinic of Andijan State Medical Institute. Patient complaints, anamnesis and clinical and laboratory diagnostic methods were used for examination and treatment: general blood analysis, blood biochemical analysis, echocardiography, ECG examination, international normative relations (INR /MHO) examination, abdominal ultrasound, coagulogram, PTI ( index), if necessary, analysis of fecal occult blood. Patients' quality of life was assessed. Bleeding risk factors were considered.

Research results. The longest-acting OAC in clinical practice have been studied by comparing the safety and efficacy of warfarin and rivoraxaban to prevent vascular and arterial thromboembolism in patients with fibrillation. During the study, 2.5 mg of warfarin and 20 mg of rivoraxaban (xarleto) were selected. During the study, 40 patients with BF were divided into 2 groups and received warfarin and rivoraxaban for 1 year, and on the basis of traditional treatment principles received beta-blockers, iAPF, nitrate, diuretics, antiarrhythmic, hypolipidemic drugs. The mean age of the patients was around  $66.6 \pm 3.9$ . During the study, patients receiving warfarin were monitored in the International Normative Relationship (INR/MNO) monitoring system. The dose of warfarin is 2.5 mg, which is standard in all cases. During titration of the warfarin dose, patients underwent INR examination once every 4 days and then at least twice a month. Determining the effectiveness of prophylaxis is the administration of indirect anticoagulants in the therapeutic range of INR 2 to 3. Lack of anticoagulant effect (less than INR 2) increases the risk of thrombotic. Being above INR 3 increases the risk of bleeding, including the risk of intracranial hemorrhage. Thus, according to the literature, the annual frequency of major bleeding during treatment with indirect anticoagulants ranges from 0.2% to 5.2%; among them, the frequency of fatal bleeding ranged from 0.07% to 0.7%. Rivoraxaban was prescribed taking into account the frequency of recurrence of fibrillation and factors predisposing to embolism. Treatment was started with 20 mg, depending on the patient's condition. Patients over 60 years of age should be treated with low-dose rivoraxaban (15 mg / day), taking into account the effects of drugs that enhance the anticoagulant effect of rivoraxaban, chronic heart failure (CHF), chronic renal disease (ball filtration rate less than 50 ml / min).

Conclusion.

1. Patients with fibrillation are treated with long-term anticoagulants, often for decades. This analysis showed not only the high efficacy of rivoraxaban, but also the safety of this therapy.

2. The efficacy and safety of rivoraxaban from warfarin have now been proven in patients with ischemic heart disease, diabetes mellitus, and chronic kidney disease.

3. The efficacy and safety of rivoraxaban have now been proven not only in randomized clinical trials but also in actual clinical practice.

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## **THE NEED AND IMPORTANCE OF TEACHER-PUPIL SCHOOL IN THE DEVELOPMENT OF KARAKALPAK JIROV ART**

*Annotation: In the folk art of folk music, the traditions of the teacher-student are very important. Jirovs play an important role in the development of Karakalpak music culture. The tradition of Jirov's master-disciple continues to this day, and their work is passed down from generation to generation.*

*Key words: Jirov, folklore, music culture, epic, tradition, national art, kobiz.*

Formation processes of the school of Jirovs and Jirov art execution: The most basic orientation of art is the music culture. The fact that the art of zhirovism in the culture of Karakalpak music has its own history of centuries-old captivity is reported in historical sources and is known from the historical scientific works of our scientists. When we say the development of the culture of Karakalpak music, first of all we bring to our eyes the National Music of our people, that is, the art of zhirovism. We know from the history of our people that customs, national culture, history, oral creativity of the people, our zhirovs, stories and songs and music performed by them, the epics performed by them have been preserved and reached to this day, which is the reason of our national values coming from father to child, teacher to pupil as an inheritance for centuries. Of course, this means that within the reason of our art, the art of zhirov has been developing since the early period. Jirov, which is a great achievement of the Karakalpak people, and the ways of their performance have been performed since an early period, in its pure form, it has been performed by our ancestors and further developed, new music has been created and reached to us by the traditions of teacher-pupil. In the hands of Jirov, the owner of a great talent, a great voice carp, a proverbial narrator who transports oral narratives, narrates the dreams of his people by adding to the shell the harmonies of Dreams, a listener telling the people gathered by showing historical sources to the epics of the people with a magnificent cultural heritage, national values. In the people of Karakalpakstan, the art of zhirov was of great importance. They are with the people and teach the brave young girls of the people to protect the love of their native land by describing their services and courage through words the work of guarding the motherland. In order for the zhirovs to continue after him, it was customary to prepare pupil. Through this process, their teacher founded the creation of pupil schools. The tale of the art of zhirovism in Karakalpakstan appeared earlier than in the qissaxonliq. The people have reached out to us through teacher pupil school that has pushed life expectancy for centuries together for years. The kubiz, an instrument played by Karakalpak zhyrovs, is described by the information received from Essemurat Jirov and Kiyas Jirov.

From history, we consider the qobiz master and skilful performer Qorqit Baba and Dyvanayi buriq. In the jewelers of history, the zhirovs of the period before us lived, they used to say so. Qorqit baba dreamed of making a bark from wood and playing the song. Tried to make a shell from them, bleaching a lot of wood. But these wooden crusts were not what he liked. The evil ones saw that the Qorqit baba made a shell. They said to him to show his qobiz, but Qorqit baba . Then the frightened father showed himself as if he had left the taiga .and at this time quietly went to the second path and listened to them the word of the invisible Devils. That's what the Devils say about the Scarecrow father.As long as the Scarecrow father began to do a very wonderful job. But the drift did not take the lead. If the pig in the dam were to bark from the tree, which had been drained, if the tree was to take out a pot from this place of the earth, cover the pot with the skin of the camel's head, if the horse's tail was narrow, the sound of the harrak yasalsa from the pumpkin would be a As soon as the Scarecrow father heard this tune of the Devils and quickly returned back and made a rich instrument of bark, as the Devils said, from that moment onwards, musical instrument appeared, in which all sorts of music were played.

Aityms in the history of karakalpaks were shaped as a genre by performing and processing them in the continuation of the long years by zhirovs in their repertoires. In the repertoires of all Karakalpak performers historical aityms are also can be seen .Historical aityms of every zhirov are different. Historical aityms were formed on the basis of the events that the people experienced, this is also the reason why aitym is called so.They are performed by folk artists from ancient times to this day as aitym. For this reason, the word "aitym" could be called "historical aityms". The genre of historical aitym of oral Karakalpak literature consists of the following: the historical aitym "Ormambet biidyin tolgaу" tells how the Karakalpaks were destroyed on the bank of the Edil Zhaiyk River and they had to abandon these lands and move to a new river in Turkestan. Aitym, which was created and performed by Jien zhyrau About the separation of the Karakalpaks from Turkestan and the resettlement to Khorezm, is called "Poskal el " tolgaу. Among the historical aityms that were performed about the experience of the Karakalpaks after their migration to the banks of the Amu Darya are the following aityms: "Bozatov" by Ajiniyaz, "Aidos baba" by Berdak the poet, "Ernazar biy"," Amangeldy " works. About the history of the spread of the Karakalpak people, about the origin of their ancestors, is widely discussed in the work of Berdakh the poet " Shezhire".

Folk memory of Qorqit Ata. When it comes to Karakalpak Zhyrauism, the name Qorqit Ata is first mentioned. Also, when it comes to the musical instrument kobyz, which occupies the main place in the origin of art, the name Qorqit Ata is mentioned.The legendary types of kubyz were named "aikubyz" and "narkubyz". In addition, there is information that the Karakalpaks had other instruments "balakubyz", "dzhelkubyz", "dzhezkubyz", "sazkubyz","shakkubyz", "changkubyz" and others. In addition, the tool "duncobyz" is mentioned.But among them it is generally known that the creator of kylkobyz is Korkyt ata. Among the Karakalpak people, legends and legends associated with the name Qorqit Ata were

widely spread. Traces of what is associated with the name Korkyt ata can be found in folklore. In his monograph "Korkyt ata Kytaby", the scientist K. Palymbetov was engaged in this issue in a scientific way. He tells in detail about the mentoring of Karakalpak poems. In the Karakalpak people, according to shezhir Korkyt Ata, the legend of "Petya of the children of Besim" is told. The word "Bayatlan Korkyt, Bai Korkyt" turns out to belong to the father of zhyrau in question. We heard about this from the Bukhara Karakalpak zhyrau Kurban Navruz.

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## **THEORETICAL AND METHODOLOGICAL FUNDAMENTALS OF INCREASING THE EXPORT POWER OF THE REGION**

*Annotation: Analysis of the basic concepts of the export potential of the region, the assessment of the export potential of the regions and the improvement of its rational use, and the role and analysis of the world economic situation*

*Key words: Export potential, active exports, passive exports, export base, real sector, investment*

It is known that the concept of "export potential" is one of the most widely used terms in science and is considered important for the development of the national economy. In this regard, the development of a set of measures to assess the export potential of the regions and improve their rational use is especially important for the national economy. Overcoming the negative effects of the global financial and economic crisis, sustainable growth of the real sector of the economy and ensuring macroeconomic balance, increasing employment, targeted support of leading exporting industries and small businesses. It remains a topical issue in Uzbekistan today. Successful implementation of these tasks involves a scientific analysis of export activities in the country and its regions.

Many scholars have expressed different views on the concept of "region". The concept of "region" is a relatively new term, associated with a new direction of the economy - "regional economy". It was first described by the Russian scientist N.N. Nekrasov in 1975: "The region is a country with more or less the same natural conditions and natural resources in accordance with the material and technical base, production and social infrastructure. "On the basis of its development, a large area of development of production capacity is understood." [15] According to A.G. Granberg, "a region is a specific area characterized by the integrity and interdependence of its constituent elements." "The region - a common natural geographical, historical, national-cultural unity and religious-ethnic proximity, the

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<sup>15</sup> Некрасов Н.Н. Региональная экономика. М.: Экономика, 1975.

level of socio-economic development, imperfect management system at different stages and the joint activities of administrative-territorial bodies in solving socio-economic and environmental problems O.Akhmedov described it as a single territorial unit. [16]

Most economists have proposed to divide the territory of Uzbekistan into 6 economic zones. In recent years, some economists have proposed reducing the number of economic zones to four. In general, most economists divide the republic into the following six economic regions:

1. Tashkent (Tashkent city and Tashkent region);
2. Fergana (Fergana, Andijan and Namangan regions);
3. Zarafshan (Bukhara, Navoi and Samarkand regions);
4. Mirzachul (Syrdarya and Jizzakh regions);
5. South (Kashkadarya and Surkhandarya regions);
6. Lower Amudarya (Aral Sea, the Republic of Karakalpakstan and Khorezm region).

Foreign trade activity is a business activity in the field of international trade in goods, works (services). Foreign trade activities are carried out through the export and import of goods, works (services). Execution of works (rendering of services) by a legal or natural person of the Republic of Uzbekistan for a legal or natural person of a foreign state, regardless of the place of their performance (rendering), is export of works (services). Execution of works (rendering of services) by a legal or natural person of a foreign state for a legal or natural person of the Republic of Uzbekistan, import of works (services) regardless of the place of their performance (rendering) Competitiveness is the ability of an economic entity or commodity to maintain and improve its position in front of another economic entity or commodity. The conditions and conditions that determine competitiveness are factors of competitiveness. Beneficial factors that distinguish a competing entity (product) from others are called competitive advantages. It is important to distinguish between external and internal competition. External competitiveness is the ability to sell goods and services on the world market and the availability of sufficient quantities of goods and services in the structure of exports to ensure the stability of the country's balance of payments. Domestic competitiveness is the ability to sell imported goods in the domestic market in a competitive environment with other domestic producers, which, along with exports, provides a high level of income and employment. World experience shows that external competitiveness requires the existence of internal competitiveness, but not vice versa. Sales in the domestic market create the basis for external competitiveness, but do not guarantee it. This is the lowest level of competitiveness. Competitiveness forms the basis of an evolving industrial society. Initially, it is the free use of the price mechanism in the implementation of free competition of producers in open markets and competitiveness in domestic and foreign markets. At the same time, the concept of competitiveness in an industrialized society has evolved over the years. Another

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<sup>16</sup> Некрасов Н.Н. Региональная экономика. М.: Экономика, 1975.



term widely used in science today is "export potential." It encourages us to study it in more depth because of a number of new concepts for our national economy.

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## **THE IMPACT OF NATURAL CONDITIONS AND RESOURCES OF NAVOI REGION ON THE LIFESTYLE OF THE POPULATION**

*Annotation: This article describes the impact of natural conditions and resources of Navoi region on the lifestyle of the population. It also looks at the state of resources that affect lifestyle and its impact on human life and health.*

*Key words: lifestyle, relief, water, ecology, living conditions, mineral resources, climate, soil.*

Navoi region is one of the youngest regions of the republic, it was first established on April 20, 1982 for the development of the Kyzylkum desert and the use of its natural resources. Later, in 1988, Navoi region was abolished and included in Bukhara region. In the first months of independence, in 1992, Navoi region was restored within its 1982 state borders. The area of Navoi region is 110.9 thousand km<sup>2</sup>, its share in the country in terms of area is 19.8%, and its share in the population is 2.9%. The population density in the region is approaching 9.1 people per 1 sq. Km. This is the lowest rate not only in Uzbekistan but also in the CIS.

The territory of Navoi region is a region of our country with its own natural geographical features. In its territory there are deserts, small remnant mountains, low plains, swamps. The lowest point of the republic above the ocean level, the Mingbulak basin, is also located here.

The region is located in the central and northern part of the country and borders with the Republic of Kazakhstan, the Republic of Karakalpakstan in the north and northwest, Bukhara and Kashkadarya in the west, and Samarkand and Jizzakh in the south and southeast.

The territory of Navoi region slopes from south-east to north-west, and the height above the ocean level decreases in this direction from 350-400 m to 90-100 m [2]. This leads to a change in the lifestyle of the population in the region, ie the upper (south-eastern) part of the region differs from the lower (north-western) part in its climate, soil, water composition and other aspects. This is because as the altitude of a place decreases relative to sea level, the circulation of air in it, the properties of groundwater and surface water, also change in a peculiar way.

Although the region consists mainly of plains, it has its own complex geological history. Prior to the Paleozoic era, the region also belonged to the bustling geosynclinal marine basin of Central Asia. As thick sea deposits

accumulate, tectonic movements are revived. The powerful Hercynian deformation that occurred in the second half of the Paleozoic era radically changed the relatively calm tectonic situation. Adjacent to the territory of the province are the high mountains of the Tianshan system. Through tectonic faults, magma enters as well as rises and falls. The accumulation of marine and terrestrial sediments continues. By the end of the Paleozoic era and the beginning of the Mesozoic era, the mountains are collapsing. All the lands of the region become a single plain and a platform is formed [1].

Navoi region is one of the regions in the country with large industrial enterprises rich in natural resources. More than 200 mineral deposits have been identified in the region. Of these, 16 are uranium deposits, 37 are deposits of rare metals and 12 are mineral springs. Mineral resources have been mined from 78 of these identified deposits.

The largest mining enterprises in the region are located mainly in the cities of Zarafshan, Uchkuduk, as well as in Tomdi, Nurata, and Konimex districts.

The territory of Navoi region is not only the main center of pastoralism, but also a place rich in mineral resources that serve the development of the mining industry. The Uchkuduk uranium deposit, the Muruntau gold deposit, and others are clear examples of this. The location of these large deposits will have an impact on improving the living standards of the population.

The first formation and development of natural resources and catchments in the Kyzylkum Desert is inextricably linked with the formation of Paleozoic residual mountains and Mesozoic foothills and Quaternary thin deposits of the Quaternary [3].

Currently, Navoi region ranks first in the country in terms of proven reserves of gold, uranium and phosphate deposits. Gold mining begins in the 60s and 70s in connection with the development of gold deposits in the region, such as Muruntau, Auminzo-Amantoy, Sharqiy, Dovgiztov, Aristantov.

The opening of the mines directly led to the emergence of cities. Along with water, climatic resources, transport, geographical factors, the influence of mineral resources on the formation of cities is also great. In particular, the cities of Zafarabad and Zarafshan were formed on the basis of mining industry. These areas do not have fertile soil and favorable climatic conditions for horticulture and agriculture, which are the farms of the population. Nevertheless, this is based on the presence of deposits in the formation of cities and the well-established mining industry. For example, the soil in and around the city of Zafarabad is suitable for agriculture, but there are no water resources to establish irrigated agriculture, the use of which is limited [4].

The marble deposit in Gozgan is one of the largest in the country. The industrial mining and processing of marble was founded in the 1930s. Unused 31.0 million cubic meters of marble and 104.1 million cubic meters of granite deposits have reserves of at least 150 years [7]. This plays an important role in the employment of the population.

At present, more than 80,000 employees work at the enterprises and departments of the Navoi Mining and Metallurgical Combine. [5]. This indicates the development of the mining industry in the region. Also, the high potential of mineral resources in the region plays an important role in improving the living standards and employment of the population.

Natural climatic conditions also affect the lifestyle of the population of the region. In particular, it should be noted that it is located in the desert region.

It is known that the influence of climatic conditions of places on lifestyle is also great. The climate of the region is affected by tropical air masses in summer and cold air masses coming from the northern temperate latitudes in winter. However, there are climatic differences between the northern and southern parts of the region. Because the northern part of the province is desert, the winters are a bit colder than the southern parts, and the summers are warmer.

One of the peculiarities of the regional climate is the change of seasons. One season differs from another in temperature, humidity, solar radiation, and other aspects. Winter is cold in the region and differs from other regions with frequent changes in weather. As a result of the inflow of cold air masses from the north and northeast to the territory of the region, the air temperature sometimes drops to -34°C in winter. The arrival of each season (hot-cold) does not go unnoticed by the lifestyle of the population. For example, due to the sharp cooling of the air temperature in winter, Tomdi, Uchkuduk, Konimex and Nurata districts have a significant impact on the livestock of the population living in rural settlements. Livestock do not go out to pasture and have to hand out fodder. Also, the decrease in air temperature makes it difficult for livestock to survive and some winter work to be done in agriculture, and has a serious impact on the health of the population.

In summer, the temperature rises to 48-50°C in the deserts in the northern regions and 46-47°C in the southern regions. On such hot days, a lot of water evaporates, causing the crops grown in agriculture to shed their crops unbearably and affect the survival of living organisms. High temperatures also cause a number of inconveniences for the population working in agriculture [6].

In general, the territory of Navoi region is desert, so the temperature is cold in winter and hot in summer, which affects the lifestyle of the population. Also, the large number of large industrial enterprises in the region leads to the deterioration of the ecological situation in the region, which has a direct impact on the living conditions of the population.

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## DEMOGRAPHIC SITUATION OF NAVOI REGION

*Annotation: this article analyzes the features of the formation of the population in the Navoi region, the factors affecting it. Economic-social and demographic development of cities and rural districts is shown. The article also covers the issues of natural growth of the population of the region, the ratio of urban and rural areas in the number of permanent population.*

*Keywords: demographic situation, urban, rural, population composition, labor resources, demographic policy, natural population growth, urbanization rate.*

Introduction. Today, Navoi region is one of the most complex regions of the Republic in terms of its demographic situation. As a result of this, there are many economic and social problems in the region. True, a lot of work is being done in order to eliminate these problems. In particular, new jobs are created in industry, agriculture and other sectors, while the demand for labor resources is partially met. However, as a result of insufficient attention to this pressing problem in some districts, the socio-economic situation is becoming more complicated.

It is known that socio-economic problems in the region in many ways are one of the pressing issues of the present day in the natural growth, composition, territorial location and rational and effective use of labor resources.

Methodology and level of study. In the course of the research, a systematic approach, comparative and comparative analysis, statistics and other methods were used on the features of demographic situation formation in Navoi region. It should be said that a lot of research has been carried out on demographic processes abroad and in our republic. In Particular, Ata-Mirzaev A.B., Abdurahmanov Q.H., Burieva M.R, Tojiev Z.N.Y. and others investigated the formation of demography as a science, the sources of the study of demographic processes, the demographic nature of birth, death, marriage and divorce, the number and quality characteristics of the population, the legislation of reproduction, sex, age, marriage and family composition, socio-economic status, Population migration, demographic forecasting. Also, the subjects of geography and demographic Sciences of the population, their functions, history of formation as a science, number and reproduction of the population, composition, basic demographic processes, urban

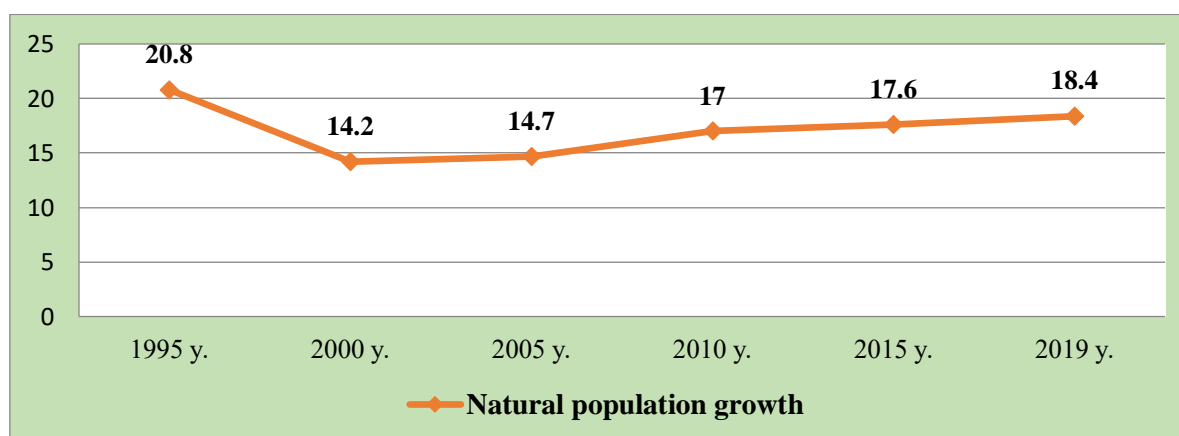
and rural population and global problems related to the demographic situation of the world are highlighted [4].

Analysis and results. An increase or decrease in the population at a very high rate leads to a sharp change in the demographic situation. The formation of the demographic situation is an important factor in the social, age, sexual and family composition of the population [1].

In the process of modernization of the economy of Navoiy region, demographic factors are given special importance in the implementation of socio-economic policy.

The size of the area of the land area and at the same time the inconvenience of its natural conditions affect the population and its density. Therefore, the population in the region is very sparse. In particular, if the population density was 6.6 people in 1995, this figure was 7.3 people in 2005, in 2015 it was 8.2 people in 2021, this figure was 9.1 people (compared to 1995 it increased to 2.5 people). Currently, 4 out of 11 administrative territorial divisions of Navoi region, including the city of Navoi, are among the densely populated areas, although they occupy only 6 percent of the territory of the region, while the non-densely populated 5 districts occupy 94 percent of the territory of the region. According to the state of January 1, 2021, 1 as the most densely populated areas in the region kv.km the number of population corresponding to Khatirchi (142,1 people), Karmana (134,9 people), districts and Navoi city (2940 people) [5].

Today, the population of the region is more than 2.9 percent of the population of the Republic. Chunanchi, in 1995-2020 years, the number of the population of the region increased significantly. However, in the following years, it is noticeable that the natural growth rates of the population of the region are decreasing. In the Navoi region, the period when the population reached the lowest level of natural increase was recorded in 2000, which amounted to 14.2 people per thousand inhabitants. This figure reached 18,4 people by 2019 year (Picture -1).



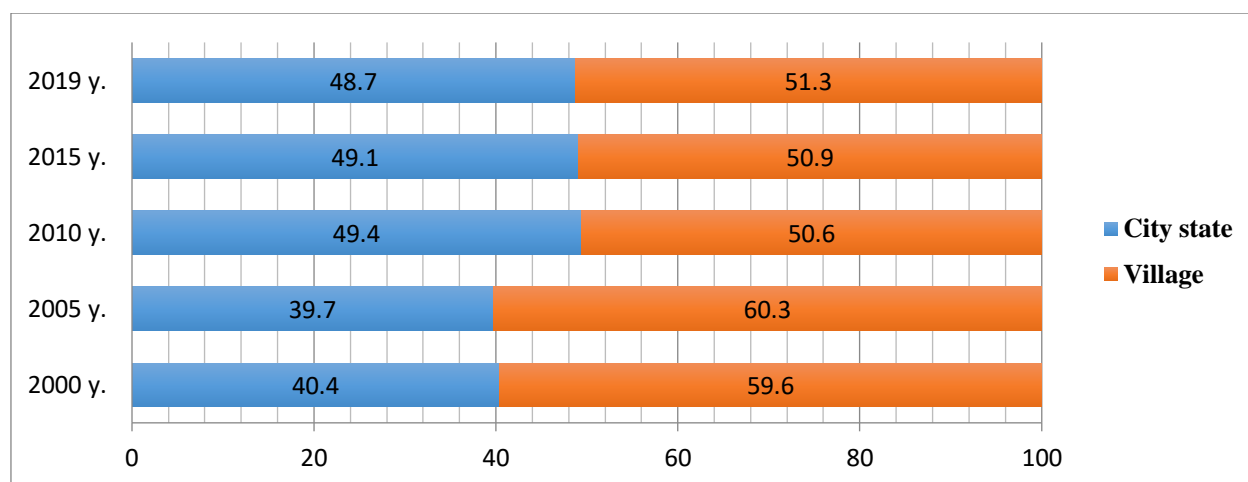
**Picture 1. Natural population growth in Navoi region (every 1000 people)**

In the region at the moment, the number of births increases significantly. Bunda youth health is high and there are problems with their employment. Such an

increase in the population will be useful in solving such problems as creating new jobs in the region, attracting young people to the actual socio-economic spheres of the region.

At present, a specific demographic situation has arisen in the region, which is manifested by an increase in the population, an increase in the age structure of the population, an increase in the proportion of people under the age of Labor and the elderly, a decrease in the number of people under the age of Labor.

During 2000-2019, the number of permanent population in the region increased by 201,2 thousand people or by 16,8 percent. When analyzing the picture of the growth of the existing urban and rural population of the region, it is observed that in most cases it is higher than the urban population. Analysis of the implementation in the cross-section of urban and rural population showed that it is not a norm. In particular, now the share of the population of the city in the total population decreased from 40,4 to 48.8 percent, while the rural population from 59.6 to 51.2 percent (Picture -2).



**Picture 2. The proportion of urban and rural areas in the Navoi region in the number of permanent population (per cent)**

It should be noted that the number of rural residents in the region indicates a regular decrease in their share over the years compared to the total population.

Today, among other regions of Uzbekistan, the urbanization rate of the population is constantly growing in the region. The decrease in the number of rural residents is explained by the fact that 39 rural punkts were given the status of a town in the region according to the resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated 13 March 2009 № 68 "on measures to improve the administrative-territorial structure of population punkts of the Republic of Uzbekistan". Therefore, in all districts except Uchkuduk, rural areas are given the status of a settlement.

In particular, the rural population punk, which has become the most urban in the rural districts of the region, accounts for the contribution of Kızıltepa (12 units) and Xatırçı (10 units) districts. At the same time, there were 5 settlements in

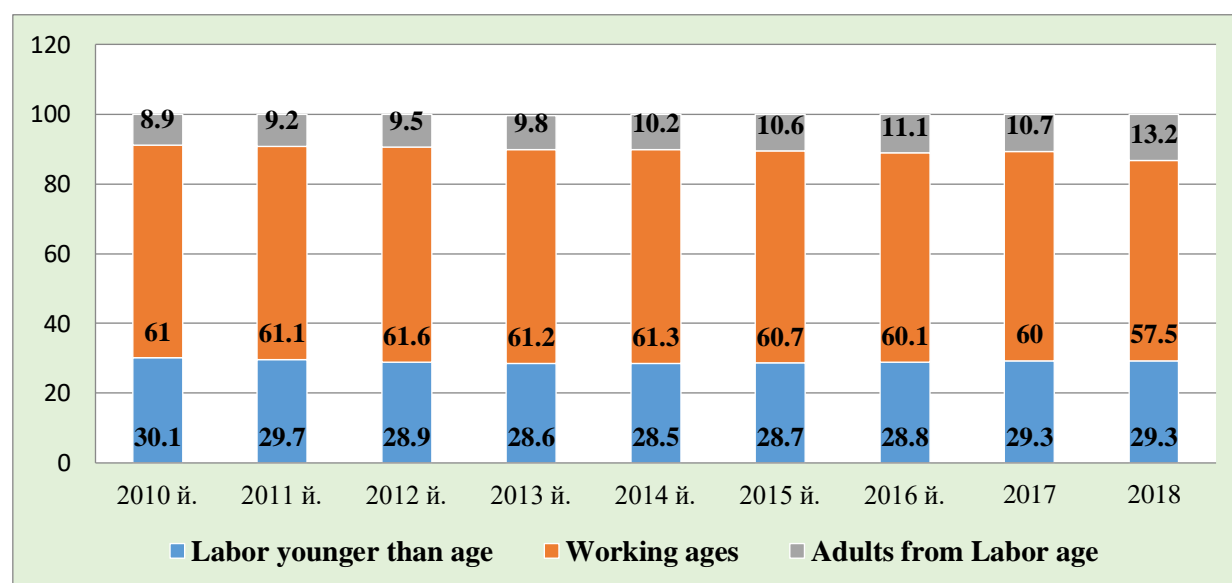


Navahor, 4 in each of the Nurota and Karmana districts. Also in the development of the economy in the region, the city's role in relation to the increase in the level of urbanization is important. The development of industry in cities, their political and cultural functions, the deepening of the territorial division of Labor are the characteristics of this process.

Today, 51,2 percent of the population of the region lives in cities. The urbanistic status of the region stands higher than the average of the Republic. But the population in all regions of the region is not evenly located.

If we pay attention to the distribution of the population of the region by Regions, the maximum number of the population corresponds to the District of Khatirchi 20 percent, to the cities of Navoi and Zarafshan 22.5 percent. To the steppe (Uchkuduk, Tomdi, Konimex) districts-8.4 percent, to the Kyzyltepa district- 15.3 percent, and to the districts of Karmana, Navahor, Nurota-33.8 percent of the population's contribution [3].

Changes in the population of the region are directly related to its age composition. That is, the share of youth under the age of 30 in the population in the state of January 1, 2019 - 34.9 per cent, the share of children under the age of 16 - 22.7 per cent, the share of children under the age of 16-29 - 19.5 per cent. Also, the analysis of statistical data shows that the absolute number of the population aged 0-15 has increased in recent years. For 2010-2016, the population of the region was 8.9 per cent in 2010 and 11.1 per cent in 2016 (Picture 3).

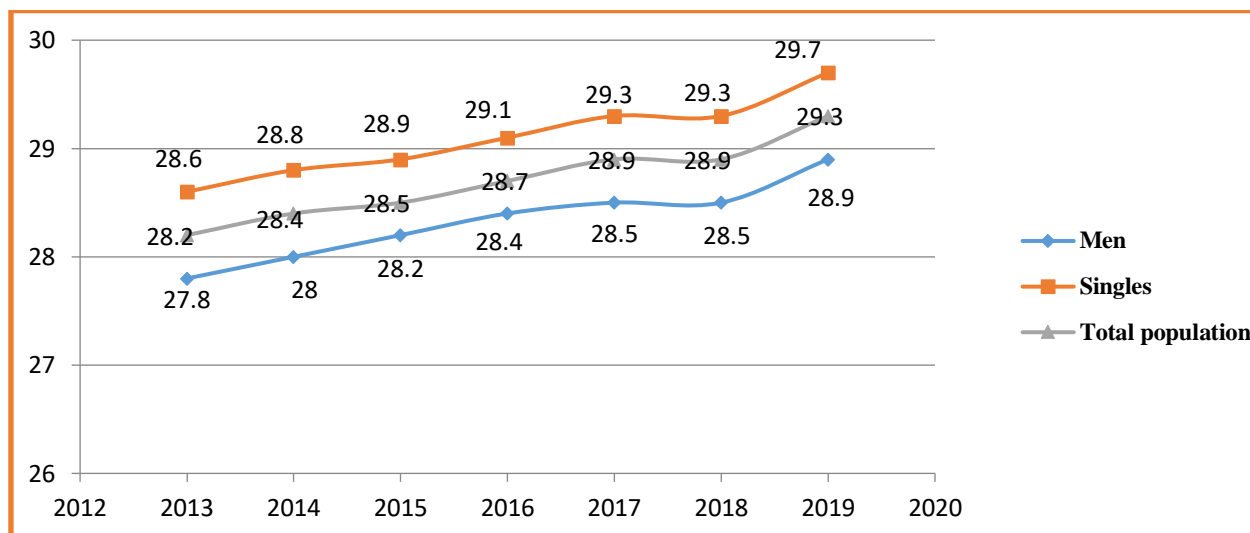


**Picture 3. Distribution of population by age composition in the region (in percent)**

This situation is explained by a slight increase in the birth rate in the region. Of particular importance is the health of the population group of the working age (16-60) in the structure of the population. Because this group constitutes the main production Force and serves as a factor of economic development. The formation

of the working-age population group is mainly due to the features of repeated reproduction of the population [1].

The average age of the population of the region at the present time is 29,3 years, including women 29,7 years, men 28,9 years. According to the international demographic classification, it allows to include young regions in Uzbekistan (Picture 4).



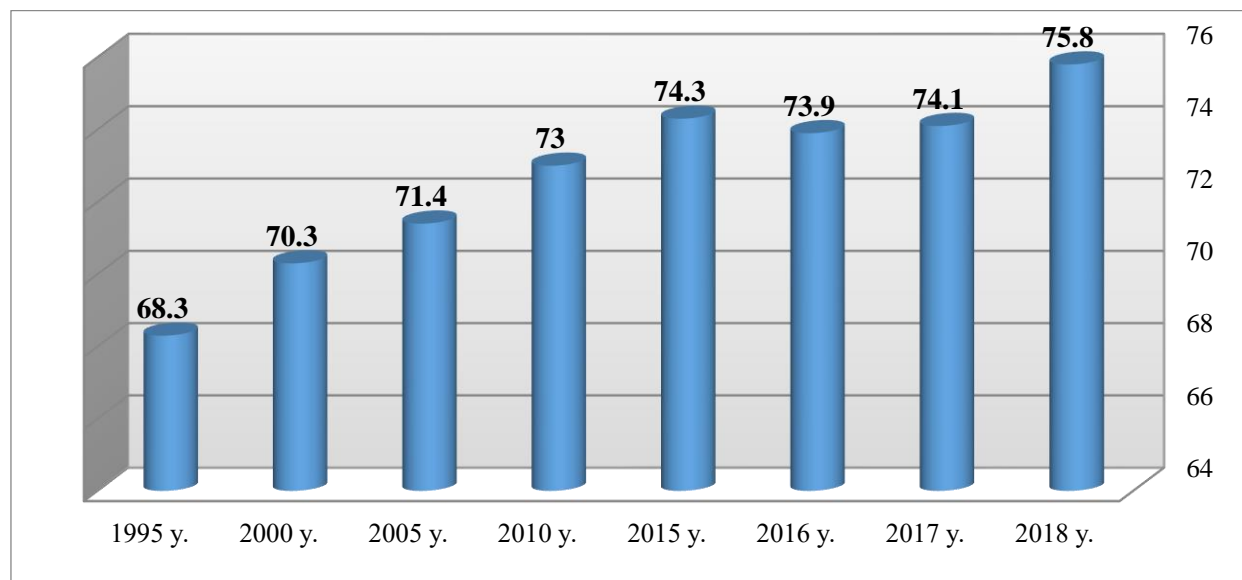
**Picture 4. The average age of the population in the region (thousand people)**

If we assess the level of aging of the population of the region, then 60 years of age and older in the region account for 7,2% of the population, and the population of the region is considered Young from a demographic point of view. According to the classification of foreign demographics, the age of 65 and above is 3.5 percent of the population of the region, which corresponds to the demographic classification of the aging population [5].

The analysis of demographic processes taking place in the region shows that the incidence of children in the age group of the population decreases, and the incidence of Labor and old age increases slightly. According to data, in 2000-2016, in relatively sluggish aging regions of the population of the region, the aging status of the population is also increasing. This, in turn, indicates the development of the aging rate of the population, even in all regions of the region, in the near future.

At present, the decline in the birth rate has also been clarified by many factors, which are based on the fact that in many regions its rate remains relatively high. First of all, the degree of birth, especially its stratification, is explained by the interdependence of economic, social, religious, spiritual and other factors. In the years of independence, the birth rate of the region has decreased. The reduction in the birth rate in the region is influenced by the increase in the age of marriage of young men and girls, divorce, migration and other socio-economic processes. For these reasons, the province decreased from 27,1 promille in 1995 to 22,3 promille in 2018.

Indeed, the life expectancy of the population in the region has been increasing in recent years. This is an effective result of the socio-demographic work carried out in the region. Life expectancy at the beginning of independence was 68,3 years, while in 2018 year this indicator was 75,8 years, this indicator has a regular growth trend over the years. (Picture 5). And this is the top of the trust for the elderly in the region.



**Picture 5. Expected life expectancy at birth in the region**

The growth of the expected life expectancy in the region is the main criterion for determining the level of development of social systems. In particular, as a result of the attention paid to the sphere of social policy in the region, the life expectancy of the population is increasing.

In general, based on the analysis of the demographic situation in the Navoi region, one can conclude that the population in the region is growing mainly on the account of natural increase. Especially in rural districts, the growth of the population remains high. This means that the socio-demographic development of rural districts necessitates the further development of the state of social infrastructure in the localities, especially in the areas of education, health care, household services.

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## MAIN CRITERIA FOR ASSESSMENT OF WORK, COMPETENCE AND PROFESSIONALISM OF THE TRAINER

*Abstract: The peculiarities of the coach's activity are connected, first of all, with the goal facing him - the achievement of high sportsmanship by his students as a result of many years of training. To understand the psychological characteristics of successful sports activity, it is necessary to understand the nature of one of its most important factors - the personality of the coach. He was represented as a dogmatic and rude person, striving to bring up the same qualities in athletes under his command, as a loser with a whistle around his neck. In some cases, it was a portrait of a courageous knight with a strong will and high moral principles, ready to protect his pupils from delusions, to prepare them for life.*

*Key words: sports activity, coach, criteria, assessing, pedagogical problems.*

It is important for a teacher (trainer) today to convince the society (educational authorities, family) of the importance of the results of their work, to be able to enter into business relations in the educational services market, showing the advantages of their methods and forms of work.

The criteria for professional commitment show: is the coach able to respect the honor and dignity of the profession, to highlight its specific unique contribution to the progress of society.

It is important for the teacher to have professional patriotism and dedication. Unfortunately, sometimes there is isolation, corporatism, opposition of the teaching profession to others, as well as an external professional locus of control, when the shortcomings of the education system are associated only with negative social phenomena.

Qualitative and quantitative criteria characterizing the professionalism of a teacher (trainer) are both in quality parameters.

In accordance with the above criteria for assessing work, a professional can be considered a trainer who:

- successfully solves the problems of education and upbringing, prepares the necessary specialists for society, graduates of educational institutions with a set of socially significant personal qualities (objective criteria);

- personally disposed to the profession, motivated to work in it (subjective criteria);
- achieves the desired results trained and educated students (performance criteria);
- uses democratic methods of influencing students (procedural criteria);
- open for continuous improvement of the level of professional qualifications, accumulation of experience (criteria for professional learning);
- at the same time enriches the experience of the profession through personal, creative contribution (criteria of creativity);
- is socially active in society, raises in the course of public discussions questions about the needs of the profession, its achievements, at the same time looks for solutions to problems within the profession, is not afraid to get into conditions of competition (criteria of social activity);
- devoted to the teaching profession, strives to support, even in difficult conditions, its honor and dignity (criteria of professional commitment).

The teacher's professionalism in practical activities is largely determined by the ability to set and solve pedagogical problems. The structural components of a coach's abilities to sports activity can be attributed to: guess (quick enumeration of possible options for strategies and tactics for solving sports and pedagogical problems, a curtailed system of reasoning and actions); differential sensitivity; probabilistic forecasting; the ability to generalize, to identify pedagogical patterns in the educational process, the creative and varied nature of training, efficiency in solving various problems during training and outside of it; short-term memory; breadth and flexibility of constructive solutions in the course of the educational process; the use of a variety of teaching methods and methods of pedagogical influence.

The analysis of the characteristics of special pedagogical and sports abilities of coaches of different skill levels showed the following.

Coaches of a high level of skill are characterized by the highest level of development of all types of studied abilities, and the leading components are those reflecting more special abilities. The trainers have a clearly expressed pedagogical orientation, responsibility for work and love for, they strive to master the psychological and pedagogical knowledge and experience of their colleagues. They are distinguished by proper self-criticism and adherence to principles in relations with workmates. As a rule, these are thoughtful hard workers and good social activists.

Coaches of a low skill level are characterized by the heterogeneity of the development of special abilities. Thus, the level of projective abilities is significantly lower than the level of the other two groups, the level of reflexive and sports abilities is significantly lower than the level of these abilities in master trainers does not differ from the level of these abilities in trainers of the middle group.

Coaches of a low skill level find it difficult to rethink the advanced experience of colleagues and the achievements of psychological and pedagogical science. At

the same time, they may have a pronounced love for business, for children, but they have a special inclination only for sports activities. They constantly conflict with young athletes, parents and school leaders, are not self-critical, are constantly dissatisfied with something, grumble, refer to difficulties in their work.

Developing models, fulfilling the same role of assessment, are aimed at assisting the teacher in unleashing his creative potential.

The choice of one of these models depends, first of all, on the interest of the leaders in the assignment of advanced qualifications to the teaching staff of the educational institutions subordinate to them. In this regard, at present, there are many complex, multifactorial techniques, the use of which makes it difficult to assess the objectivity of teaching work, introduces additional difficulties in the formation of interest in professional development.

It is well known that the objective criteria for assessing the level of qualifications of any work is its effectiveness, the ability to solve various professional tasks.

In the work of a teacher, an objective criterion may be his ability to successfully solve the problems of teaching and upbringing in accordance with the requirements of the education system, the needs of society, the family and the student himself.

Evaluation of the results of the teacher's work is related to the extent to which the profession meets his requirements, motives, abilities, how satisfied he is with the work in the profession.

The criterion for assessing the professionalism of a teacher can be a stable professional and pedagogical orientation, an understanding of the importance of the profession, its value orientations, a set of necessary professional and psychological qualities of a person, a positive attitude towards oneself as a professional, and the absence of personal deformations.

A professional teacher is characterized by a combination of a fairly high work success and an internal desire to improve in the profession.

Until now, there are different opinions about the correctness of the choice of criteria for assessing the work of a teacher. Some researchers believe that the result of a teacher's work can be only the knowledge of students, their compliance with the requirements of educational standards, others note the need to first of all take into account the development of students' creative abilities, others see the main result of teaching activities in the adaptation of a graduate to subsequent social life, etc.

At the same time, the main priority criterion for assessing the result of work remains positive qualitative changes that determine the increments in the personal development of students that arise in the process of their interaction with the teacher. Tracking and evaluating these changes, the teacher needs to know the development indicators, be able to diagnose their initial level, potential level, zone of proximal development, as well as the student's self-development zone.

Currently, in pedagogy, there are methods for assessing the work of a teacher, associated with the use of procedural, effective, individual-variable, prognostic criteria and criteria of the impersonal level.

For a teacher, as for any other specialist, it is important to master the norms of the profession, developed in science and tested in practice. In pedagogical work there are certain norms of communication, behavior, social relations, the observance of which at a high level represents the professional skill of a teacher of any educational institution.

Individual-variable criteria show: does the teacher strive to individualize his work, realize his own personal needs in it, show originality in work, etc.

Today, in a teacher (coach), as never before, they value originality, individuality, uniqueness, the presence of their own style, the originality of their view of the surrounding reality.

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## **BASES OF ENSURING PUBLIC PARTICIPATION IN CRIMINAL PROCEDURAL LAW**

*Abstract: This article discusses the participants in criminal procedural law, focusing on the role and importance of public participation. Recommendations and suggestions were made to increase the role of public participation in the pre-trial phase, preliminary investigation and inquiry, as well as in the judicial investigation. There are also recommendations for the formation of new mechanisms for public participation in criminal proceedings, based on the universally recognized rules of international law.*

*Key words: public participation, democratic essence, fair punishment, prosecutor, defence, democracy, protection function, indictment, defensive speech.*

An effective fight against crime is impossible in modern conditions without the broad participation of members of the public, since only with their help it is possible to ensure full disclosure of all crimes, exposure and fair punishment of all perpetrators, and eliminate the causes and conditions that contributed to the commission of crimes.

The current criminal procedure legislation provides for various forms of public participation in criminal proceedings. This principle is enshrined in Article 21 of the Code of Criminal Procedure, according to which, during the investigation and trial of criminal cases, an inquiry officer, investigator, prosecutor and court have the right, within their competence, to use public assistance to establish the circumstances of the crime, search for and expose the perpetrators, and deliver a fair sentence, as well as to identify the causes of the crime and the conditions that contributed to its commission.

According to the article of the Constitution of the Republic of Uzbekistan, the only source of power is its multinational people. The Law enshrines the right of all citizens to participate in the management of state affairs, both directly and through their representatives. These constitutional provisions suggest that in a democratic rule-of-law state, which is being built in our country, the regime of democracy should operate fully in the entire law enforcement system, including in criminal proceedings. Also, the activity of citizens in this area is one of the most important indicators of the level of development of democracy in the country.

These provisions imply the need to eliminate the tendency to limit public participation in the fight against crime, which developed at the end of the last century and significantly weakened the country's law enforcement potential. Moreover, as indicated in the Recommendation of the Committee of Ministers of the Council of Europe of September 5, 1996 "On the policy of combating crime in a changing Europe" (paragraph 11), neither the policy of combating crime nor the



criminal justice system can be effective without the active participation of the population ...

The problem of solving crimes is extremely acute. For many years, the percentage of crimes solved has been kept at an extremely low level. Solving this problem requires ensuring effective public participation in pre-trial criminal proceedings.

Judicial proceedings in criminal cases also need to be more effective. In the target program "Development of the judicial system, it was directly stated that the legal framework that would fully ensure the administration of justice by the Constitution of the Republic of Uzbekistan and generally recognized norms of international law has not yet been created. It seems that this is why, in his Address, the head of state, substantiating the importance for the modern Republic of Uzbekistan of the values of freedom, democracy, justice, legality and other riches of human civilization, stressed that these principles should be reflected in everyday practice, and in this vein, he called one of the directions of the country's development improving the efficiency of justice.

The fact that there are still problems associated with insufficient efficiency of justice is also confirmed by the target program "Development of the judicial system. "On the state of the judicial system of the Republic and the priority directions of its development and improvement" These documents state the low level of public confidence in justice and the effectiveness of the consideration of cases, including a significant narrowing of the opportunities for the participation of the masses in criminal proceedings.

Thus, despite the growing great need for public participation in criminal proceedings, it remains unsecured by law, except for the participation of assessors in criminal proceedings.

V.V. Stepanov "Involving the population to participate in the fight against crime", which mainly considers the historical, sociological, criminalistic and ethical issues of attracting the population to participate in the fight against crime, and only one small paragraph is devoted to the criminal procedural issues of this problem, consisting of ten incomplete pages. In 2009, AA Pavlov defended his PhD thesis "Public participation in the activities of the penitentiary system at the present stage", which, although it testifies to the importance of using public resources in the enforcement system, practically does not touch on the issues of criminal proceedings.

This goal is realized through the following tasks:

- to identify the social conditioning and democratic essence of public participation in criminal proceedings, to determine its legal basis;
- to analyze the historical experience and determinants of the development of the popular principle in criminal proceedings;
- to consider issues of public participation in the implementation of the functions of criminal prosecution, defence in criminal cases and assistance of criminal justice;

- to formulate proposals for improving the criminal procedure legislation in terms of normative regulation of the participation of citizens and public formations in criminal proceedings.

Provisions for Defense:

1. The social conditionality of public participation in criminal proceedings lies in the strengthening and development of the democratic foundations of the criminal procedure; the need to improve the quality, efficiency of justice, increase citizens' trust and respect for the court, eliminate conditions conducive to the commission of corruption crimes in the judicial environment; in improving the quality and efficiency of criminal prosecution of crimes and fulfilling the tasks of the criminal justice authorities to prevent crime; in the implementation of international legal standards for the fairness of criminal proceedings.

2. A representative of the public is an uninterested person who is involved (alone or with the participation of other persons) to participate in a criminal case by officials, participants in criminal proceedings or who participates in it on his own initiative,

providing assistance to criminal procedural activities or directly carrying out it, expressing the public interest.

3. The types of public participation in criminal proceedings are determined by the range of subjects of public representation in modern criminal proceedings, which are:

a) individual citizens involved in a criminal case by officials, participants in criminal proceedings or participating in it on their initiative;

b) unorganized, random groups of citizens who are not united either organizationally or jointly;

c) labour and educational collectives and other associations of citizens not created specifically for the protection of human rights (trade unions, parental committees, commissions for juvenile affairs, sports societies, etc.) and their representatives;

d) non-governmental human rights organizations and their representatives.

4. The forms of participation of the public in criminal proceedings - a specific, regulated by law for their involvement in activities aimed at the prevention, suppression, disclosure, promotion of investigation and consideration of criminal cases.

5. To ensure public participation in the performance of the prosecution function, we propose to reinstate such a participant as a public prosecutor. Public Prosecutor - a representative of the labour collective, a public, including a human rights organization, who appears in court and supports the prosecution. By participating in the trial, the public prosecutor has the right to: get acquainted with the case materials; present evidence and participate in their research; make motions and speak in the debate of the parties with the presentation to the court of an opinion on the proof of the accusation. The public prosecutor is obliged to: take part in the trial; state the opinion of a public association or collective and assist in clarifying the circumstances of the case. Besides, as representatives of the victim, civil

plaintiff and private prosecutor, at their request, admit, in addition to lawyers, other persons.

6. To ensure public participation in the implementation of the protection function, we propose to reinstate such a participant as a public defender. Public defenders are allocated by a plenipotentiary meeting of a public association or collective. The decision of the meeting must be submitted to the court. Persons authorized by the assembly to act in court as public defenders cannot refuse to defend themselves on behalf of a public association or collective without a relevant decision of the assembly. Public defenders have the right to submit documents and objects for admission as evidence, take part in their research, file motions and challenges before the court, express their opinion on the petitions of other participants in the trial, participate in judicial debates, present to the court an opinion on the circumstances mitigating liability the defendant or acquitting him.

The suspect, the accused should have the right to invite as a defence lawyer at his choice: a lawyer, another person with higher legal education, a relative.

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## COMMUNICATIVE LANGUAGE TEACHING

*Abstract: This article outlines and describes eight essentials of second language education that fit with the Communicative language teaching paradigm shift. The subsequent of the article focuses on one of the eight essentials and concludes the discussion. These eight essentials are: encourage Learner Autonomy, emphasize the Social Nature of Learning, develop Curricular Integration, Focus on Meaning, celebrate Diversity, expand Thinking Skills, utilize Alternative Assessment methods, and promote English language Teachers as Co-learners.*

*Key phrases: Learner Autonomy, Social Nature of Learning, Curricular Integration, Meaning, Diversity, Thinking Skills, Alternative Assessment methods, English language Teachers as Co-learners*

Since the 1970s communicative language teaching has been one of the most popular teaching methodologies around the world in second language education. Before that, the more traditional teaching methods (e.g., Audio-Lingual Method; Grammar-Translation Method) that were employed focused more on producing accurate, grammatically correct target language. Communicative Language Teaching (CLT) however began to change the emphasis to where learners produce the language with a focus on fluency and where errors are seen as being a part of development. In usual classes, teachers were seen as the knowledge providers and sole controllers of the class. In the approach English language teachers share this control and “facilitate” learning rather than dispense knowledge. So CLT represents a major change and is considered one of the main approaches to second language education today. [1] Jacobs and Farrell label this major change in teaching and learning a second language a *paradigm shift* because in order to successfully implement the CLT approach we must shift our thinking about teachers, students, learning, and teaching a second language. The idea of the shift in focus is illustrated by the story of the “Cricket and the Coin.” [2]

One pleasant summer day at lunch time two colleagues, A and B, were walking along a busy street in Atlanta when A turned to B and said, “Do you hear that cricket across the street?” to which B replied, “How could I possibly hear a cricket with all this traffic.” Her colleague confidently said, “Let’s cross the street and I’ll show you.” They carefully made their way through the traffic to a flower box on the other side where, sure enough, there was a cricket. B was astounded. “How could you hear a little cricket amid all this noise? You must have super-human hearing!” “The key,” A explained, “is not how well we hear but what we listen for.” To illustrate, she took a coin from her purse, threw it in the air, and let it drop on the sidewalk. Soon, the sound of braking vehicles filled the air, as cars came

to a halt. Drivers and pedestrians turned to look for the rattling coin. As A reached to retrieve her coin, B smiled and said, “Now, I see what you mean; it’s all a matter of focus.”

CLT can be seen as a set of “principles about the goals of language teaching, how learners learn a language, the kinds of classroom activities that best facilitate learning, and the roles of teachers and learners in the classroom”. [3]

CLT has been the “in” approach to second language education since its beginning in the early 1970s, and has now become the driving force that affects the planning, implementation, and evaluation of English Language Teaching (ELT) throughout the world. That said, not many English language teachers or second language educators are in agreement or even clear in their own minds as to what exactly CLT is, and there exist as many diverse interpretations as there are language teachers and second language educators. This wide variation in implementation of CLT is not, as we discuss in the article on celebrating Diversity, necessarily a bad thing. Rather, it is a natural product of the range of contexts in which second language learning takes place and the range of experiences that students, teachers, and other stakeholders bring with them.

In its early inception CLT was seen as an approach to teaching English as a second or foreign language for the purposes of enabling second language learners to be able to use language functionally, meaningfully and appropriately, instead of the previous emphasis on correctness. However, over the years ESL and EFL teachers have interpreted a CLT approach to language teaching in many different ways with many thinking that the teacher just forms groups in their classes and let the students practice speaking the second language. The end result that teachers using this approach were seeking was that their students become competent in speaking that second language. Richards calls this *phase 1* of the CLT movement and he says it continued until the late 1960s. In phase 1 the previous traditional approaches that gave priority to grammatical competence as a foundation for language proficiency gave way to functional and skill-based teaching that had a “fluency over accuracy” pedagogical purpose. The next phase of CLT according to Richards was the classic CLT period from the 1970s to the 1990s.

In this phase, the place of grammar in instruction was questioned because it seemed to result only in grammatical competence that produced grammatically correct sentences under controlled conditions but did not, according to many, improve oral production or aid the communicative use of language. So what was really called for at that time was communicative competence where students could actually be in touch orally in the second language; for example, Hymes suggested that Chomsky’s ideal native speaker with linguistic competence include the sociolinguistic component of communicative competence of *knowledge of* and *ability for* language use with respect to four factors: “possibility, feasibility, appropriateness and accepted usage”. [4]

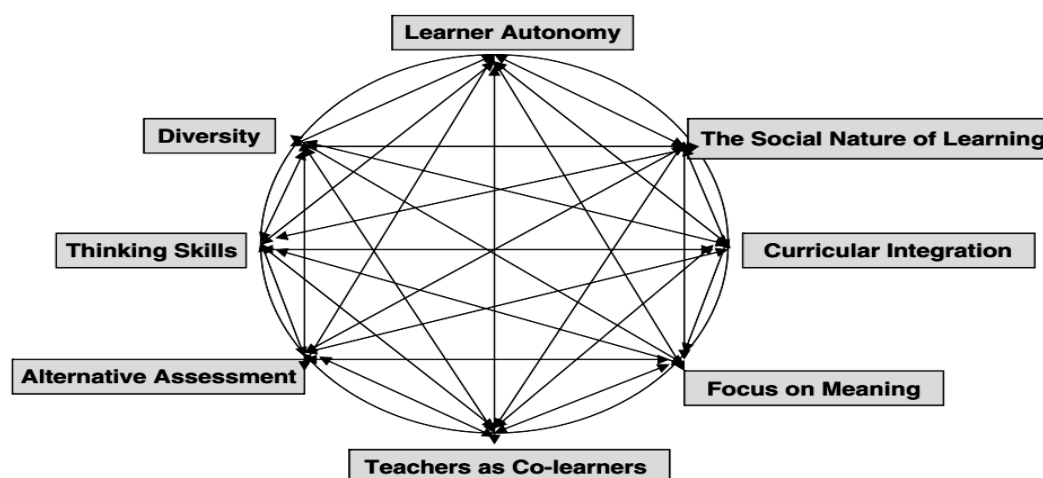
More recently, Richards suggests that communicative competence includes the following aspects of language knowledge:

- knowing how to use language for a range of different purposes and functions
- knowing how to vary our use of language according to the setting and the participants
- knowing how to produce and understand different types of texts
- knowing how to maintain communication despite having limitations in one's language knowledge.

Since the 1990s CLT has continued to evolve by drawing from different educational paradigms and diverse sources with the result that as Richards maintains, there is still “no single or agreed upon set of practices that characterize current communicative language teaching.” Rather, he suggests that CLT these days refers to “a set of generally agreed upon principles that can be applied in different ways, depending on the teaching context, the age of the learners, their level, their learning goals.” In addition, Brown has maintained that CLT should include the following:

- Classroom goals are focused on all the components of communicative competence and not restricted to grammatical or linguistic competence.
- Language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes.
- Fluency and accuracy are seen as complementary principles underlying communicative techniques.
- In the communicative classroom, students ultimately have to use the language, productively and receptively, in unrehearsed contexts. [5]

Richards maintains that if we ask ESL/EFL teachers today who say they follow the CLT approach what exactly they do, or what they mean by “communicative,” their explanations will vary widely, from an absence of grammar in a conversation course, to a focus on open-ended discussion activities. In our view, the key problem lies in the fact that not enough teachers are implementing CLT and some of those who do implement it have done so too infrequently, too often returning to the traditional paradigm.



**Figure 1.1** Eight essentials for successful second language teaching

Figure 1.1 provides an illustration of the interdependence of these eight essentials of the paradigm shift in second language education. The circular nature of the figure emphasizes that all the changes are parts of a whole and that the successful implementation of one is dependent on the successful implementation of others.

This article focuses on these eight essentials in second language education, the links between the eight, and, most importantly, how these essentials are being used and can be implemented. The eight essentials are briefly explained as follows.

**Learner autonomy** Within a CLT approach to second language education we focus more on the role of learners rather than the external stimuli learners receive from their environment, such as from teachers and materials. In other words, then center of attention in learning English as a second/foreign language has shifted from the teacher and materials (the external) to the student (the internal). This shift is generally known as the move from teacher-centered instruction to learner (or student)-centered instruction. Learner Autonomy is a key concept here: learners have an important share of the responsibility for and control over their own learning.

**The social nature of learning** As the name suggests, to be social in learning we mean some form of interaction and cooperation is necessary within a CLT approach to second language education. We focus greater attention on the Social Nature of Learning English as a second/foreign language rather than on students as separate, decontextualized individuals. To understand and promote learning, we look not only at individuals but also at the people who make up their world and the connections between them. These people include not only teachers but also peers and others such as administrators and people in the outside community. Cooperation is valued over competition without excluding the latter completely. When students collaborate they all play leadership roles.

**Curricular integration** Curricular Integration refers to a second language pedagogical approach which fuses knowledge from different disciplines to create more meaningful contexts for overall learning. The traditional fragmentation of content by disciplines assumes that students will recognize the links between the disciplines on their own, but this can be difficult for second language students whose main focus may be the language rather than the content. However, with a CLT approach to teaching and learning English as a second/foreign language the integrated approach purposefully and systematically guides second language students toward discovering these connections and processes; connections and processes that help ESL/EFL students better understand themselves and the world around them. In the highest form, this student-centered approach uses real-life issues and varied resources to bring students as close to the “real thing” as possible. Furthermore, integration can also include integrating the various language skills, as well as integrating the academic with the social and emotional. [6]

**Focus on meaning** For this essential we focus on learning English as a second/foreign language for purposes other than just passing an exam. Education is not just preparation for life; it is also participation in life. Students understand the purposes of learning and develop their own purposes for learning regardless of the

subject. Within learning English as a second/foreign language we suggest that understanding also involves our students' comprehension of what they are learning rather than learning by rote learning methods such as drills so that they can be educated as complete human beings.

**Diversity** First of all, we celebrate Diversity among our second language learners and we see this diversity as a plus in our English as a second/foreign language classes. We focus on discerning, taking into account, and appreciating differences among our second language learners within a CLT approach to language education; thus we consider all second language (indeed all students) to be unique. This uniqueness includes differences not only in first language backgrounds, but also in intelligence profile, personality, and such other background factors as race, ethnicity, social class, religion, sex, and sexual preference. We suggest in this CLT concept that no standard, one-size-fits-all way of teaching a second language exists, and that differences of opinion and perspective offer opportunities for learning rather than being cause for winner-take-all conflict.

**Thinking skills** For this CLT essential we focus on how students learn by a process of expanding their Thinking Skills rather than looking only at what they produce. This emphasis on process rather than just on end-product encourages second language students and teachers to promote reflection on one's thinking, to encourage deeper critical thinking, and more varied ways of solving problems, and to gain sense of greater questioning of how things are done. With an appreciation of the complexity, uncertainty, nonlinearity, and instability of knowledge in learning a second language, students not only come to see change as a constant but also that learning a second language (and learning in general) is a life-long process; indeed, we suggest that disruption and surprise are to be welcomed while learning.

**Alternative assessment** We should point out immediately that when we say alternative we are not "throwing out the baby with the bathwater" because we still see the place of more traditional testing; it is just that now we want to suggest that English as a second/foreign language teachers and administrators take into account that not all our second language learners may respond to such testing in a manner that compliments their different cultural backgrounds and that we have alternative means of assessment that may be more suitable. So within a CLT approach to second language education we recognize that while standardized, objective-item tests do provide relevant information, sole reliance on such measures blinds us to a great deal of what is important in education. We suggest that more Alternative Assessments connect closely with real world purposes. Furthermore, this type of assessment is done not mainly by outsiders but more importantly by those actually in the classroom (peers) who grasp the particular context in all its complexity. Thus Alternative Assessment includes students assessing themselves, peers, and the "how" and "what" of their English as a second/foreign language learning. Additionally, Alternative Assessment focuses on what second language students can do rather than on what they cannot do.

**Teachers as co-learners** The final concept within the eight essentials for successful implementation of CLT focuses on language teachers not principally as



possessors of knowledge that is to be passed on to students; instead, teachers learn along with second language students because knowledge is dynamic and learning is a life-long process. Teachers learn with their students, and they learn along with their fellow teachers. Based on this learning, teachers join students in playing a greater role in such matters as materials design and institutional governance.

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## **SOME COMPLEX PROTEINS AND THEIR BIOLOGICAL PROPERTIES**

*Annotation: The article provides information about some complex proteins and their biological properties and importance.*

*Keywords: Glycoproteins, carbohydrate-protein complexes, immunoglobulins, interferons. IgG, IgM, IgA, IgD, IgE, Lipoproteins, Chylomicrons.*

A complex protein contains two components - a simple protein and a non-protein substance. A non-protein substance is called a prosthetic group. Typically, prosthetic groups are strongly bound to a protein molecule.

Glycoproteins and their biological significance. Complex proteins are divided into several groups depending on the nature of the non-protein components.

Carbohydrate-protein complexes. These macromolecules are divided into two types: glycoproteins and proteoglycans or polysaccharide-protein complexes. The carbohydrate part of glycoproteins is composed of smaller, irregular heteropolysaccharides. 80-90% of the macromolecule is protein.

Depending on the location of carbohydrate-peptide bonds in the structure of glycoproteins, the following types have been identified: glycosylamide - a monosaccharide bound to the amide group of asparagine, such as immunoglobulin, glycoprotein enzymes and hormones; O-glycoside - a monosaccharide bound to the OH-group of serine or threonine, for example, mucin in saliva, blood group substances. It sometimes binds to the OH group of hydroxylysine or hydroxyproline in collagen proteins.

Although the carbohydrate component makes up a small portion of the glycoprotein, it gives the protein molecule qualitatively new properties. In particular, glycoproteins differ from proteins in their high temperature resistance (thermostability). High or low temperatures do not change their physical and chemical properties. This means that if a protein is resistant to temperature denaturation, it can be considered a glycoprotein. Unlike other proteins, glycoproteins are extremely difficult to digest in the presence of proteolytic enzymes such as trypsin and pepsin.

The carbohydrate portion of glycoproteins gives the protein a high degree of specificity. Macromolecules on the cell surface are an example of this. Most proteins consist of hormones, complex proteins in the membrane, all antibodies (immunoglobulins), blood plasma, milk proteins, ovalbumin, interferons, blood group factors, receptor proteins and other glycoproteins. They perform various functions in animal and plant organisms, microorganisms: receptors for high molecules in intercellular communication, transport of hydrophobic substances and

metal ions (transcortin, serruloplasmin, haptoglobin, transferrin), coagulation (prothrombin, fibrinogen) and immunity (immunoglobulins). Enzymes such as cholinesterase, ribonuclease B and gonadotropin, corticotropin hormones are among the glycoproteins.

The cell membrane of microorganisms living in hot springs contains glycoproteins. Capsules of chemically and thermally resistant spore bacteria contain glycopeptides and glycolipoproteins. Glycoproteins act as antifreeze in Antarctic fish and prevent the formation of ice crystals in the body's internal environment.

Also, heparin, which is synthesized in the liver and is contraindicated in blood clotting, is a glycoprotein antigen of many bacteria.

A separate group of glycoproteins consists of glucosaminoglycans or acidic mucopolysaccharides. They differ from true glycoproteins mainly in that they contain repetitive, often specific disaccharide units. The main part of the proteoglycan molecule formed by the binding of glucosamine glycans to a protein molecule belongs to polysaccharides. They are also called sour mucopolysaccharides because they were first derived from the sticky proteoglycan in saliva - mutsin. Most proteoglycans are the main gel-like substance between tissue cells. In addition, they are involved in the composition of the fluid that moisturizes the skin, joints, cornea.

\ Proteoglycans include hyaluronic acid, heparin, chondroitin sulfuric acid, and others. Mutsin, found in saliva and in the secretions of various glands, gives them a high degree of viscosity, facilitates the sliding of food into the stomach, protects the mucous membrane of the mouth from harmful mechanical, thermal and chemical effects.

Interferons. Many types of viruses are inhibitors of reproduction. There are currently several types of interferons (a, b, g). Some of them are genetically engineered. Interferons are formed in response to the introduction of viral nucleic acid into the cell, limiting the spread of the virus, which is the main protective protein in patients with cancer.

Immunoglobulins. Immunoglobulins are synthesized in plasma cells in lymphocytes. Antibodies (antibodies) enter the class of glycoproteins and perform a protective function, neutralizing foreign substances entering the body - antigens of a chemical nature. There are 5 classes of immunoglobulins: IgG, IgM, IgA, IgD and IgE. Different classes of immunoglobulins differ in molecular weight, blood concentration and biological properties.

Protein and fat complexes. Lipoproteins and proteolipids are complexes of proteins with fatty substances. Fat protein complexes are divided into free lipoproteins (milk, blood lipoproteins) and structural proteolipids contained in the membrane. Lipoproteins are water soluble. Their structure is unique, the oily component is inside the molecule, and the surface is covered with a protein layer. In proteolipids, on the other hand, the protein component is inside and the surface is covered with fat. Therefore, they are soluble in fat solvents. Lipoproteins contain neutral fats, free fatty acids, phospholipids and cholesterol.

Protein complexes of lipids differ in particle size, solubility and other

physicochemical properties. They are called alpha- and beta-lipoproteins because they move along with plasma proteins, alpha- and beta-fractions in electrophoresis. Fats are digested, absorbed from the small intestine into the lymph, and then appear in the blood chylomicrons (drops or particles with a diameter of about 1 micron) also contain a lipoprotein complex.

In the structure of lipoproteins retains a complex of non-polar triacylglycerol and cholesterol esters. The water-soluble hydrophilic parts of the polypeptide fragment are composed of phospholipids. They are trapped inside the particle. Therefore, this structure, rich in lipids, has the ability to dissolve in water and is convenient for the transport of fats from the small intestine to the fat depots and other tissues through the blood.

In addition to chylomicrons, blood lipoproteins are divided into three main groups: very low-density lipoproteins (VLDL) - pre-beta-lipoproteins, low-density lipoproteins (LDL) - beta-lipoproteins and high-density lipoproteins (HDL) - alpha-lipoproteins.

Chylomicrons, pre-beta-lipoproteins, and beta-lipoproteins contain less than 30% protein, while alpha-lipoproteins contain 50% protein. Proteins are assumed to be wrapped in alpha-lipoproteins, and in beta-lipoproteins in a layered configuration. The classification of lipoproteins is based on the density of the lipoprotein complex. The unit of density, in turn, depends on the ratio of protein and various lipids. The higher the amount of lipids, the lower the density of lipoproteins, and they float to the top during the centrifugation of blood plasma.

In medicine, it is important to determine the amount of lipoprotein fractions in the blood plasma. It is confirmed that the development of a serious and widespread cardiovascular disease called atherosclerosis is associated with an increase in the amount of LDL in the blood. This is due to the deposition of cholesterol and its esters in plasma lipids on the inner surface of blood vessels.

Structural lipoproteins are part of biological membranes. According to their physicochemical properties, they are called proteolipids because they are soluble in non-polar solvents (chloroform-methanol 1: 1 mixture). This property of proteolipids is due to the fact that the inner part of their molecule consists of 65-85% protein, and the shell is a lipid component. Proteolipids are found in the heart, kidneys, lungs, skeletal muscle, plant cells, mostly in the myelin sheaths of nerves. The composition of proteolipids in different organs varies. They are involved in the physiological functions of nerve fibers and the transfer of substances through the membrane.

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## **SOLUTION OF PROTEINS AND FACTORS AFFECTING IT**

*Annotation: The article provides information on the solubility of proteins and the factors that affect it, as well as the importance of their content.*

*Keywords: protein, hydrophilic, collagen, gelatin, neutral salts, temperature effects, globulin, pepsin, muscle phosphorylase, polyanion, salinity.*

Proteins are hydrophilic, aquatic colloids. Dry protein dissolved in water swells like all high-molecular hydrophilic compounds, and then the protein molecules slowly begin to dissolve. During swelling, water molecules pass into the protein and bind to its polar groups. The solid layer of the polypeptide chain swells. The digested protein can be considered as a recyclable solution. Further absorption of water causes the protein molecule to separate and dissolve from the total mass. But bloating does not always lead to melting; Some proteins, such as collagen, remain suffocated even if they absorb a lot of water.

The process of melting occurs on the basis of the hydration of proteins, that is, the binding of water molecules to proteins. The hydrated protein is strongly bound to the water molecule, which is very difficult to break. This is not simply adsorption, but shows the electrostatic bonding of water molecules with the polar groups of negatively charged acidic and positively charged basic amino acids.

A portion of the hydrated protein is bound to peptide groups by water molecules using hydrogen bonds. For example, proteins with a non-polar side chain also bind to water. An example of this is the non-polar amino acids stored in collagen that bind large amounts of water. Under the action of water bound to peptide groups, the polypeptide chain is elongated. However, the bonds (chains) between the chains prevent the protein molecule from breaking apart and dissolving. When the collagen-containing product is heated, the inter-chain bonds in the collagen fibers are broken and the separated polypeptide chain is dissolved. Partially hydrolyzed soluble collagen is called gelatin. Gelatin is chemically close to collagen, it absorbs easily and forms a sticky solution in water. Gel formation is a key feature of gelatin. Aqueous solutions of gelatin are used in practical medicine as a plasma substitute and hemostatic agent, and the gel is used in the manufacture of capsules in pharmaceutical practice.

Factors affecting protein solubility. The solubility of proteins depends on their amino acid composition (polar amino acids are better soluble than non-polar amino acids), structural properties (globular proteins are better soluble than fibrillar proteins) and solvent quality. For example, plant proteins - prolamins are soluble in 60-80% alcohol, albumins - in water and weak solutions of salts; collagen and keratin are insoluble in most solvents.

The stability of protein solutions depends on the charge of the protein molecule and the hydrated shell. There is an organic link between the charge of a protein or the number of polar amino acids in it and hydration: the more polar amino acids in a protein, the more water is bound (per 1 g of protein). In some cases, the hydrated shell of the protein is enlarged, and the hydrated water can dissolve 1/5 of its weight.

Some proteins are strongly hydrated but poorly soluble. For example, collagen binds more water than well-soluble globular proteins, but is insoluble. Its solution is hindered by structural features - transverse bonds between polypeptide chains.

The solubility of a protein depends on the number of hydrophilic groups in the molecule, the size, shape and total charge of the molecules. The solubility of proteins decreases at the isoelectric point. Because there is no electrostatic force between the molecules that pushes them apart.

The effect of neutral salts. Neutral salts ( $\text{Na}_2\text{SO}_4$ ,  $\text{MgSO}_4$ ,  $(\text{NH}_4)_2\text{SO}_4$ ) increase the solubility of even insoluble proteins in pure water, such as euglobulins. Salt ions interact with the oppositely charged molecules of the protein, breaking the salt bridges between the protein molecules. Excess salt (increased ionic strength of the solution) has the opposite effect.

The effect of environmental pH. The pH of the medium affects the charge of the protein, as well as its solubility. A protein is unstable at its isoelectric point, ie when the sum of its charges is zero. The loss of charge facilitates the approach, adhesion and precipitation of protein molecules. Therefore, the solubility and stability of a protein is minimal at the pH of the medium at its isoelectric point.

The effect of temperature. There is no strong correlation between protein solubility and temperature. But proteins such as globulin, pepsin, and muscle phosphorylase are good with increasing temperature in water and saline solutions; proteins such as muscle aldolase and hemoglobin are poorly soluble.

Effects of various charged proteins. Aggregates are formed if polyanion-based proteins are added to polyanionic-acidic proteins. In such cases, as a result of neutralization of charges, stagnation disappears and proteins precipitate. This property is sometimes used to separate the desired protein in a protein mixture.

Water-soluble substances, organic solvents - ethyl alcohol, methyl alcohol, acetone, alkali metals - thick solutions of neutral salts break down the water membrane of the protein and reduce its solubility. When organic liquids - ammonium sulfate, sodium sulfate, sodium chloride, sodium phosphate and other solutions are added to the protein solution, the protein usually precipitates.

Salting. When various salts are added to a protein solution, its precipitation is called salinization. Under these conditions, the protein molecules are free of the hydrate shell that gives it stability, combine easily with each other and form large aggregates. Salinization often does not change the native state of the protein (initial, natural), when the salt ions are separated from the precipitate by dialysis, the protein is re-dissolved. Therefore, the method of salting with ammonium sulfate and sodium sulfate is widely used in the separation of proteins without disturbing the structure.

Different protein solutions precipitate when they are saturated with salt to varying degrees. Therefore, it is possible to precipitate some proteins separately by saturating a solution consisting of a mixture of proteins with a concentrated solution of ammonium sulfate. For example, when serum is semi-saturated with ammonium sulfate, globulins are released, filtering the globulin precipitate and adding salt powder until the solution is completely saturated, precipitating albumins.

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## **GEO-ECOLOGICAL PROBLEMS OF OASIS LANDSCAPES OF ZARAFSHAN VALLEY**

*Abstract: the article discusses ecological problems in oasis landscapes of Zarafshan Valley, resulting from human economic activity. It was found that contamination of surface and subterranean waters, soil greasiness in the oasis grows downstream the Zarafshan River.*

*Keywords: oasis, landscapes, pesticides, mineralization of water, subterranean waters, optimization of nature, environment monitoring.*

Introduction. Valley of Zarafshan River is located in the heart of Central Asia and is drawn into the sub-latitudinal direction beginning from the east of the high mountains of Pamir-Alai, and to the west, on the plain it penetrates deep into the desert of Kyzylkum. The total length of Zarafshan river is 770 km.

In geomorphological structure the Zarafshan Valley is divided into three parts: the Upper, the Middle and the Lower. To the Upper Zarafshan belong mountainous part, that extends from the source of the river to Rabothodzhin (Pervomayskiy) dam. It is called Quhistan (a country of mountains) and lies entirely in the territory of Tajikistan. From Rabothodzhin dam to Hazarinskoy gorge is called the Middle Zarafshan, where the valley rapidly expands and it is surrounded from the north with off spurs of Turkestan and from the south with Zarafshan ridge. After leaving the Hazarin gorge, the river flows on the plain, surrounded by the desert Kyzylkum. This part up to the river Amu Darya is called the Lower Zarafshan. The Middle and the Lower Zarafshan administratively belongs to the Republic of Uzbekistan.

On the Upper Zarafshan Valley the river is narrow, the speed of flow of the river is big. Only slightly higher on Rabothodzhin plateau near a city Penzhikent the valley widens to 2.0-2.5 km. In the Middle Zarafshan the width of the valley river reaches 15-20 km. Due to the abundance of water, fertile soil people settled in the valley in the Stone Age, as evidenced by the remains of people's settlements found in several places of the valley. Irrigated agriculture in the Middle and the Lower Zarafshan occurred 4.0-4.5 million years ago. Yet far from BC in the Zarafshan Valley were built channels, water dividing structures, accustomed large areas of land for irrigation.

On the Middle and the Lower Zarafshan clearly stand out five large oases, which we call landscapes. They are: Samarkand, Kattakurgan, Karmana on the Middle Zarafshan, Bukhara and Karakul on the Lower Zarafshan. All the landscapes spatially related to each other and the specialization of agriculture have



much in common. In all landscapes mostly important economic crops are cotton and 35-45% of them are engaged in cotton crops.

Results and Discussions. Sowing decades only of cotton, without complying with the rules crop rotation, as well as the excessive use of pesticides and fertilizers has led to degradation of soil, a decrease of productivity of cotton and other crops. According to T.L.Ortykov (2002), R.K.Kuziev humus content in the irrigated soil over the past 50 years decreased by 45-50%, which led to a deterioration of the soil structure, which in turn has reduced the soil's resistance to water and wind erosion.

One of dynamic natural processes in the oases is strengthening of mineralization of water. Currently, 60% of the Zarafshan Valley irrigated land is saline to varying degrees, and they are increasing downstream. In Samarkand landscape saline land is less than 30%, in Kattakurgan-about 60%, Karmana- 70.4%, in Bukhara 89.5%, in Karakul more than 90%.

Currently, all irrigated land distributed to farms and farmers to obtain high yields make fertilizers at two to three times more than the norm. For the soil condition no state organization controls. Soil scientists note that by a ruthless exploitation of the irrigated land run down, degraded.

Mineralization of Zarafshan river water changes dramatically downstream. In the Upper Zarafshan the mineralization make up 250-300 mg/l, in the entrance to Samarkand oasis – 400-450 mg/l, in a meridian of the city Samarkand – 500-600 mg/l, in Kattakurgan oasis – near the city Xatirchi – 900-1000 mg/l, after the city Navoi – 1300-1400 mg/l, in Bukhara oasis – near the city Bukhara - 1600-1800 mg/l, In Karakul landscape it reaches up to 2500-2600 mg/l.

Mineralization of groundwater as surface waters changes downstream of the river Zarafshan. The clearest, fresh water is available at the Samarkand oasis - 350-500 mg/l, the most mineralized water in Bukhara (1500-400 mg/l) and in Karakul oasis (2500-10000 mg/l).

In order to accurately lighting the mineralization of groundwater in the oases of the Zarafshan Valley were sampled drinking water of more than 80 points, the chemical analysis was carried out in laboratory "Microelements" of Samarkand state university. In samples of water founded the number of ions, that is chlorides, sulfates, bicarbonates, carbonates, sodium, calcium, potassium and magnesium, as well as the degree of mineralization rate of hydrogen and water hardness. Changes in water salinity increases markedly from the upper reaches to the lower reaches of the Zarafshan. In the upper part of the Middle Zarafshan, the salt content in the groundwater is 100-1100 mg/l, in the middle part 1850 mg/l, In the city Aktash – 2000 mg/l, in the Lower Zarafshan changes up to – 3128 mg/l.

Water hardness changes in the spring waters from 2,6 and 4,5 and mg-ekv/l, in groundwater increases from the upper reaches of the river to the lower pool. In the upper part of the Middle Zarafshan it changes from 10,55 to 17,49 mg-ekv/l, downstream reaches up to 34,00 mg-ekv/l, in the Lower Zarafshan in Romitan district of Bukhara region it made up - 41,6 mg-ekv/l. In general, hardness in groundwater exceeds the MCL from 1,5 up to 6,0 times.

Distribution of anions and cations in the water given based on 20 water samples. Depending on mineralization of water in groundwater chlorine ion content increases from the upper part of the valley Zarafshan in its lower part. For example, it ranges from 161 mg/l -252 mg/l, up to 546 mg/l, and in the Lower Zarafshan – 609 mg/l. Sulphate ions high degree of migration, but low compared to chloride ions [7]. The main sources of sulphate ions are sedimentary rocks containing gypsum and anhydrides. These rocks are widely distributed in the foothill plain of Zirabulok, Ziyavutdin, Karatag Mountains and massifs Malikchul and Urtachul. A large number of sulfate ions in the artesian wells and groundwater of Narpay area are connected with these deposits. In all four wells from which samples were taken in water Narpay area a content of sulfate ions exceeds to 3.5 times of the MPC. The amount of sulfate ions in groundwater in the Middle Zarafshan in rare cases exceeds MPC level, but in the Lower Zarafshan it's content is quite large. For example, in the Zhandarov district of Bukhara region it's number is 789 mg/l, in Karakul district – 464 mg/l, in Romitan – 1076 mg/l. The number of ions of hydrocarbons in spring waters changes from 171 mg/l up to 432 mg/l.

With change of mineralization of water, also changes the number of cations of calcium, magnesium, sodium and potassium. Of these cations, content of calcium fairly mineralized in many waters. By extent of the sodium ions have high solubility and migration. Magnesium ions can be found less than calcium. Usually, in weakly mineralized water found a large amount of sodium. The amount of sodium and potassium ions in an ordinary well water is increased from 1.5 to 6 times the SEM.

In the last years ground waters of Bukhara and Karakul oasis become not suitable for drinking. To provide the population with quality drinking water from the Samarkand oasis it was built pipeline Damhodzha - Navoi - Bukhara. It provides part of the population of Navoi and Bukhara region with drinking water. In perspectives Samarkand oasis will provide with clean drinking water not only the population living in the lower reaches of the Zarafshan River, but also the population of the Khorezm region and the Republic of Karakalpakstan. Therefore Samarkand Oasis as a reservoir of clean groundwater must be protected from possible contamination and preserve as a precious national wealth.

In the Upper Zarafshan in the territory of Tadjikistan there are two large mining and industrial enterprises, wastes of which permanently pollutes the river Zarafshan. These are - Anzob Mining and Processing Plant and Magian gold mining complex. They do not have water treatment plants and septic tanks are available for the temporary storage of contaminated water. After their filling excess water continually falls into the river Zarafshan. According to G.G.Deushev, S.Sh.Arutyunyan, M.M.Sultonov (2003) of these enterprises in Samarkand oasis annually receives 90-1200 tons of antimony. Together with antimony come mercury, arsenic, lead, zinc, copper and other heavy metals. All settlements in the Upper Zarafshan located on the banks of rivers in a narrow valley. Household and industrial waste and wastes of cattle farms dropped into the river. Therefore, on the border between Uzbekistan and Tadjikistan at the entrance of the river Zarafshan Samarkand oasis phenol content of oil products, nitrates, certain types of heavy

metals, as well as bacteriological contamination is often higher than the MPC. Due to the lack of control and no intergovernmental agreement nobody is responsible for the pollution and its consequences. The Zarafshan River Basin home to more than 4 million people, their health, fortune, wealth directly associated with the river Zarafshan. Therefore, between neighboring countries should be set intergovernmental agreements that meet international standards and regulations.

Groundwater pollution from sources in addition depends on filtration sediment properties. In unconsolidated coarse clastic sediments of pollutants along with the water quickly percolates down and they can reach tens of meters of power from the land surface. According to N.I. Sabitova (2001) in the Samarkand oasis on the banks of Akdarya water mineralization at a depth of 100 meters is higher than the MPC. She noted that this is not due to natural factors, but is due to human activities.

At the current rate of the population growth in the mid-21 th century it will double to 50 million mark. This leads to the fact that in the oases density of population will double and every inhabitant of the Republic will have to 7.0-7.5 hundredth of irrigated land, against the current, which is 14-15 hundredth. Currently, land occupied by settlements, various state and private buildings, irrigation and road networks and other make up an average of 10-12% of the total area of irrigated land. This figure is also in the middle of the 21st century will reach 20-25% of fertile land. Due to a decrease of area of irrigated lands will be intensified anthropogenic load per unit area and of course, naturally will worsen ecological condition. In order to improve environmental situation and support the environmentally sustainable development of oasis landscape it is necessary:

1) Separately for large oases of Uzbekistan to develop a special program for optimization and sustainable environmental development;

2) Greater involvement of innovation and advanced technology to clean up water pollution havens;

3) Improve and strengthen the service monitoring of the condition of the natural environment, constantly monitor the quality of agricultural products grown in the oases of;

4) To study the spatial movement of chemical elements and determining the functioning of the landscape it should be systematically maintained landscape-geochemical survey, making the landscape map oases.

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## **O'ZBEK XALQ POETIK IJODIDA MILLIY QADRIYATLARIMIZ VA XALQ QO'SHIQLARIMIZNING TUTGAN O'RNI**

*Annotatsiya: "O'zbek folklori" talabalarga xalq og'zaki ijodi haqida bilim berish, ularda folklor asarlarini tahlil va talqin qilish ko'nikmalarini shakllantirish, milliy an'analarga nisbatan hurmat va vatanparvarlik ruhida tarbiyalash. Yosh avlodni tarbiyalash g'oyasini ifodalashda folklor asarlari va an'alarining ahamiyatini belgilash, adabiyotshunoslik va xalq og'zaki ijodining chambarchas bog'liq ekanligini anglash hamda folklor asarlarini ilmiy jihatdan o'rganish ko'nikmalarini shakllantirish. Iste'dodli ijodkorlar folklor namunalarini saqlab qolishi va keng ommalashtirish bilan birga og'zaki an'analari doirasida uni yanada mukammallashtirgan holda, yangilarini yaratilishi.*

*Kalit so'z: "O'zbek poetik ijodi", folklorshunoslik, folklor, xalq poeziyasi. O'zbekiston Respublikasi Prezidenti Shavkat Mirziyoyevning "Sharq taronalari" o'n ikkinchi xalqaro musiqa festivali ochilishiga bag'ishlangan tantanali marosimidagi nurqida*

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## **THE PLACE OF OUR NATIONAL VALUES AND FOLK SONGS IN UZBEK PEOPLE'S POETIC WORK**

*Annotation: "Uzbek folklore" to teach students about folklore, to develop skills in the analysis and interpretation of folklore, to educate them in the spirit of respect and patriotism for national traditions. To emphasize the importance of folklore works and traditions in expressing the idea of educating the younger generation, to understand the close connection between literature and folklore, and to develop skills in the scientific study of folklore. Talented artists should preserve and popularize folklore samples and create new ones by perfecting them within the framework of their oral traditions.*

*Keywords: "Uzbek poetic creativity", folklore, folk poetry.*

“Barchangiz guvohsiz, shu kunlarda generativ musiqa, sun'iy intellekt haqidagi bahslar qizg'in tus olmoqda. Kelajak musiqasini endi faqat texnika yaratadi, degan bashoratlar ilgari surilmoqda. Lekin hammamiz yaxshi bilamizki, har qanday mukammal texnika vositasi ham tirik inson nafasini, uning yurak nolalarini, jonli ovoz jozibasini, chinakam san'at o'rnini hech qachon bosolmaydi.

Haqiqiy san'atni, sof va boqiy musiqani faqat Parvardigori olamning marhamati bilan hazrati Inson yaratadi.

Sayyoramizda turli kelishmovchilik va qarama-qarshiliklar, urush va nizolar avj olgan tahlikali zamonda, odamzot tobora o'z dunyosiga o'ralib borayotgan bir sharoitda musiqa insonga insonligini eslatib, uning qalbida kelajakka umid va ishonch uyg'otadi.

Musiqa san'ati madaniy fenomen sifatida yangi avlodni tarbiyalash va kamolga yetkazish borasida cheksiz imkoniyatlarga egadir. San'at bilan oshno bo'lgan yoshlarning hayotga munosabati, milliy urf-odat va umumbashariy qadriyatlarga hurmati baland bo'ladi.

Va men ishonaman, ular dunyoni ma'naviy tanazzuldan qutqarishga qodir bo'lgan, o'zaro ahillik va birdamlikni ulug'lovchi avlod bo'lib maydonga chiqadi. Shu ma'noda, musiqa – hech narsa bilan o'lchab, solishtirib bo'lmaydigan beqiyos ilohiy ta'sir kuchiga ega desak, ayni haqiqatni aytgan bo'lamiz”.

Shavkat Mirziyoyev.

Dunyo xalqlari qatori mamlakatimiz mustaqillikka erishgandan so'ng, ajdodlarimiz tomonidan yaratilgan milliy qadriyatlarni tiklash, unutilgan an'analarni keng ommalashtirish va ularni chuqur o'rganish uchun zarur sharoitlar yaratildi. Zero, O'zbekiston xalqining qadimgi urf-odat, an'ana va marosimlarga alohida e'tibor berishi ma'naviy tiklanish jarayoni jadal kechayotgan hozirgi kunda muhim ahamiyatga ega. Chunki, kishilarni yangicha ruhda tarbiyalash, ularning ongiga milliy mustaqillik g'oyalarini chuqurroq singdirish, ajdodlarimiz yaratgan qadriyatlar mohiyatini keng targ'ib qilishda, an'ana va marosimlar mohiyatini anglash, ularni ayniqsa, yoshlarga chuqurroq tushuntirish, milliy istiqloq mafkurasini keng omma orasiga yoyishning ta'sirchan vositalaridan biri hisoblanadi. Jamiyat rivoji davomida kishilarning o'zaro munosabatlari va ijtimoiy – iqtisodiy taraqqiyot qonuniyatlari asosida muayyan urf-odat va marosimlar tizimi shakllanadi. Asrlar davomidagi rivojlanish jarayonida xalqona, milliy xususiyatlarni aks ettirgan marosim va an'analargina saqlanib, takomillashib kelaveradi. Xalqning milliy ruhiyati va mentaliteti ham uning marosimlari hamda og'zaki badiiy ijodiyotida o'z ifodasini topadi.

Ma'umki, an'ana va marosimlar xalqning ulug'vorligini, uning milliy qadr-qimmatini va mehnatsevarlik, erksevarlik, do'stlikka sadoqatni, boshqa xalqlarga hurmat, Vatanga muhabbati-yu, dushmanga nafrat kabi xususiyatlarini o'zida aks ettiradi. Xalqning eng yaxshi an'analari – insonparvarlikni, jamoa bo'lib ishlash va kamtarlikni, mehmondo'stlikni va kattalarga hurmatni, asrlar davomida mehnatkash xalq orasida rasm-rusumga aylangan boshqa ijobiy xislatlarni o'zida gavdalantiradi.

Folklor haqida umumiy tushuncha. «Folklor» atamasi aslida «folk» — xalq va «lore» — donolik so'zlaridan yasalgan bo'lib, «xalq donoligi, xalq donishmandligi» ma'nolarini anglatadi. Uni birinchi marta 1846- yilda Vilyam Toms ilmiy istiloh sifatida qo'lladi. Shundan boshlab bu istiloh xalqaro miqiyosda ilmiy taomilda o'zlashib ketdi. Shunga qaramay, Angliya, AQSh va boshqa ingliz tilida so'zlashuvchi mamlakatlarda bu mavhum keng ma'noda xalq ijodining barcha

sohalarini — xalq poeziyasi, xalq nasri, musiqasi, raqsi, rassomlik, o'ymakorlik, diniy e'tiqodi va odatlarini ifodalasa, boshqa tillarda so'zlashuvchi xalqlarda, asosan, so'z san'atini — xalq og'zaki poetik ijodi tushunchasini ifoda etadi.

Xalq musiqasi tushunchasini ifodalashda «musiqa folklori», xalq san'atining boshqa turlarini, chunonchi, o'ymakorlik, zargarlik, zardo'zlik, kashtachilik (patdo'zlik) singarilar «xalq amaliy san'ati» termini ostida tushuniladi. O'zbek folklorshunosligi tarixida «folklor» istilohi nisbatan keyinroq ilmiy iste'molga kirdi. U dastlab «el adabiyoti», «og'zaki adabiyot», «og'zaki ijod» tarzida qo'llanildi. O'zbek folklori xilma-xil janrlardan tarkib topgan og'zaki so'z san'ati bo'lib, xalqimizning dunyoqarashi, badiiy zavqi, ijodiy salohiyati, simpatiya va antipatiyasini, orzu va intilishlarini aks ettiradi.

Folklor — so'z san'atining boshlang'ich namunasi bo'lib, u behad qadimiy so'z san'ati sanaladi, unda uzoq o'tmishda yashagan ibtidoiy ajdodlarimizning hali yozuvni bilmagan zamonlardagi turish-turmushi, dunyoqarashi va e'tiqodi, kurash va mag'lubiyatlari ifodalangan. Folklorda tasvirlangan voqelik vaqt (zamon) e'tiboriga ko'ra o'tmishga daxldor, undagi u yoki bu janr tabiatida, til xususiyatlarida buning izlarini ko'rish mumkin. «Xalq poeziyasining qaysi bir yodgorligi xususida o'ylab ko'rmang, uning zamirida diniy-hayotiy yoki diniy marosim, uy-xo'jalik yoki «xalqaro siyosiy g'oya» yarqirab turishini ta'kidlar ekan, E.V.Anichkov folklorda ifodalangan poetik obrazlar genetik asosi o'sha qadimiy e'tiqodlardan suv ichishini nazarda tutgan. V.M.Miller esa xalq ijodiyotiga «xalqshunoslikning tarkibiy qismi» sifatida qarab, uning xalq rasm - rusumlarini ifodalagan etnografik mohiyatini ta'kidlaydi. Folklor asarlari jonli ijro jarayonidagina yashaydi. Uning ayrim janrlarida so'z va kuy omuxtaligi yetakchi bo'lsa, ayrimlarida sahna san'ati unsurlari ustun turadi. Bu hol folklor asarlariga sinkretiklik xususiyatini baxsh etgan. Uning talay namunalari so'z va kuy uyg'unligida ijro etiladi. Chunonchi, doston va termalarni do'mbira jo'rligida kuylash an'anaviy bo'lsa, qo'shiq dutor, childirma jo'rligida kuylanadi. Aksariyat folklor asarlarida so'z yetakchi o'rinni egallaydi. Ertak, afsona, naql, rivoyat, latifa, maqol va topishmoq janrlari shunday xarakterga ega. Xalq ertaklarida, xalq dramasi harakat va mimika muhim qimmat kasb etadi. Biroq ko'pgina asarlar ijrosida kuy g'oyaviy-badiiy mazmunni ifodalashda bir qadar qiymat kasb etsa-da, baribir so'z mazmunini ochuvchi asosiy vosita bo'lib qolaveradi. Bu folklorning so'z san'ati sifatidagi mohiyatini to'la-to'kis tasdiqlaydi.

Xalq — folklorning ijodkori. Folklor qabila, urug', elat, xalq yoki millatning mafkurasi va psixologiyasini aks ettiradi. Uning paydo bo'lishida hal qiluvchi rol o'ynaydi. Boshda ijod g'ayrihuuriy holda bo'lgan. Ijodkor g'ayriixtiyoriy tarzda mohiyatni tushunmagan holda ijod etar edi.

Folklorshunoslik sotsiologiya, etnologiya, til, tarix, arxeologiya, san'atshunoslik, musiqashunoslik va boshqa fanlar bilan aloqadorlikda ish ko'radi. Chunki folklor sinkretik so'z san'ati sifatida san'atning barcha turiari bilan chambarchas bog'langan.

O'zbek xalq og'zaki ijodining eng qadimiy va barqaror janrlaridan biri marosim folkloridir. Bu janr o'zining hayotiy yo'nalishi va maqsadi jihatidan ikki

katta turkumga - mavsumiy hamda oilaviy-maishiy marosimlar folkloriga bo'linadi. O'z navbatida bu ikki turkum vazifasi, tuzilishi va poetik tabiati bilan har xil janrlarni qamrab oladi.

Oilaviy – maishiy marosim folklori etnografik jihatdan muhim ahamiyatga ega. Bunga kiradigan marosimlar vazifasi va mazmuni bo'yicha bir necha xilga bo'linadi: a) so'zning sehrigarlik qudratiga asoslangan kinna, badik( gulafsho), burey-burey, avrosh, olqish va qarg'ish kabi qadimiy urf-odatlar; b) bolalarning beshikdagi davri bilan bog'liq- beshikka solish, chilar qochirish kabi udumlar folklori; v) to'y marosimlari faolliklari ifodalovchi yor-yor, o'lan, lapar, kelin salom, to'y olqishlari, oyna ko'rsatar qo'shiqlari kabilar; e) motam marosimi folkloriga mansub yig'i-yo'qlovlar.

Mustaqillik sharofati tufayli ajoyib milliy an'analar urf-odatlar va marosimlarni tiklash boyitish va hayotga keng joriy etish uchun barcha imkoniyatlar yaratildi. Ayni vaqtda bir tizimdan boshqa tizimga o'tish davrida xalq an'analari, urf-odat hamda marosimlarini tiklash, rivojlantirish va ommalashtirish nihoyatda murakkab va mas'uliyatlidir. Buni chuqur anglagan holda xalqimizning azaldan ma'lum bo'lgan ahillik, mehr-oqibat, xayr-saxovat, hamdardlik, kamtarlik, shirinsuxanlik kabi fazilatlarni yoshlar ongiga singdirish rivojlantirish muhim vazifa hisoblanadi.

Yoshlarning kelajakda vatanimizning barkamol farzandlari bo'lib yetishlari uchun hamma shart-sharoitlar yaratilgan zero buyuk ajdodlarimiz tomonidan yaratilgan betakror ma'naviy merosini yosh avlodga o'qib-o'rganishi hayotiy zarurat bulmogi kerak shu bilan birga go'zal fazilatlarga ega bo'lgan asrlar osha saqlanib kelayotgan marosimlardan qurib foydalanishga katta kelajak vorislari bo'lgan yoshlar qonunlarni o'rganish ularni hurmat qilishi asosiy burchlaridan biri hisoblanadi zero urf-odatlarimiz qadriyatlarimiz marosimlarimizning mohiyatini yoshlar ongiga yetkazish milliy va umuminsoniy qadriyatlarimizning bu borligini saqlagan holda yoshlar shuuriga singdirish ular ma'naviyatini shakllantirishning muhim omilidir.

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## **SOLAR POWERED LASERS**

*Abstract: this article reveals the information about solar-powered lasers that is possible to create laser light with sunlight and the difference between sunlight and laser light. It is clear that laser light can have a continuous constant amplitude or pulse, as well as extremely high power. Many devices use a laser as an amplifier to emit radiation from another source. The amplified signal corresponds to the initial signal in terms of wavelength, phase, and polarization.*

*Key words: solar energy, lasers, laser radiation, polarity, radiation, directions, solid, crystal, chromium, lenses*

The invention of the laser is one of the great achievements of human scientific and technological progress. Shortly after the invention of laser physics and technology, various lasers based on solid, gaseous, and semiconductor materials based on optical, electronic, injection, and other types of injections were developed and used in many fields of engineering and manufacturing. The main features of lasers in practice are their coherence of radiation, the ability to control the direction and high power.

Laser radiation is monochromatic and coherent, with a constant wavelength and a clear phase, as well as a certain polarity. On the other hand, some types of lasers, such as colored composite lasers or semi-chromatic solid-state lasers, can control several sets of frequencies over a wide spectral range. Sunlight, on the other hand, is produced by an expanded source, resulting in a variety of rays. Sunlight has different frequencies from ultraviolet to infrared. This can cause problems in optical systems, as light at different frequencies tends to refract and refract. Natural sources of light scatter light in a wide range in different directions. In addition, radiation from non-laser sources usually does not have a fixed polarity.

So how do you use solar energy to create laser light? The essence of laser operation is related to the movement of electrons because of the excitation of the working part. The working part is mounted on an optical resonator, and its energy increases exponentially as a result of the rotation of the waves by means of a forced irradiation mechanism. The laser usually consists of three main parts:

- energy source;
- working part;
- glass system (optical resonator)

The power source is the energy supplied to the system, which can be an electric discharge, a pulsed lamp, a submerged lamp, another laser, a chemical reaction, or even an explosive, and natural solar energy. If we think about solar energy from the above energy sources. A solar-powered laser is a laser that has the same optical properties as conventional lasers, such as emitting light consisting of

consistent electromagnetic radiation that can have high power, but uses sunlight to create an active environment. This type of laser is unique from other types because it does not require any artificial energy source. This is because energy is absorbed by the wide assimilation ranges of the Cr<sup>3+</sup> + dopant and then converted to Nd<sup>3+</sup> in a dipole-dipole interaction. This material has been proposed for use in solar-powered lasers, which form part of a solar-powered satellite system. Landis et al have also proposed solar furnace semiconductor lasers.

A solar-powered laser was used to create a magnesium combustion engine. The two Fresnel lenses direct sunlight onto the ceramic crystal to produce laser light. There is hope to use such powerful lasers to produce heat and hydrogen from magnesium and water

Magnesium has great potential as an energy source because it has an energy storage density about 10 times higher than that of hydrogen. It is also highly abundant, with about 1.3 grams found in every liter of seawater, or about 1,800 trillion metric tons in our oceans. Moreover, the magnesium oxide resulting from the reaction can be converted back into magnesium. The catch? Recycling the magnesium oxide back into magnesium requires temperatures of 4,000 kelvins 3,726 °C—hence the need for a laser to generate such temperatures on a small spot. But for a magnesium combustion engine to function as a practical source of energy, the lasers need to be powered by a renewable energy source, such as solar power. Solar-powered lasers already exist: they work by concentrating sunlight onto crystalline materials such as neodymium-doped yttrium aluminum garnet, causing them to emit laser light. Until now, however, most solar-pumped lasers have relied on extremely large mirrors to focus the sunlight on the crystal. A compact laser offers a threefold improvement in efficiency over previous designs, in terms of how much power it can deliver compared with the available sunlight.

The use of Nd:YAG crystals that are additionally doped with chromium, enabling them to absorb a broader range of light. Adding the chromium makes a greater proportion of the spectrum available, thus the efficiency from sunlight to laser is greatly enhanced. The other innovation of laser is the use of a small Fresnel lens instead of large mirror lenses. Fresnel lenses reduce the size and amount of material needed to build a lens by breaking it into concentric rings of lenses. Typically, 10 percent of incident light is focused on the crystal, whereas with the Fresnel, it is around 80 percent. In our case, we used only 1.3 meter squared and achieved 25 watts. Although this is only a threefold increase, the laser output exponentially increases with the increasing area.

The addition of chromium makes up a large part of the available spectrum. Thus, the efficiency of laser light from sunlight is significantly increased. Another novelty of this laser is the use of a small Fresnel lens instead of a large mirror lens. This divides the lenses into concentric rings, reducing the size and amount of materials needed to create the lenses. Typically, 10% of the incident light falls on the crystal, while with a Fresnel lens it falls on 80%.

Solar-based lasers are not used commercially, as the low cost of electricity in most places means that other more efficient types of electric lasers are used more

efficiently. Solar pumped lasers can be useful in off-grid locations. Interestingly, such a solar furnace in Uzbekistan was built in 1981 and is located 45 kilometers from Tashkent. The oven is the largest oven in Asia. It uses quartz glass or a series of glasses that act as a parabolic reflector, which can reach temperatures up to 30,000 C. It is currently operated by the largest solar-powered laser research center. This is a solar-powered NdYAG-type laser with a capacity of 1 MW, cooled by distilled water.

It is proposed to use a solar oven in Uzbekistan to power the Nd: YAG laser. Because this furnace is the largest system in the world, it has the capacity to input solar energy up to 1 MW. However, current research is focused on combining the production of several small concentrators.

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## **LEARNING METHODS OF ENGLISH IN UZBEKISTAN**

*Annotation: The article analyzes the global position, the dominant business and socio-economic lingua-franca of the English language in the contemporary world and the factors that contribute to this phenomenon. The article also analyzes the current policy and practice of teaching English in Uzbekistan, educational reforms in the country in the light of modern requirements.*

*Key words: the role of English, educational reforms, presidential decree, enforcement of the decree.*

With the emergence of new technologies, the value of education has risen so that the teaching process can be efficiently consolidated. In addition, new methods of teaching English have changed over the last 20 years. Nowadays something is evolving, obviously in the teaching of the English language. In fact, there is a huge variety in the methods of teaching foreign languages to language learners. It is widely understood that each of these teaching approaches is mainly focused on a particular understanding of the language or learning process, often using various materials and techniques used in a given sequence.

In today's modern world, as well as in Uzbekistan, the position and influence of English is increasing at a faster pace. After gaining independence and increasing the pace and reach of knowledge exchange in the global village, the key reasons for this phenomenon include widening contact with the globe. The dominant role of the language of published content in the internet space is firmly held by English, which is a clear incentive for those who wish to promote their global skills to learn English. As has been mentioned since the declaration of independence, the importance of the English language in all aspects of the life of the Uzbek people has increased. Currently, great attention is being paid to the radical reorganization of the education system in the Republic of Uzbekistan, which will provide an opportunity to lift it to the level of international standards. In order to achieve the goals and tasks set out in the Law of the Republic of Uzbekistan "On Education" and the "National Program of Personal Training" the dynamic method of reorganizing the structure and content of the training of workers, proceeding from the point of view of social progress, the economic development of society, the modern achievements of science, culture, technology.

Over the long history of mankind, a great many different educational methods have been developed. Initially, all methods of teaching foreign languages were borrowed from programs designed to teach the so-called "dead languages" - Latin and Greek, in which almost the entire educational process came down to reading and translating. It was such a method, the foundations of which were laid by the

enlighteners at the end of the 18th century, that took shape by the middle of the 20th century under the name “grammar translation method”.

According to this method, language proficiency is proficiency in grammar and vocabulary. The process of improvement is understood as a movement from one grammatical scheme to another. Thus, the teacher planning the course using this method first thinks about what grammatical schemes he wants to highlight. Then, texts are selected for these topics, from which individual sentences are singled out, and everything ends with a translation.

As a result of the preservation of research by the central board of secondary education, new directions in English language education such as interactive approach or teaching English strategy are enhanced. The Indian Council of School Education also supports this process. It is understood that "to connect" implies to communicate during contact with each other. It means providing the information, thoughts unknown to the recipient. In this scenario, we can concentrate on the following statement: "Engaging technique relating to the actual use of expression." We can also look at the instructions below:

Interactive methods: Brainstorming, chain drills, Think pair and share, Discussion, Debates, Role playing, Project work, Group work, Aquarium, Microphone.

The following (interactive) teaching methods are widely accepted: "Brainstorming," "Think pair and share," and so on. Some points of view are pursued in the interactive process, such as the chief, Test Tournaments, YouTube, Videos Quizzes, One word, Opposing Claims, Complete Physical Answer (TPR), Electronic Role Playing, and Puzzle Pieces. It is undeniably true that such types of approaches are extremely useful for efficiently organizing teaching and learning processes. For example, both language learners and teachers benefit greatly from "brainstorming" and "Think pair or share." As a consequence, such approaches may persuade both of them to think objectively, evaluate their thoughts correctly, articulate their ideas clearly, assist them in independently criticizing or evaluating different points of view, or adjust to a new environment in any situation, or otherwise improve language learners' capacity.

Taking all into account, it is concluded that integrating interactive forms or methods into the teaching and learning of foreign languages is one of the most important solutions to the problem. Aside from that, it is undeniably true that teachers should be qualified and experienced not only in teaching foreign languages, but also in nearly professionally organizing the link between lessons and creative technologies. The explanation for this is that new techniques and strategies are successful in comprehensively teaching English.

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## **SCIENTIFIC AND THEORETICAL BASES OF FORMATION OF INNOVATIVE PROCESSES IN THE SYSTEM OF INFRASTRUCTURE OF THE AGRARIAN SPHERE**

*Abstract: The article substantiates the features and the objective need for innovative development of rural infrastructure in the context of modernization and diversification of agricultural production and the implementation of structural changes. They also discussed issues of further improving the system of integrated management of innovative development processes in infrastructure industries.*

*Keywords: Innovation, investment, infrastructure, innovation process.*

Introduction. Ensuring the country's food security in the context of global integration requires that the sector be flexible, adapt to the changing external environment, and influence various innovations and scientific and technological developments on the basis of sustainable agricultural development.

The modern stage of agricultural development in many developed countries of the world is the transition to an innovative model that provides a systematic integration of the agricultural sector and science and technology to increase its efficiency.

In particular, it is necessary to create a “smart agriculture” to optimize production and distribution systems and introduce new business models that allow more efficient use of land, energy and other natural resources and focus more on needs [1].

By 2050, world population will reach 9.7 billion. The global human population represents a global problem. These problems pose a serious threat to the right to adequate nutrition and the basic right of everyone to be free from hunger. Feeding the growing population and achieving the goals of sustainable development requires agricultural producers to produce more food. In this regard, innovation is about reforming the food system, saving family farmers from poverty, food security, sustainable agriculture, and the "Changing the World: September 25, 2015," adopted by the United Nations General Assembly. Sustainable Development Goals 2030". Decree “On Approval of the Innovation Development Strategy of the Republic of Uzbekistan for 2019-2021”, dated May 7, 2018, PK-3698 No. 2460 "On Measures for Further Reform and Development of Agriculture in 2016-2020", as of May 29, 2018, No. PK-3751 "Mechanization and Service Providers for Agricultural Products" This research will serve to some extent in fulfilling the objectives set out in the Decree “On Additional Measures for Improving Dental Efficiency” as well as other regulations related to this activity.

As the first President of the Republic of Uzbekistan IA Karimov said: "... The main task for us is continuous technical and technological renewal of production, constant search for domestic opportunities and resources, deep structural changes in the economy, modernization and diversification of industry. should consist of a consistent continuation of the work "[2]

This important task is reflected in the Decree of the President of the Republic of Uzbekistan Sh.M.Mirziyoev "On the Strategy for further development of the Republic of Uzbekistan": strengthening macroeconomic stability and maintaining high economic growth, increasing the competitiveness of the national economy, modernization of agriculture. and rapid development .... [3]

Indeed, in the context of modernization of the country, through the improvement of organizational and economic mechanisms for the innovative development of rural infrastructure, it is necessary to provide services to agricultural and agricultural producers at the level of demand and fully meet their needs.

Literature review. Some scientific and theoretical and organizational and economic aspects of innovative development of various sectors of the economy, including agriculture, are provided by foreign economists: D.Aschauer, R. Wethersfield, I.R. Bright, A. Stow, L.I.Abalkin, I.Ansoff, P.Baranchev, I.K.Belyaevsky, J.Bright, W.P. Krasovsky, K.R. Mackonel, L. Bru, M.Porter, Research of scientific works of IS Sandu, B. Santo, A. Smith, R. Taker, B. Twiss, R.A. Fatkhudinov, V.F. Fedorenko, M. Huchek, FK Shakirov, I. Schumpeter was made.

Some of these issues are from the economists of the Republic of Uzbekistan B.B. Berkinov, K.D.Mirzaev, Ch. Partially studied in scientific works of Choriev, R.H. Ergashev, SS Gulomov, A.M. Kodirov[4] and others.

Research Methodology. In Uzbekistan, too, much attention is paid to the provision of all the conditions for activating innovation processes in all sectors of the economy, including agriculture. Innovative development will allow solving existing problems in agriculture, as well as radically changing its appearance, and moving to a new stage in the development of agriculture and its infrastructure. In the context of modernization of the country, it is necessary to "restore the lost old varieties, rational and effective selection, wide introduction of scientific achievements and innovations in the field"[5] and "farmers who are well versed in modern technologies of production and innovation in agricultural technologies." water and air needed" [6]. At the same time, the methods and mechanisms of innovative infrastructure development must meet not only the modern market principles of the national economy, but also take into account the specifics of each region. In general, a comprehensive review of innovation activities and processes in the agricultural infrastructure sector, critical review of the practice and innovative development of the agricultural infrastructure are becoming an objective necessity.

Investment and innovative development of agriculture is a wide-ranging process, using financial resources, attracting additional sources of financing, investing in new knowledge and ideas, applying new technologies, introducing services, and introducing new forms of infrastructure management. are closely



related. This problem can be solved only when investment is compatible with innovation, and balanced development of investment and innovation processes.

This approach entails studying investment and innovation as a system, and its successful development and functioning is closely linked to the infrastructure and services provided by agriculture and the level of economic growth and sustainable development.

The concepts of innovation, innovative activity, innovative process and so on are firmly entrenched in our daily lives, business activities and various aspects of the economy. Innovation is one of the important factors in increasing the competitiveness of enterprises in developed countries, strengthening its position in the market and the production of consumer goods.

In the implementation and implementation of innovative activities, first of all, it is necessary to clarify the basic terms and concepts.

In our opinion, innovation is an investment based on the use of scientific achievements and best practices, the process of improving and developing social production, the formation of new consumer products (goods, products, equipment, technology, other organizational forms and tools), implementation and is the materialized end result of creative activity, contributes to the satisfaction of market and social needs, saves costs, and ensures that people are productive in different areas of life and activity.

Innovative development of rural infrastructure is a system of measures aimed at increasing the level of competitiveness of the industry, improving the quality of services, increasing profitability, conducting a set of research and development, creation and implementation of innovations.

Innovation policy in infrastructure development is part of the state's innovation policy in the agricultural sector and is a form of implementing the country's innovation strategy to modernize the country, achieve the sector's stability and competitiveness.

Innovative infrastructure is a set of organizational and economic institutions that provide the conditions for the implementation of direct innovation processes based on the principles of economic efficiency. Management of the process of formation and development of innovative infrastructure is one of the main tasks of the problem of effective management of the agricultural sector.

Innovation is described in the economic literature as follows. Innovation is the end result of innovative activity, a product that emerges and is introduced to the market in a new or improved form, a new or improved technological process used in practice, interpreted as a new approach to social services based on the results of the latest research or inventions.

Innovative activity is the introduction of a new or improved type of product in production, the introduction of a new or improved technological process, the production of products with a higher quality content for consumers or to increase the competitiveness of the product.

Innovative infrastructure - consists of organizations that provide services for the organization of the introduction of new or improved products in production, the introduction of new or improved technological processes.

Innovative development of rural infrastructure and increasing its economic efficiency requires a thorough and comprehensive study of innovations.

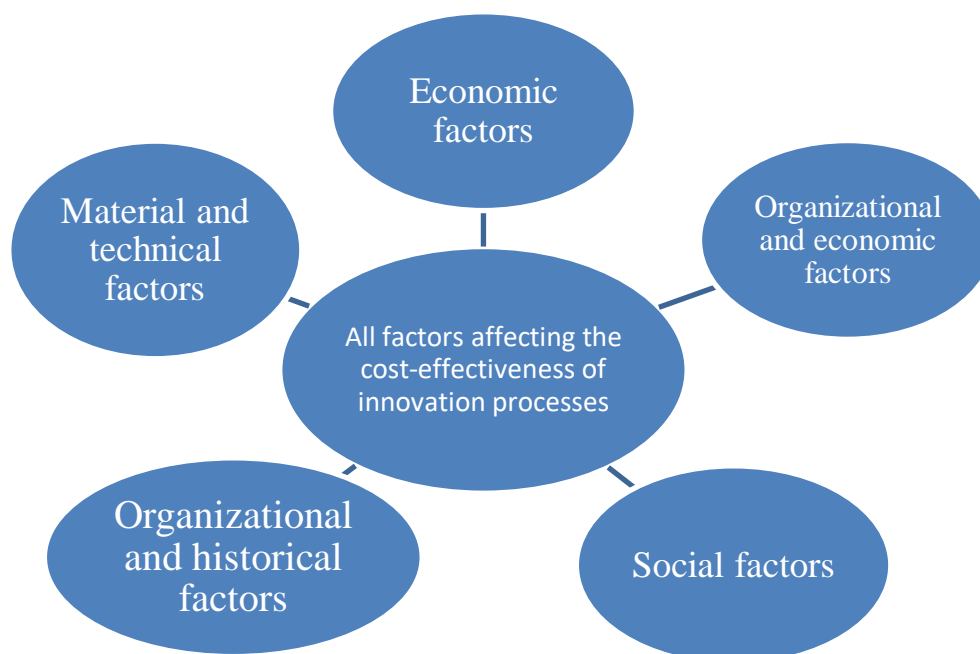


Figure 1: All factors affecting the cost-effectiveness of innovation processes

All the factors affecting the cost-effectiveness of innovation processes, taking into account the specifics of the industry, can be divided into the following groups: (Figure 1)

- natural-historical factors: improvement of soil-climatic conditions by means of chemical, ameliorative, irrigation and other means, selection, genetics and other means and factors in the field of animal husbandry and agriculture;

- social factors: factors related to the identification and development of human abilities - physical, psychological, intellectual, factors related to the development of positive attitudes to work and its results, and the exclusion of negative ones;

- organizational and economic factors: organization of production, its specialization, concentration, application of best practices, the nature and level of management systems and methods, etc .

In the current conditions of our country, the reform of the agricultural sector is one of the most important strategic goals and priorities of economic change. As mentioned above, the growth of production efficiency is influenced by such factors as soil - climatic, organizational - productive (production), technical, technological and socio-economic. Economic research focuses on the first group of factors, and the impact of socio-economic factors on production results is poorly understood.

One of the reasons for this is the difficulty of quantifying them, as well as the sudden inability to determine the impact of certain socio-economic factors.

In accordance with a number of resolutions of the President and the Government of the Republic of Uzbekistan, relevant ministries, companies, commercial banks and local authorities have created a number of infrastructure facilities in rural areas, taking into account factors such as natural and economic conditions. Various benefits (tax benefits, soft loans, etc.) were also provided to infrastructure facilities, provided that they were provided with the necessary machinery and equipment, as well as qualified personnel. As a result of these benefits, practical assistance was provided to the effective implementation of the initial activities of rural businesses. In the context of modernization of the economy and the introduction of innovations, it is necessary to focus on the acceleration of innovation processes and production activities in the development of sectors of the economy, including rural infrastructure.

It is estimated that three different types of technologies will be used to intensify agricultural production:

The first is simple, traditional technologies used in farms with low economic efficiency and capacity.

Older generation machines are mainly used when operating using simple technologies.

The second is intensive technologies, which are mainly designed for high-yielding farms.

The third is high-intensity technology, which is the future of competitive agricultural production in the country.

In general, in the introduction of innovations and scientific and technological advances in agriculture, on the one hand, given the conditions for the introduction of these innovations, on the other hand, it is necessary to determine what measures should be developed for the introduction of innovations in agriculture.

The reason is that GDP growth today can be achieved, first of all, through the development of small and large innovative businesses. Given the great role and importance of agriculture in the country, the innovative development of production will bring the industry to a new level of quality. At present, there are many directions in the development of agriculture, including rural infrastructure, due to various conditions and factors, the main of which are inertial and innovative development. Inertial development is a process that takes into account the stagnation in the economy, the slowdown in economic growth, the rise in prices, the crisis associated with inflation and unemployment.

Innovative development is associated with accelerated economic growth, increased sector efficiency, expanded reproduction and improved quality of life.

Analysis and results. The specificity of innovative processes in agriculture stems from the specific nature of the industry. At the heart of the distinctive features of the industry are, first of all, the natural-biological characteristics of agricultural production (land is the main tool, the use of living organisms as a means of labor - plants and livestock, dependence on natural-climatic conditions, etc.). Due to

natural and biological factors, the technical and technological characteristics of the industry (seasonality of production, length of work, etc.). Due to these differences, in the process of long-term development, specific socio-economic features and characteristics of the industry have been formed. From the point of view of the innovation process, they are:

- Due to limited land resources, instead of extensive development in agriculture, it is necessary to pay attention to intensive factors, ie to get more per unit of land;

- The level of specialization of agricultural enterprises is lower than in other sectors, which is due to the need for efficient use of land, the seasonal nature of agricultural production, resulting in the organization of full use of labor, machinery and other means of production throughout the year; > Peasants, farms and private farms are not able to independently develop measures to develop production, which, as is well known, requires significant investment;

- At present, a number of works in the production process are carried out by special services, ie infrastructure facilities (tractor fleets, agrochemical service, fuel and lubricants sales outlets, processing plants, veterinary services, etc.); Special forms of state support and influence are required in different ownership conditions (scientific and technical policy, information base, tax and credit policy, etc.);

- The specificity of agricultural production and the introduction of innovations increases the need for highly qualified personnel or professional advice;

- A part of agricultural products is directed to agriculture itself for reproduction, and the fund for reproduction is formed on the basis of this product and the state. However, the volume of production varies over the years, so it is necessary to establish large insurance funds in order to ensure the continuity of the production process;

- the length of the technological process and its dependence on natural and climatic conditions make it difficult to predict the outcome of production;

- The probabilistic nature of production leads to the probabilistic nature of the results of the introduction of innovations. Changes in factors of production or the economic situation in general can lead to unintended negative consequences, so a thorough in-depth analysis is required before introducing innovation achievements into agricultural production.

In agriculture, in addition to the sectoral characteristics of innovation processes, it is necessary to take into account the essence of the innovation process itself. An innovative process is a single and integral stream of transformation of separate technical or technological ideas based on scientific developments into new technologies and their delivery directly to the use in the production process in order to obtain a new quality product. Through the implementation and implementation of innovation policy, society manages innovation processes in whole or in part in each area. The main purpose of this is to put scientific and technical developments into practice.

The innovation process is cyclical. The economic and technological impact of innovation processes is only partially reflected in new products and technologies. The main part is manifested in the increase of economic and scientific-technical capabilities (purchase of new equipment), ie the technological level of the innovation system increases, which leads to an increase in demand for innovation.

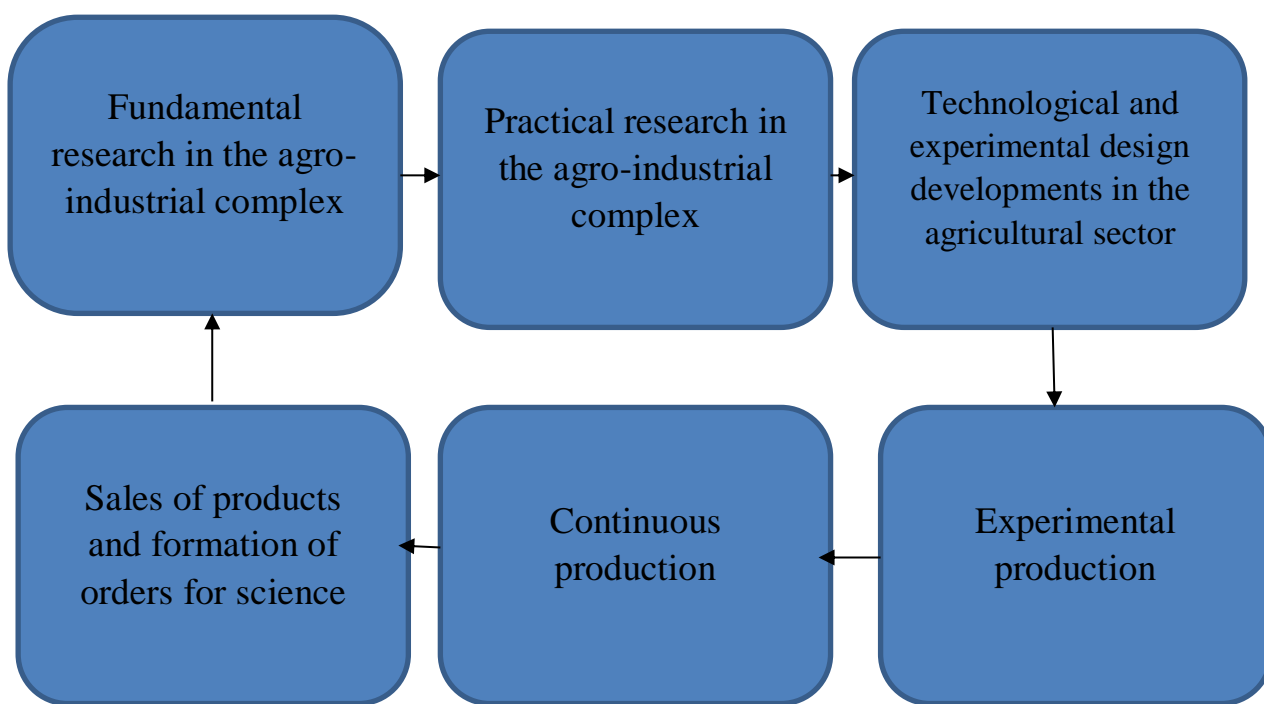


Figure 2. Stages of formation of the innovation process in AIC<sup>[17]</sup>

A simple view of innovation processes in AIC (Agro-industrial complex) can be illustrated by the following figure (Figure 2).

The starting point of the innovation process is fundamental research, the purpose of which is to identify and study the basic laws of the compatibility of nature and technology. Fundamental research results in fundamental scientific knowledge in the form of basic principles, laws, and theories.

The purpose of applied research is the purposeful use of fundamental and derived knowledge obtained as a result of scientific and applied research. They will focus on improving new or existing hardware, technologies and products. The targeted focus of applied research and the high probability of obtaining the final result allow planning innovative activities in advance.

Technological and experimental design developments are a set of activities aimed at rigorous scientific research, design, construction, creation and testing of an experimental model. Production materializes a scientific product and then forms an order for the field of science. The common task for all stages is to process technological and managerial data in order to sell the product of scientific and

<sup>17</sup> Developed by the author.

technical developments in the form of a new product, a new device, a new method, a new technological process and a new system of agro-industrial complex management. In a well-designed and well-managed innovation process, all attention is focused on the sale of finished products from the field of scientific and technical research. At the same time, the elements of innovation are constantly interconnected throughout the innovation process through the exchange of information and the implementation of their processing.

As a result of the innovation process and the implementation of appropriate innovation policies in the AIC, the process of modernization of production based on scientific results is underway. This process is objective and continuous. Its foundations go back to a time when agriculture was simple and relied solely on natural factors.

Organizational forms of the innovation process in agriculture include:

- > research and production associations;
- > research and production systems;
- > small innovative firms;
- > engineering firms;
- > innovative development centers;
- > information and consultation centers and outlets;
- > agro-firms, agro-techno parks and other similar forms.

Conclusions. Positive (contributing to the development of innovative processes) and negative (impeding the development of innovative processes) factors affecting the innovative development of agriculture were identified. Obstacles:

- limited funds allocated by the state to finance science and technology, research institutes and universities;
- high interest rates on loans for innovations;
- high risk of innovative processes in agriculture;
- Lack of interaction between agricultural producers and science;
- Insufficient development of the mechanism of financial incentives for those engaged in innovative activities;
- Research is not sufficiently developed in agriculture.

The factors that stimulate innovation processes are:

- availability of natural resources;
- development of business entities based on market relations;
- scientific potential;
- capacity of the domestic food market;
- Opportunity to produce environmentally friendly, natural food products.

Investment and innovation development of agriculture is a comprehensive and active process, involving the use of financial resources, attracting additional sources of funding, the process of finding investors with new knowledge and ideas, the application of new technologies, the organization of services and new forms of governance in infrastructure. closely related. This problem can be solved only in the context of the compatibility of investments with innovations, the balanced development of investment and innovation processes.

Such an approach imposes the obligation to study investment and innovation as a system, the successful development and operation of which is closely linked to the infrastructure serving agriculture and the economic growth and sustainable development of agriculture.

According to the analysis, the volume of innovations in the agricultural sector of Uzbekistan is 0.00004% of total agricultural output, while in the field of agricultural infrastructure this figure is even lower, while in other developed countries this figure is 20-25 times higher. During 2009-2018, expenditures on technological, marketing and organizational innovations in the agricultural sector increased by 354 times, but the share of innovation expenditures in gross agricultural output decreased by 8.5 times. These funds are certainly not enough for the innovative development of the network.

Investment and innovation development of agriculture is a comprehensive and active process, closely related to the use of financial resources, attracting additional sources of funding, searching for investors, application of new technologies, organization of services and application of new forms of governance in infrastructure.

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## **ORGANIZATIONAL AND PEDAGOGICAL CONDITIONS FOR THE FORMATION OF PROFESSIONAL SIGNIFICANT QUALITIES**

*Annotation: The article is devoted to the formation of professionally important qualities of specialists in the field of information security. The concept of professional qualities that can contribute to the manifestation of the independence and thinking activity of future professionals in the field of information security, as well as the formation of professional qualities, opens up organizational and pedagogical conditions. are studied.*

*Keywords: Qualities of professional significance, organizational and pedagogical conditions, the theory of solving inventive tasks, algorithm for solving inventive tasks.*

In the process of searching for pedagogical conditions for the formation of professionally significant qualities in a higher educational institution, we considered it necessary to pay attention to the age of students. According to V.A. Romenza, senior adolescence and early adolescence is a period in a person's life when the structure of an act is fully developed for the first time, when it can be done for its own sake, and the act does not contribute to the achievement of another goal.

Human creativity - from adolescence to the masterpieces of a mature genius - is a manifestation of the spiritual capabilities of a person and a demonstration of boundless human qualities<sup>5</sup>.

Creativity and action are precisely the principles on which it is most expedient to investigate the nature of human creativity, as well as its advancement on the path to personal maturity. If a person perceives his own life as creativity, then it fills his every moment with behavioral content. In carrying out an act, a person builds a creative situation of self-development, in which the essential elements of the individual world of his "I" are constructed<sup>6</sup>.

Based on the foregoing, we can conclude that the effectiveness of the educational process depends on such pedagogical conditions that could maximally contribute to the manifestation of independence and activity of students' thinking, as well as advancement in their mental development. In other words, the question arises: what should be the educational process so that success can be achieved both in the development of students' mental activity and in the development of their actions?

Analysis of the literature on the problem of the formation of professionally significant qualities and our own experience made it possible to identify, first of all, pedagogical conditions that would contribute to the successful formation of professionally significant qualities of future information security specialists

studying in higher technical educational institutions in the process of studying scientific and natural disciplines.

The first of them we identified the creation of a motivational attitude towards the creative activity of students due to persuasion, the development of interest, establishing a connection with life and future professional activities. We will justify our opinion in this way. It is known that motivation as a psychological phenomenon is interpreted in different ways. In one case, it is interpreted as a set of factors that support and direct, that is, determine behavior (J. Godefroy, K.B. Madsen); in the other - as a set of motives (KK Platonov); in the third - as an impulse that causes the activity of the organism, and the direction that determines it. In addition, motivation is viewed as a process of psychological regulation of a specific activity (M. Sh. Magomed-Evminov); as a process of action of a motive, as a mechanism that determines the emergence, direction and methods of implementation of specific forms of activity (I. A. Dzhidaryan); as an aggregate system of processes that are responsible for motivation and activity (V. K. Vilyunas). Researcher E. P. Ilyin considers motivation as a dynamic process of the formation of motive (as the basis of an action); according to A. B. Orlov, motivation is the process of forming an incentive to action or activity.

In addition, the studies of A.N. Pechnikov and G.A.Mukhina<sup>7</sup> carried out among students of the VTU on the issue of motivation, gave the following results. The leading motives were chosen "professional" and "personal prestige", less significant "pragmatic" (to get a diploma) and "cognitive". True, at different courses of study, the role of dominant motives changes. So, in the first year the leading is the "professional" motive, in the second - "personal prestige", in the third and fourth years - both of these motives, in the fourth - also "pragmatic". In most cases, academic performance is influenced by "professional" and "cognitive" motives. "Pragmatic" motives are mainly inherent in underperforming students<sup>8</sup>.

The importance of knowing the structure of motivation for educational activity is especially clearly manifested in the process of professional study. Thus, in the study of A.O. Reana did not find a difference in the chosen profession among excellent students and poorly performing students. Other dependencies were obtained when the emphasis was on performance in specialized subjects and industrial practice. Here, the difference in attitude to the profession became significant in the interests of the students of the first group, that is, those who are doing well<sup>9</sup>. Similar data were obtained as a result of a study of the motivational sphere of study of university students (A.O. Rean, V.O. Yakunin, N.I. Meshkov)<sup>10</sup>. The reason for such results lies in the confidence of a significant part of students that general scientific and general education disciplines do not bring them closer, but distance them from mastering professionally important knowledge and skills (it is no coincidence that many students are expelled in the first years when these disciplines are taught).

Characteristically, the factor of motivation for academic performance turns out to be stronger than the factor of intelligence. Academic performance does not reveal a close and reliable relationship with the intelligence of students, while

“strong” and “weak” students differed in the level of motivation for educational activity. The first ones have a weakness for mastering a profession at a high level, they are focused on obtaining strong professional knowledge and practical skills. The second - in the structure of the motive, they have, for the most part, external motivators: to avoid condemnation, punishment for poor studies, not to lose a scholarship, and the like.

Awareness of the high value of the motive for learning for academic performance in educational activities led to the formation of the principle of motivational support of the educational process (O.S. Grebenyuk) 11.

We emphasize that a high level of intellectual activity, at which a creative solution to tasks is possible, is achieved by individuals with a certain motivation and moral attitudes. Self-affirmation orientation, rivalry, avoidance of failures become a barrier on the way to creativity even with significant intellectual potential<sup>12</sup>. Another such obstacle is intellectual passivity - as an underestimated level of intellectual activity, predetermined mainly by the peculiarities of upbringing, which manifests itself in an insufficient focus of intellectual skills, a negative attitude towards mental stress, the use of detours in the performance of intellectual tasks. An indicator of intellectual passivity is a negative attitude towards any activity associated with mental work; lack of initiative in intellectual activity (from open protest to submissive thoroughness); cessation of mental activity (work) in the absence of significant reinforcement, avoidance of intellectual stress, lack of "mental surprise" and low efficiency in this activity.

In addition, the studies of A.N. Pechnikov and G.A. Mukhina<sup>7</sup> carried out among students of the VTU on the issue of motivation, gave the following results. The leading motives were chosen "professional" and "personal prestige", less significant "pragmatic" (to get a diploma) and "cognitive". True, at different courses of study, the role of dominant motives changes. So, in the first year the leading is the "professional" motive, in the second - "personal prestige", in the third and fourth years - both of these motives, in the fourth - also "pragmatic". In most cases, academic performance is influenced by "professional" and "cognitive" motives. “Pragmatic” motives are mainly inherent in underperforming students<sup>8</sup>.

The importance of knowing the structure of motivation for educational activity is especially clearly manifested in the process of professional study. Thus, in the study of A.O. Reana did not find a difference in the chosen profession among excellent students and poorly performing students. Other dependencies were obtained when the emphasis was on performance in specialized subjects and industrial practice. Here, the difference in attitude to the profession became significant in the interests of the students of the first group, that is, those who are doing well<sup>9</sup>. Similar data were obtained as a result of a study of the motivational sphere of study of university students (A.O. Rean, V.O. Yakunin, N.I. Meshkov) 10. The reason for such results lies in the confidence of a significant part of students that general scientific and general education disciplines do not bring them closer, but distance them from mastering professionally important knowledge and skills (it

is no coincidence that many students are expelled in the first years when these disciplines are taught).

Characteristically, the factor of motivation for academic performance turns out to be stronger than the factor of intelligence. Academic performance does not reveal a close and reliable relationship with the intelligence of students, while “strong” and “weak” students differed in the level of motivation for educational activity. The first ones have a weakness for mastering a profession at a high level, they are focused on obtaining strong professional knowledge and practical skills. The second - in the structure of the motive, they have, for the most part, external motivators: to avoid condemnation, punishment for poor studies, not to lose a scholarship, and the like.

Awareness of the high value of the motive for learning for academic performance in educational activities led to the formation of the principle of motivational support of the educational process (O.S. Grebenyuk) 11.

We emphasize that a high level of intellectual activity, at which a creative solution to tasks is possible, is achieved by individuals with a certain motivation and moral attitudes. Self-affirmation orientation, rivalry, avoidance of failures become a barrier on the way to creativity even with significant intellectual potential<sup>12</sup>. Another such obstacle is intellectual passivity - as an underestimated level of intellectual activity, predetermined mainly by the peculiarities of upbringing, which manifests itself in an insufficient focus of intellectual skills, a negative attitude towards mental stress, the use of detours in the performance of intellectual tasks. An indicator of intellectual passivity is a negative attitude towards any activity associated with mental work; lack of initiative in intellectual activity (from open protest to submissive thoroughness); cessation of mental activity (work) in the absence of significant reinforcement, avoidance of intellectual stress, lack of "mental surprise" and low efficiency in this activity.

Note that the help and support from the teacher is important for the student not only while searching for a solution in a difficult "emotional" situation, but also during the formation of methods of response in order to prevent and the emergence of negative situations. The solution of the noted tasks is facilitated by the emotional environment, being in which the person realizes himself, showing certain emotions and influencing the other (other) participants in these relations. Within a positive emotional environment, it becomes possible to solve the following tasks:

- disclosure of their own reserves of internal activity, the possibility of self-expression and self-knowledge;
- improvement of mood, awakening interest in learning activities, in the knowledge of the subject;
- removal or reduction of anxiety, physical and intellectual stress, renewal of internal forces and reserves;
- correction of relationships, overcoming difficulties in behavior, learning that have arisen or arise among students when communicating with peers, teachers.

Thus, referring to the impact of specific emotions on students' activities, we can conclude that positive emotions with skillful management of the teacher during

the lesson have a constructive effect, respectively, negative emotions have a destructive effect on students during the lesson, which as a result affects their academic performance. Researcher I.M. Gapiychuk also emphasizes the leading role of the teacher in the achievement of success by students in various activities, since he, acting on the emotional sphere of students, causes the emotional activity of the latter, manages and corrects students' activities, creates conditions that provide the student with the status of the subject of interaction.

This is due to the fact that in the structure of independent activity, along with elements of reproduction, elements of creativity are constantly manifested, which are significant not only due to the novelty of the results, but also due to the non-standard nature of the process itself. Creative independent work is valuable in that, performing them, the student can find original ways of solving cognitive tasks that were not provided for by the teacher.

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## **SITUATIONAL APPROACHES TO EFFECTIVE LEADERSHIP**

*Abstract: This article discusses the importance of situational approaches in effective leadership.*

*Key words: efficiency, management, leadership, analysis, observation*

Leadership, the need to develop leadership qualities must be considered as one of the main tasks of working management specialties. For workers, first of all, leadership means social activity, or an active life position. It is a kind of guarantor of fresh ideas, extraordinary approaches, and bold decisions. These qualities are the foundation for management skills. The employer is interested in getting the most qualified manager - an effective leader.

Thus, the relevance of the problem under study is determined both by the trends in the development of scientific knowledge and by the existing needs of social practice. The study of emotional intelligence and its relationship with leadership qualities is an important theoretical and practical task that requires actual research and further development.

It is customary to say that the company has leaders and managers. The fact is that the key tasks, events, the very actions of managers and leaders differ from each other. A person can be a great leader and a disgusting manager, and vice versa. The problem arises when organizations mix these two roles. Of course, there are rare exceptions when people brilliantly combine both qualities.

There are three factors that influence the behavior of the leader. These factors are:

- The relationship between the leader and team members. This implies the loyalty shown by subordinates, their trust in their leader and the attractiveness of the leader's personality for performers.
- Task structure. It implies the familiarity of the task, the clarity of its formulation and its structuring, and not vagueness and lack of structure.

Official powers. It is the amount of legal power associated with the manager's position that allows him to use the remuneration, as well as the level of support that the formal organization provides to the manager.

The potential benefits of a task-oriented leadership style are speed of action and decision-making, unity of purpose, and tight control over the work of subordinates. Thus, for the success of production, the autocratic style is initially an effective tool for achieving the goals of the organization, provided that the performers willingly cooperate with the manager.

In this situation, a task-oriented leadership style is most appropriate, because the relationship between the leader and the subordinates is already good. Therefore,

the leader does not need to spend a lot of time maintaining this relationship. In addition, because the leader has significant power and the task is routine, subordinates obey the leader's instructions and need little help. Therefore, the role of the leader in this situation is to say what needs to be done.

People-centered leadership styles are most effective in moderately leader-friendly situations. In such situations, the leader does not have sufficient authority to ensure the full cooperation of subordinates. But, in contrast to the unfavorable situation, the subordinates here are not actively looking for any reason for resentment.

In most cases, performers as a whole tend to do what the manager wants from them, if they are explained why this is being done and given the opportunity to fulfill his desire.

If the leader is too focused on the task, he runs the risk of antagonizing the performers and thereby contributing to the manifestation of potential shortcomings of this style. This focus on the task reduces the influence of the leader.

A people-centered leadership style is likely to empower a leader to exert influence. The manifestation of concern for the well-being of subordinates in practice would improve the relationship between the leader and subordinates.

Provided that subordinates are motivated by the needs of a higher level, the use of this leadership style can enable the leader to stimulate the personal interest of performers in a particular job.

This would be ideal because a self-directed workforce reduces the need for tight, tight oversight and also minimizes the risk of losing control.

Succession planning refers to preparing promising employees to take the place of current leaders when it is time for the latter to leave their positions. This kind of training requires the active movement of the employee between departments. Moreover, in many multinational corporations, future leaders tend to travel overseas to gain experience in overseas affiliates.

Succession planning should be based on a clear vision of the future that the company aspires to: this will align the leadership development program with the long-term goals of the organization. Thus, preparing a new generation of leaders should take into account not only the existing knowledge and history of the company, but also plans for the future. For these plans to come true, the selection of potential leaders must be based not only on "what we know and have," but also on "what we want to become." Succession planning should be handled by the people who are currently in leadership positions who are the bearers of this "vision of the future", as well as senior personnel in the HR department who can translate this concept into a specific training program. Accordingly, attention should be paid to three main characteristics of candidates:

- Skills and knowledge;
- Perception of the role of the leader and the degree of its acceptance.
- Self-confidence (self-efficacy).

These three aspects should be the backbone of any leadership training program.

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## **HOW IS AN UNUSUAL THINKING SKILL OR CREATIVITY FORMED?**

*Annotation: The main goal of today's education system is to educate and train creative thinking professionals and high-level thinkers. Unfortunately, compared to other areas, many approaches and methods in the education system are still not creative thinking, but interpretation and analysis, that is, understanding and conveying the information correctly, and, moreover, summarizing a few pieces of information. aimed at extracting.*

*Keywords: creative, unusual, innovation, music education, creativity, creativity, child psychology.*

If we look around us, we can see unique and amazing examples of human creativity in the world around us. All this is the product of human imagination, thinking. The books, music, buildings, airplanes, and even lamps that we use in our daily lives, which seem simple to us today, were once created by the imagination and later by the fruit of reason.

Creativity, which began with the invention of the simple wheel, is now circulating throughout the universe. Such innovative innovations create many conveniences in our daily lives, and in this way, creativity becomes an integral part of development. Today, the demand for creative thinking professionals in all fields is growing day by day. As the demand for creative and innovative professionals in the labor market grows, it is important for us to form and develop the unusual thinking skills of students in the educational process.

So how do you teach students to think creatively? How do you think you need to change your thinking to innovate?

In order to develop the qualities of creativity in a person, it is first necessary to know the content of this concept. The word creativity is derived from the English word "create", which means "create". Creativity is a person's creative ability to innovate and solve problems. Its content lies in originality, practicality, unusualness and freedom. Also, creative thinking means comprehensive thinking on a particular issue, approaching a point from different angles. Creative-minded people are able to create something new by imagining images that are different from the usual scenes, that no one understands.

The most amazing thing is that the educational process also teaches children to think the same way. Prepared by Ken Robinson and viewed 5 million times on YouTube, "Is School Destroying Creativity?" The video also mentions this. As children learn to write along the lines, work through examples in assignments, learn how to understand a work in literature lessons, and have teachers evaluate good performers, children begin to think within patterns. As a result, many young people

are asking if there is a model for assignments. It's the result of learning to work with existing models. In order to overcome this situation, it is necessary to pay attention to the development of creative qualities in the educational process. It can be seen that the famous inventors and inventors were not accustomed to the uniformity of the educational process at school. For example, Albert Einstein was expelled from school or Dmitry Mendeleev received a "three" in chemistry.

Walt Disney is one of the world's most famous animated cartoons, creating his own entertainment industry as a result of his creative thinking. He has always used three phases of creativity - imaginative, realistic, critical - in the creation of world-famous characters. That is, in the role of a dreamer, he fantasizes without limits, creates different fantasies. In the process, he noted that he heard Bach's "Toccata, fuga re minor"

It is important to cultivate a creative personality - not only to master the knowledge known to science, but also to discover new knowledge on the basis of the acquired knowledge. The main task of modern education should be to inspire students to acquire new knowledge and create by improving their intellectual level, creativity, ingenuity and curiosity. According to youth psychology, children under the age of six have a 40% potential. From an early age, children are very creative. If the educational process with him during this period is approached only on the basis of traditional education, the tendency to creativity in him will disappear.

To creatively direct the learning process:

1. The educational process is to provide educational material, to offer other interesting additional materials and to guide the student to innovation on the basis of material that directs him to research and creativity.

2. The learning process should also be changed so that the student becomes the creator of the learning material and the given learning material serves that creativity.

3. It is necessary to increase the student's interest in creative thinking by proposing heuristic strategies, tactics, methods and techniques by making new additions to the learning materials.

A specially organized pedagogical process aimed at cultivating a child's musical culture and developing his musical skills in order to form his creative abilities. The tasks of music education are: to teach a child to love and understand music, to develop his ability to hear music and his mood for music, to instill in him the simplest performance skills, that is, to sing, to sing<sup>18</sup>

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## **THE IMPACT OF SOCIAL MEDIA ON EDUCATION: ADVANTAGE AND DISADVANTAGE**

*Abstract: There are given information about social media networking sites that's effecting on education system and its advantage and disadvantage to teaching student in this article. Also, you can know how to use them on your classroom and on students.*

*Keywords: Social media, education, Facebook, sites, massagers, students, telegram, advantage and disadvantage, WhatsApp, YouTube.*

In today's world of connected learning, the impact of social media on education is becoming a driving factor. The technology referred to here really transpires just social media technologies such as Facebook, Whatsapp, YouTube, Telegram, Twitter, and Snapchat. There are a lot of workshops, conferences, online courses, webinars, meeting and trainings in this social media networking sites. The technologies that allow these platforms to function are also one of the driving forces behind the impact of this technology on education. There are positive and adverse effects of social networking to students to students, and the jury is still out concerning the long-term effects of social media exposure may have. Social media and education are not historically allies and many educators see social media as a deterrent to real learning. This is changing as the cloud-based nature of social media for collaborating on projects is growing into a pertinent and useful technology. Facebook has the ability to create rooms and video chat with invitees. This is great for student projects which rely upon successful collaboration as the global pandemic shut down many face to face interactions.

For example, video presentation platforms, such as Zoom, Google meet, Skype, Google Hangouts, or Web video conferencing such as Cisco Webex, have allowed instruction to be delivered across great distances. No longer is it necessary for a faculty member to be in the same room as the students. These technologies have given rise to the flipped classroom model and changed the way knowledge is conveyed to students. Faculty today must be more technologically savvy than any generation previously as the students not only prefer communication through these mediums, they expect it. The adoption of social media in everyday life is one of the driving forces behind these changing expectations and how social media is changing

education. Today's students want to connect with other people in higher numbers than us old educators may think. There is a complete industry of applications that are designed to help people increase their social media following.

The impact of these technologies on education can be considered positive but also has some negative consequences. It's not clear what the positive effects of social media on students or negative effects will have on long term development, but there are some downsides.

It's no secret that most students and teachers have smartphones and have used social media in education. In fact, there are apps and web tools that offer social media in an educational context.

With faculty using a variety of software tools and free web applications to enhance learning, communication, and engagement, the use of social media is on the rise in higher education classrooms. Compared to traditional learning method that provide few opportunities for learners to develop and maintain their own learning activities, learning platforms based on social media place the control of learning into the hands of learners themselves. A growing number of research efforts have been made to support teaching and learning using a variety of social media tools. Social networking site for college students are been developed aiming at enhancing both collaborative study and social interaction. The research tells that making social media tools a part of traditional learning is attractive to students and can motivate their participation in the learning process. E-Learning, the social network sites handled the big problem by providing information to the educators in the recent period. However, Social networks have helped to resolve some of these problems, by adding interactive side with a student, and make the participation of the students in the educational process which leads to an increase to attract them toward e-learning and to clarify the reason behind the attraction educated about social network sites.

Ways To Use Social Media in Education to Impact Student Learning.

1. Use social media as an online "classroom"

Social media doesn't have to take students attention away from their school work. It can actually provide the forum you need to reach your students in a more meaningful way. By creating a private Facebook group, you can post assignments, lecture via Facebook Live, and answer student questions via comments and private messages. While face-to-face teaching has definite advantages, this is a great way to connect with students who would otherwise be unable to attend a traditional classroom (for health reasons or because they live in a remote area, for instance). Such a class could also be used to augment the standard curriculum for students who fall above or below the norm.

2. Keep students involved during snow days and school breaks

One of the key challenges for educators is to keep the momentum going when students are on spring or winter break, or when they have to stay away from school due to harsh winter weather. Posting assignments, projects, and discussions on social media can help students keep up the momentum in their school work and help you, as an educator, avoid having to go back and review quite so much material at

the end of the break. This would be a good occasion to use a learning management system (LMS) that keeps track of student assignments and records delivery of student work.

3. Encourage collaboration and teamwork. Encouraging teamwork and collaboration can be difficult in classrooms with limited time, especially if your institution covers a broad geographic area that makes it hard for students to get together after class. Social media can provide the forum a student group needs to share work, critique projects, and to collaborate on an assignment. One educator, a professor of art at Penn State University, created an iTunes U class where students could view and evaluate each other's projects. She amassed more than 58,000 students.

#### 4. Interact with parents and advisors

While parents and advisors are a vital link between educators and students, it can sometimes be tricky to forge a relationship and start a dialogue with them. It's not always realistic to send messages home with students and busy schedules often mean that the parents and advisors who would benefit most from a one-on-one conference are unable to attend such a session.

#### 5. Continue the discussion

With most classes, you only have an hour or two, at the most, to get students excited about the topic and encourage them to share their thoughts and opinions. If the discussion is slow getting started, you might have to shut it down just when it was getting beneficial. With social media, you can transfer the classroom discussion to a Facebook group or similar forum and keep the discussion going long after class has adjourned.

#### 6. Hone students' Internet writing and online research skills

Writing has evolved in the Internet age from writing in a vacuum to participating in the worldwide conversation. Writing on the web is much different from writing for an academic journal. Such writing requires shorter sentences, shorter blocks of texts, links to sources, and graphics to break up the "sometimes considered boring" text. However, these are skills most students will need as they begin their careers. Having students create and write a blog has many advantages. It not only introduces them to the quirks and special format of web writing, but it gets them researching a particular subject or topic by reading articles online and in the habit of writing regularly.

A good blog also requires students to respond to comments and questions, be able to source copyright-free images (and upload their own images), and cite sources. It also provides a good start to a digital footprint for potential employers to see when it comes time for them to start their job search.

#### 7. Learn from your colleagues around the world

It's now easier than ever to share ideas and successes with other educators from around the United States and beyond. By "friending" and following educators you admire, you can see what is working for them in a similar setting to yours and adopt their techniques to help your students succeed. In this global age, no educator

has to recreate the wheel. They just have to put together a strong professional learning network.

The prime bad effect of social media is addiction. Constantly checking Facebook, Twitter, LinkedIn other social media updates. This addiction could negatively affect other valued activities like concentrating on studies, taking active part in sports, real life communication and ignoring ground realities. Following are the Negative impact of Social Media on Education:

1. The popularity of social media, and the speed at which information is published, has created a lax attitude

towards proper spelling and grammar. The reduces a student's ability to effectively write without relying on a computer's spell check feature.

2. Many students rely on the accessibility of information on social media and the web to provide answers. That means a reduced focus on learning and retaining information.

3. Our ability to retain information has decreased, and the willingness to spend more time researching and looking up good information has reduced, due the fact that we got used to the ease of accessibility to information on social media.

4. Students, who attempt to multi-task, checking social media sites while studying, show reduced academic performance. Their ability to concentrate on the task at hand is significantly reduced by the distractions that are brought about by YouTube, Facebook or Twitter.

5. The more time students spend on social sites, the less time they spend socializing in person. Because of the lack of body signals and other nonverbal cues, like tone and inflection, social networking sites are not an adequate replacement for face-to-face communication. Students who spend a great deal of time on social networking are less able to effectively communicate in person.

6. The degree to which private information is available online and the anonymity the internet seems to provide has made students forget the need to filter the information they post. Many colleges and potential employers investigate an applicant's social networking profiles before granting acceptance or interviews. Most students don't constantly evaluate the content they're publishing online, which can bring about negative consequences months or years down the road.

7. Students are having a harder time getting to communicate face to face with people, and are losing their people skills, due to that they are spending more and more time talking from behind a screen.

According to the above study I came to know the various positive and negative impacts of social media on education or students. It is very important to overcome this problem. How can parents alleviate the negative aspects of social media while improving upon the positive results? Moderating their access to social media is one excellent method. Most of the negative aspects can be overcome by reducing the amount of time spent on social network sites. Paying attention to their academic progress and addressing any issues will go a long way towards keeping the negative aspects of social media from influencing their studies. Provide ample time for face-to-face social interaction, like having some family leisure time in

which you discuss their studies in a relaxed atmosphere or inviting friends and family over for get-together, providing fun, face-to-face social interaction with loved ones. All this we help us to reduce the Negative impact of social media on the students which will in turn benefit our young generation.

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## **PROSPECTS FOR THE DEVELOPMENT OF TOURISM IN UZBEKISTAN**

*Abstract: This paper investigates major points of tourism sector in Uzbekistan while making emphasize on outlook development perspectives. Moreover, the way of tourism advancement with major outcomes and shortcomings are also underlined with the systematic analyses. In addition, socioeconomic development of the study with the positive modernization and diversification possibilities were stated in order to conduct probable future investigations in the future. Last but not least, ecotourism perspective of country has been analyzed and accentuated as one of the most developing direction of tourism as whole.*

*Keywords: Tourism, Uzbekistan tourism, ecotourism, tourism infrastructure, tourism potential*

In the area of globalization, Tourism's impact on the economic and social development of a country can be enormous while opening it up for business, trade and capital investment, creating jobs and entrepreneurialism for the workforce and protecting heritage and cultural values (Abdukarimov B.A, 2013).

To fully understand its impact, however, governments, policy makers and businesses around the world require accurate and reliable data on the impact of the sector. On this way, data is needed to help assess policies that govern future industry development and to provide knowledge to help guide successful and sustainable Travel & Tourism investment decisions (Akhoondnejad, 2016; Alegre & Garau, 2010). For 25 years of independence, Uzbekistan has been quantifying the economic impact of Travel & Tourism. Travel & Tourism generated US\$7.6 trillion (10% of global GDP) and 277 million jobs (1 in 11 jobs) for the global economy in 2014. Recent years have seen Travel & Tourism growing at a faster rate than both the wider economy and other significant sectors such as automotive, financial services and health care.

Last year was no exception. International tourist arrivals also surged, reaching nearly 1.14 billion and visitor spending more than matched that growth. Visitors from emerging economies now represent a 46% share of these international arrivals (up from 38% in 2000), proving the growth and increased opportunities for travel from those in these new markets. The sector faces challenges while facing internal and external political modifications at all (Akhoondnejad, 2016; Alegre & Garau, 2010).

The present stage of human development and socio- economic development level of the highest rates of growth of the life and well-being of the population growth could be the major point of development as whole. Urbanization increases

the level of increase in the share of leisure time, social values and personal life that may lead to a radical change of the property. These, in turn, adjust to changes in the life of the population, and to increase significantly the supply and demand in the tourism inaugurated the foundation. Accordingly, time, travel, and nature ceased to be an active part of the life of the people of the rest of modern health and shape of the importance of strengthening the effective use of time and space. At a time before tourism without thinking about it, just enjoy having a superior goal, at present, these goals have radically changed: weak position occupied seek to promote active recreation; most of the rest of the active role of the individual, or at least two people to try out for a rest. Tourism trip for other purposes also changed: in the past, the only individuals now enjoy recreation; accurate planning in the past, and now we want to meet the demand; past civilization (civilization) favors the consumer, now the pleasures of nature in the first place (A. V. Akimov & Dollery, 2006; Buhalis & Law, 2008).

During the years of independence our country has created new legal and economic foundations based on market relations that are fundamentally different from the past. There have been fundamental economic reforms based on a single state policy aimed at accelerated development of the industry, modern tourism infrastructure has been established, many new tourism routes have been introduced at the world standards, historical and cultural monuments have been renovated and widely disseminated, training and retraining System has been formed.

Nevertheless, Uzbekistan's rich and varied tourism and recreational potential remains low, the existing tourism infrastructure, the volume, types and quality of tourism services provided, and the distribution of available tourism capacities by region, the network management system globally. Nevertheless, Uzbekistan's rich and varied tourism and recreational potential remains low, the existing tourism infrastructure, the volume, types and quality of tourism services provided, and the distribution of available tourism capacities by region, the network management system globally It does not meet modern requirements in critical innovation and sharp competition. The role of tourism in the national economy, the role and scale of exports of services and services, and the employment of the population remain considerably behind the average global average (A. Akimov & Dollery, 2009; Berger, Hanweck, & Humphrey, 1987).

According to the State Statistics Committee, the share of tourism in the country's gross domestic product in 2010-2014 has the following indicators (percent): in 2010 it was 1.2 million but during years has risen significantly. The number of firms and organizations operating in 2015 is 398, serving 560.4 thousand visitors. The net profit of all enterprises operating in the tourism industry in 2015 amounted to 61819.5 million soums. It should be noted that Tashkent city has the dominant position in all major tourism industry indicators: 73.4% (292%) of firms and organizations account for 58.8% (329.5 thousand) visitors. The same indicator for Samarkand (13.1 and 4.1%), Bukhara (4.5 and 9.2%) and Khorezm (1 and 21%) regions. These four regions share 92% of firms and organizations in Uzbekistan, and 93.1% of the service visitors.

In this regard, the President of the Republic of Uzbekistan Sh.M. Mirziyoev's December 2, 2016 Decree "On Measures to Ensure Rapid Development of the Tourism Industry of the Republic of Uzbekistan" serves as an important basis for the development of this sector to a new level. The decree provides for the creation of favorable economic, organizational and legal conditions for the dynamic development of tourism as a strategic area of the country's economy, more fully and efficiently utilizing the vast tourism potential of the regions, the radical improvement of tourism network management, promotion of national tourism products and their promotion in the world markets, The directions of formation of a positive image of Uzbekistan are defined (Buckley, Gretzel, Scott, Weaver, & Becken, 2015; Nargiza & others, 2015). For this purpose, the medium term perspective The State Committee for Tourism Development has been established on the basis of the abolished national company "Uzbektourism", whose goals and priorities are determined by the state policy in the field of tourism, and its functions have been described, as well as the concept of tourism development in the medium term and the implementation of this Concept It is planned to elaborate and implement the Program of specific measures for 2017-2021, the system of activity licensing and certification s is the simplification of the visa regime, to further stimulate business activity, tourism, infrastructure development, tourism organizations and additional privileges and preferences, and a number of other areas have been identified. Implementation of this decree will give an impetus to the development of tourism in Uzbekistan as a strategic national economy and to make the country one of the most important centers of world tourism

The Decree envisages the development of the Republic of Uzbekistan in the medium term, as well as the Concept of the development of tourism in the medium term, it is planned to elaborate and implement a program of concrete measures for the implementation of the Concept in 2017-2021. In our opinion, in the development and implementation of this concept and program, it is necessary to take into account the following areas in the development of tourism as a strategic area of the economy:

1. Development of conceptual foundations of tourism development (goals and objectives, methodological approach, principles and criteria, international practice, development of state policy in tourism and directions).

2. The current state of tourism development and its main problems (role in the country's economy, resource potential, management environment, processes and efficiency, current situation analysis, key issues).

3. Priority approaches, strategy and concept development approaches and mechanisms for their implementation (sustainability of the sector, funding sources and funding sources, sources of investment, approaches to the formulation of strategies and concepts and their implementation mechanisms).

To conclude with, on measures on ensuring rapid development of tourism industry in Uzbekistan and for the purpose of providing the effective organization of activities of the State committee of the Republic of Uzbekistan on tourism development need to determine the main objectives and activities of the State committee of the Republic of Uzbekistan on tourism development. On this way,

gouvernement ensures forming and implementation of the complete concept of tourism development directed to radical increase in tourist capacity of the country, giving to tourism of the status of the strategic sector of economy, carrying out single state policy in the sphere of tourism.

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## **ISLOM TARAQQIYOT BANKI VA O'ZBEKISTON: IQTISODIY DIPLOMATIYA TARAQQIYOTI YO'LIDA**

*Annotatsiya: Maqolada "Islom Hamkorlik Tashkiloti" ning tashkil topishi va uning musulmon davlatlari o'rtasidagi iqtisodiy, siyosiy hamkorliklari, hamda musulmon davlatlarida yoshlarning ta'lim tarbiyasi ilm ma'rifatga ega bo'lishi, musulmon davlatlarida qashshoqlikni oldini olish va buyuk allomalarimizning bizga qoldirib ketgan merosini asrab avaylash munosabati yoritilgan.*

*Kalit so'zlar: Islom Hamkorlik Tashkiloti, musulmon davlatlari, Ta'lim, marifat, sessiyasida, moliya, Islom taraqqiyot banki, iqtisodiy birdamlik kabi siyosiy tushunchalarni o'rganamiz.*

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## **ISLAMIC DEVELOPMENT BANK AND UZBEKISTAN: THE PATH OF ECONOMIC DIPLOMACY DEVELOPME**

*Annotation: The article covers the organization of the Organization of Islamic Cooperation and its economic, political and educational cooperation among Muslim countries, as well as the education of young people in Muslim countries, the development of knowledge, the Prevention of poverty in Muslim countries and the preservation of the legacy left to us by great scholars.*

*Keywords: Islamic Cooperation Organization, Muslim countries, education, education, session, Finance, Islamic Development Bank, Economic birdamlik, we will study such political concepts*

XX- XXI asrning asosiy mezonlari bu albatta bugungi kunda siyosiy jarayonlarning rivojlanish bosqichida islom davlatlarining dunyoda bo'layotgan global jarayonida qay tariqa muhim ahamiyat kasb etayotganligi va xalqaro

munosabatda ahamiyatiga e'tibor qaratadigan bo'lsak musulmon olamida Islom Hamkorlik Tashkilotining o'rni tobora ortib bormoqda. Jumladan, iqtisodiy, siyosiy, madaniy, gumanitar, diplomatik munosabatlarning rivojlanish bosqichida muhim ahamiyatga egadir. Islom Hamkorlik Tashkilotining tarkibiy qismiga kiradigan Islom Taraqqiyot Bankining siyosiy jarayonlarga ta'siri haqida qisqacha to'xtalib o'tadigan bo'lsak, Islom taraqqiyot banki (ITB) xalqaro moliya tashkiloti bo'lib, 1973 – yilning 18 - dekabr kuni Islom Hamkorlik Tashkilotining (IHT) mamlakatlari ichida moliya vazirlari yig'ilishlarining qaroriga ko'ra ta'sis etilgan va 1975 – yil oktyabr oyida o'z faoliyatini boshlagan moliyaviy tashkilotdir. 2014 - yilning iyunida ITBning yillik yig'ilishida bank faoliyati boshlanganing 40 yilligi nishonlandi. Islom Hamkorlik Tashkilotiga a'zosi bo'lgan har bir mamlakat Islom Taraqqiyot Banki a'zosi bo'lish huquqiga ega. Bank tashkil etilayotgan vaqtda ITB ga ishtirokchi a'zo davlatlar soni 57 taga yetgan edi. O'zbekiston 2003- yildan boshlab ITBning a'zo mamlakatidir.<sup>19</sup> Bankning asosiy hissadori: Saudiya Arabistoni, Liviya, Eron, Nigeriya, BAA, Qatar, Misr, Quvayt va Turkiya davlatlari shular jumlasiga kiradi. Islom taraqqiyot banki bosh qarorgohi Saudiya Arabistonning Jidda shahrida joylashgan bo'lib, musulmon davlatlarining moliyaviy markazidir. Islom taraqqiyot bankining hududiy vakolatxonalari 1994 - yil Marokash hududidagi Rabbot shahrida joylashgan bo'lib, xuddi shu yili Kuala - Lampur (Malayziya)shahrida vakolatxonasi ham ochilgan. 1997- yili Olmeta shahrida (Qozog'iston), hamda 2008 yili Dakar (Senegal) shaharlarida ochilgan.<sup>20</sup> Shuningdek, ITBning Misr, Turkiya, Indoneziya, Bangladesh va Nigeriya shaharlarida ham vakolatxonalari o'z faoliyatini davom ettirmoqda. ITBning asosiy vazifasi a'zo-mamlakatlarda islom dini talablariga muvofiq bo'lgan ijtimoiy va iqtisodiy taraqqiyotni qo'llab-quvvatlashdir. Islom taraqqiyot banki guruhining tarkibiga quyidagi tashkilotlar kiradi: IsDB xususiy tarmoqni rivojlantirish buyicha islom korporatsiyasi - ICD; Investitsiyalar va eksport kreditlarini sug'urtalash islom korporatsiyasi - ICIES; Xalqaro islom savdo-moliya korporatsiyasi - ITFC; Tadqiqotlar va treninglar islom instituti - IRTI. Ushbu tashkilotlar butun musulmon mamlakatlari va islom davlatlarining manfaatlariga xizmat qiladi, hamda a'zo mamlakatlar miqyosdagi talablar quyidagi tartibda amalga oshiriladi: A'zo-mamlakatlarda qashshoqlik darajasini pasaytirishga ko'maklashish; a'zo-mamlakatlar savdo-iqtisodiy hamkorligini rivojlantirish; a'zo-mamlakatlar mehnatga yaroqli aholisi uchun ta'lim dasturlari va tadqiqotlarni tashkil etish; a'zo-mamlakatlarga favqulodda holatlarda yordam ko'rsatish; a'zo-mamlakatlarni ijtimoiy-iqtisodiy rivojlantirish bo'yicha boshqa turli dasturlarni amalga oshirish, a'zo-mamlakatlarda davlat va xususiy tarmoqqa qarashli yo'llar, kanallar, to'g'onlar, maktablar, kasalxonalar, uy-joylar, qishloq tumanlarini rivojlantirish va boshqa shu kabi qishloq xo'jaligi loyihalarini moliyalashtiradi.<sup>21</sup>

<sup>19</sup> International Financial And Banking Forum2019

<sup>20</sup> Uzreport Tv

<sup>21</sup> Кўйсинава Ф. О. Ислам Конференцияси Ташкилоти Яқин Шарқ Араб Давлатлари Сийсий Интеграциялашувининг Омили Сифатида. Сийсий Фан.Буйича Фалс.Фан.Док (Phd)Дисс.Автореф.- Т.: 2019.-Б.17

Shuningdek 12 ta a'zo mamlakat mahalliy vakolatxonalariga egadir. Jumladan: Afg'oniston, Ozarbayjon, Bangladesh, Gvineya, Indoneziya, Eron, Nigeriya, Pokiston, Serra-Leona, Sudan, O'zbekiston va Yaman davlatlaridir. ITBning asosiy vazifasi a'zo-mamlakatlarda shariatga muvofiq ijtimoiy va iqtisodiy taraqqiyotni qo'llab-quvvatlashdan iborat bo'lib, ITBning qarashlar: 2020 - yilda a'zo mamlakatlar inson kapitalini barqaror rivojlantirishga jiddiy ta'sir ko'rsatuvchi shariat tamoyillariga muvofiq faoliyat ko'rsatadigan jahon miqyosidagi taraqqiyot banki bo'lishga erishdi va bank tashkil etilayotgan vaqtda uning nizomiy jamg'armasi 6 mlrd. islomiy dinorni, a'zolari soni esa 22 ta davlatni tashkil etgan edi. Islomiy dinor – ITB foydalanadigan hisob birligidir. 2013 yilda ITB boshqaruvchilar kengashi umumiy hissadorlik kapitalini 30 mlrd. islomiy dinordan 100 mlrd. islomiy dinor (150 mlrd. AQSH dollar) ga ko'tarish haqida qaror qabul qildi. Bankning obuna kapitali ham 18 mlrd. islomiy dinordan 50 mlrd. islomiy dinorga oshirildi.<sup>22</sup> Ushbu qaror a'zo-mamlakatlarning moliyalashtirish mablag'lariga bo'lgan katta ehtiyoji bilan bog'liqdir. So'nggi 12 yil davomida yetakchi reyting agentliklari (Moody's, Standard Poor's, Fitch) tomonidan ITBga uzoq muddatli kredit reytingi- "AAA" va qisqa muddatli oliy barqaror kredit reytingi – "A+" kodi berib kelinmoqda. 2013 - yilning dekabrda ushbu reytinglar yana qaytadan tasdiqlandi. Shu jumladan ITB BMTning Bosh Assemblyasida kuzatuvchi maqomini oldi. ITBning muassasalari IHT Bosh kotibiyati va muassasalari, Xalqaro taraqqiyot banki, BMT taraqqiyot tashkiloti, Hududiy rivojlantirish tashkiloti, Milliy rivojlanish jamg'armalari va nodavlat tashkilotlari kabi bir qator tashkilotlar bilan taraqqiyot sohasida yaqindan aloqa qilib kelmoqda.<sup>23</sup> 2011- yilda Yevropa tiklanish va taraqqiyot banki, Osiyo taraqqiyot banki, Moliyaviy nazorat yuqori organlari xalqaro tashkiloti, Butunjahon banki bilan hamkorlik to'g'risidagi kelishuvlar imzolandi. Sog'liqni saqlash va ta'lim sohasidagi ITB loyihalarini moliyalashtirish ITBga a'zo-mamlakatlarning har biri erishishga intilayotgan ming yillik rivojlanish maqsadlariga (Millennium Development Goals) muvofiq amalga oshirilmoqda.<sup>24</sup>

Bugungi kunda respublikamizda bank ishi va moliyaviy islom prinsiplarini tatbiq etish loyihasini amalga oshirish bo'yicha Moliya vazirligi tomonidan tashkil etiluvchi «tashabbus guruhi»ga aylandi. Shuningdek, Islom taraqqiyot banki grantini jalb etgan holda «O'zbekiston Respublikasida islom bank ishi va moliyasi infratuzilmasini tatbiq etish uchun qonunchilik asoslarini yaratish» bo'yicha ishchi loyihasini amalga oshirish belgilangan. Bundan tashqari, O'zbekiston hukumatiga Islom taraqqiyot banki bilan muvofiqlashtirilgan Ishchi loyihasini amalga oshirish bo'yicha yo'l xaritasi loyihasini ishlab chiqish hamda tasdiqlash uchun kiritish aytilgan. Qaror loyihasi muhokamasi O'zbekiston Respublikasi Prezident Shavkat Mirziyoyev tomonidan 2018-yil 31-may kunda amalga oshirildi. Shu jumladan Islom taraqqiyot banki rahbarini Bandar Hajarni qabul qildi. Islom taraqqiyot banki O'zbekistondagi islohotlarga har tomonlama ko'makni kengaytirishga tayyor

<sup>22</sup> w.w.w.http//google.uz.international financial and banking foru

<sup>23</sup> w.w.w.http//google w.w.w.http//google.uz. islom moliyasi

<sup>24</sup> w.w.w.http//google.uz.international financial and banking forum 2019.uz

ekanligini takidladi. Bandar Hajar prezident Shavkat Mirziyoyev bilan 2018- yil 20- sentyabrda uchrashuvi bo'lib o'tdi. Uchrashuvda O'zbekistonning ITB bilan o'zaro manfaatli hamkorligi doirasida yurtimizga 1,9 milliard dollarlik imtiyozli kredit mablag'lari jalb etilgan bo'lib, ular iqtisodiyotning turli tarmoqlariga oid loyihalarni o'z ichiga oladi.<sup>25</sup> Ushbu loyihalar yo'l-transport, energetika va kommunal infratuzilmani modernizatsiya qilish, qishloq joylarda uy-joy qurilishi, ichimlik suvi bilan ta'minlash tizimini, sog'liqni saqlash va ta'limni rivojlantirish, tadbirkorlik sub'ektlarini qo'llab-quvvatlash kabi sohalarga sarflandi. Hamkorlik uchun ulkan salohiyat, eng muhimi, uni yanada mustahkamlashga o'zaro intilish mavjudligi ta'kidlandi. Toshkent shahrida bo'lib o'tgan «ITB guruhi kuni» doirasida O'zbekiston va Islom taraqqiyot banki o'rtasida 2018–2021 yillarga mo'ljallangan 1,3 mlrd dollarlik sheriklik strategiyasi imzolandi. Prezident Shavkat Mirziyoyev Islom taraqqiyot banki rahbariga jahon sivilizatsiyasi rivojiga ulkan hissa qo'shgan buyuk ajdodlarimizning boy ma'naviy merosini o'rganish maqsadida Samarqandda tashkil etilgan Imom Buxoriy nomidagi xalqaro ilmiy-tadqiqot markazi faoliyatiga ko'rsatilayotgan ko'mak uchun samimiy minnatdorchilik bildirdi. Bandar Hajar esa Markaziy Osiyo davlatlari ichida O'zbekiston Islom taraqqiyot banki uchun mintaqadagi asosiy hamkorlardan biri ekanini ta'kidladi. Bandar Hajar O'zbekistonda amalga oshirilayotgan keng ko'lamlı yangilanishlarga yuksak baho berib, ITB mamlakatimizdagi islohotlarga har tomonlama ko'makni kengaytirish va o'zaro manfaatli hamkorlikni mustahkamlashga tayyor ekanini qayd etdi.<sup>26</sup>

2020- yilning 2-dekabr kuni Saudiya Arabistonining Jidda shahrida joylashgan Islom Taraqqiyot Banki (ITB) ning XSRIK bosh direktori janob Ayman Amin Sejiniy va O'zbekiston Respublikasi xalq Bankining Boshqaruvi raisi janob Farhod Islomovich Salomov xalq bankida Islomiy darcha ochilishi munosabati bilan masalhat xizmatlari to'g'risidagi Bitimni imzoladi.<sup>27</sup> Ko'zda tutilgan Islomiy darcha xalq banki uchun yaxshi foyda keltiradigan Islomiy banklardan biri bo'lish va O'zbekistonda islomiy mahsulot va xizmatlarni taklif qilish imkonini beradi. Natijada, Bank o'z mahsulotlarini, moliyalashtirish manbalarini diversifikatsiya qilish va daromadini oshirish imkoniyatiga ega bo'ladi. Islomiy bank orqali taklif qilinadigan xizmatlar mamlakatda kichik va o'rta biznes sub'ektlarini va jismoniy shaxslarni moliyalashtirish, yangi ish o'rinlarini yaratish va aholi turmush darajasini oshirishda muhim rol o'ynashi ko'zda tutilgan. Ushbu munosabat bilan janob Sejiniy quyidagicha izoh berdi: Ushbu hamkorlik xalq banki bilan strategik sheriklik bo'lib, O'zbekistondagi bank va Islomiy moliya sanoatini qo'llab-quvvatlashga qaratilgan deb ta'kidlab o'tadi. Ushbu strategik tashabbus orqali xalq bankiga Shariat tamoyillari, buxgalteriya hisobi, Islomiy bankchilikka mo'ljallangan informasion texnologiyalari, kadrlar va huquqiy jihatlarni qamrab olgan umumiy echimlarni taqdim etish va Islomiy banklarda keng nazariy bilimlar berish orqali xalq bankining

<sup>25</sup> <http://prezident.uz/Islom-hamkorlik-tashkilotining-ushbu-nufuzli-sammiti-Fan,-texnologiyalar,-innovatsiyalar-va-islom-olamini-modernizatsiya-qilish/>: 10 sentyabr 2017

<sup>26</sup> [Htt://uzreportnews/UzReportTV@Instagram](http://uzreportnews/UzReportTV@Instagram)

<sup>27</sup> Uz-Report 36



birinchi Islomiy darchasini ochishga yordam beradi. Tashkilotlarimiz o'rtasidagi ushbu muvaffaqiyatli hamkorlik uzoq muddatli strategik sherikchiligimizni kuchaytiradi. "O'z navbatida, janob Farxod Salomov quyidagilarni qo'shimcha qildi: "Bugungi kunda moliya bozorida Islom banki mahsulotlariga bo'lgan talab ulkan salohiyatga ega va kelgusida ushbu xizmat turiga talab yanada ortishiga ishonamiz. Bundan tashqari, ushbu yangi hamkorlik, bizning mijozlarimizning bugungi kundagi talabini qondirish va ikki tomon uchun samarali bo'lgan vositalarni taqdim etadi." Xalq banki 2013- yildan buyon hamkorlaridan biri bo'lib, O'zbekistondagi o'nta kichik va o'rta biznes sub'ektlarini moliyalashtirish uchun ajratilgan 13 million AQSh dollari miqdoridagi moliyalashtirish dasturidan foydalandi. Xususiy sektorni rivojlantirish bo'yicha Islom korporasiyasi (XSRIK) Xususiy Sektorni Rivojlantirish bo'yicha Islom Korporasiyasi (XSRIK) - Islom Taraqqiyot Bankining a'zosi bo'lib, Bankning xususiy sektorni rivojlantirish vazifasi tashkil etilgan. Korporasiyaning ustav kapitali 4 milliard AQSh dollarini tashkil etib, hissadorlari 55ta mamlakat hamda 5 ta moliyaviy institutlaridan iborat xalqaro tashkilot hisoblanadi.

Xulosa o'rnida shuni ta'kidlab o'tish joizki Islom Hamkorlik Tashkiloti bugungi kunda musulmon davlatlarining revojlantirish bosqichida muhim ahamiyat kasb etib kelmoqda. Nafaqat siyosiy aksincha iqtisodiy, madaniy, diniy, ijtimoiy, diniy, gumanitar sohalarida xalqaro siyosiy olamda tayanch vazifasini o'tamoqda. Jumladan Yaqin SHarq arab davlatlarining siyosiy, iqtisodiy, ijtimoiy, madaniy integratsiyasiga ta'sir ko'rsatgan va xalqaro munosabatlar tizimida etakchi o'rin egallagan tashkilot hisoblanishiga alohida e'tibor beriladi. SHundan kelib chiqib, «Islom Hamkorlik tashkiloti Yaqin SHarq arab va musulmon davlatlari siyosiy integratsiyalashuvining omili sifatida qaralmoqda. Xalqaro munosabatlarning shakllanishi va rivojlanishi o'ziga xos bo'lib, mintaqaning integratsiyaviy salohiyati, moliyaviy istiqbollari, iqtisodiy ittifoqchilik, diniy, mafkuraviy, til birligi, milliy va etnik yaqinlik, madaniy o'xshashlik munosabatlarni muvaffaqiyatli rivojlantirish uchun asos yaratdi. Xalqaro nizolar va geosiyosiy kurashlarning avj olishi, dunyoning qudratli davlatlarini hududga nisbatan manfaatdorligining yuqoriligi hamda o'z pozitsiyalarini mustahkamlash maqsadida olib borgan siyosiy o'yinlari tufayli mintaqada xalqaro munosabatlarning o'ziga xos tizimi shakllanishida Islom taraqqiyot bankining ahamiyati juda ham salmoqlidir. O'zbekiston misolida fikr mulohaza qiladigan bo'lsak, ta'lim va ishsizlikni mukammal darajada tartibga solish va uning tashqi siyosatda qay darajada ta'sir doiraga ekanligi alohida ahamiyatga egadir. Barcha musulmon dunyosi siyosiy, iqtisodiy va eng muhimi, ma'naviy salohiyati to'liq shakllanganligi, o'zaro birlashish istagi, milliy, diniy o'zlikni anglash va Islom dini omili Islom Hamkorlik Tashkilotini dunyoning yirik xalqaro tashkilotlaridan biriga aylantirdi. XX asrning ikkinchi yarmida musulmon davlatlari siyosiy integratsiyasining eng muhim institutsional omili sifatida xalqaro maydonga chiqdi. Tashkilotga a'zo davlatlar, xususan, birdamligining etakchi elementi diniy omilga tayanib, Islom umumiy mezonlar bo'yicha revojlantirishining asosiy manbasi hisoblandi hamda davlatlar o'rtasida mamlakatlar manfaatidan umumiy manfaatlar ustun kelib, tashkilot

faoliyatida musulmon ummasining manfaatlari milliy manfaatlardan yuqori qo'yildi. Islom Hamkorlik tashkiloti Islom taraqqiyot banki siyosiy jihatdan musulmon hamjihatligini vujudga keltirgan, islom ummasini birlashtirgan, xalqaro maydonda ularning manfaatlarini himoya qila olgan, butun musulmon olamining revojlantirishini ta'minlash maqsadida faoliyat yuritayotgan xalqaro tashkilot hisoblanadi.

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## THE CATEGORY OF EMOTIVENESS IN LITERARY WORKS

*Annotation: This article is considered as one-stop guide for you to get information about usage of emotive language in literary works. This article will give you the information about few emotive words that are beneficial, as well as analysis of a story "Cup of tea" by Katherine Mansfield from emotive point of view.*

*Key words: emotiveness, emotion, feeling, sense, stylistic devices, repetition, anaphora, epiphora, metaphor, metonymy, hyperbole, simile.*

Emotiveness and literature may seem two different terms being related to different spheres: psychology and linguistics. But if it is paid attention deeply it would be obvious that emotiveness and literature are linked to each other. Actor and actresses can easily show emotions of hero and heroines with one of their speech, mimics and even body language. But it needs to be more skillful from authors when writing any literary work in order to give readers the sense of emotions that the characters feel.

Emotiveness as one of the categories of literary text, is usually common to nearly all literary works. Let us see the examples in detail. The first example is as follows:

"I want those and those and those. Give me four bunches of those. And that jar of roses. Yes, I'll have all the roses in the jar. No, no lilac. I hate lilac. It's got no shape."

In this extract, the category of emotiveness is represented by means of repetition and short sentences. Here short sentences are: And that jar of roses. No, no lilac. I hate lilac. It's got no shape. The repetition of those, those and those also creates emotive atmosphere. It can also be referred that in the given extract, all usage of linguistic devices might be named as the convergence of stylistic devices.

Let's pay attention to another example: "And she was followed to the car by a thin shop-girl staggering under an immense white paper armful that looked like a baby in long clothes."

In the above sentence given from the same story usage of simile like a baby in long clothes instead of wearing long clothes increases power of sense in the reader and also it helps to imagine appearance of the shop-girl better.

Additionally, even though being too brief repetitions were used several times in this story, for instance: "Twenty-eight guineas." Rosemary gave no sign. She laid the little box down; she buttoned her gloves again. Twenty-eight guineas. Even if one rich... She looked vague. She stared at a plump tea-kettle like a plump hen above the shopman's head, and her voice was dreamy as she answered: "Well, keep

it for me-will you? I'll..." In this given situation repetition of Twenty-eight guineas describes sense of misunderstanding or astonishment of Rosemary Fell. And also, giving description of tea-kettle comparing with a hen by having the same peculiarity in the shape enhances degree of emotiveness in the sentence.

The author also uses personification, simile and hyperbole in order to raise emotive sense in the story: "The discreet door shut with a click. She was outside on the step, gazing at the winter afternoon. Rain was falling, and with the rain it seemed the dark came too, spinning down like ashes. There was a cold bitter taste in the air, and the new-lighted lamps looked sad. Sad were the lights in the houses opposite. Dimly they burned as if regretting something. And people hurried by, hidden under their hateful umbrellas. Rosemary felt a strange pang. She pressed her muff against her breast; she wished she had the little box, too, to cling to. Of course the car was there. She'd only to cross the pavement. But still she waited. There are moments, horrible moments in life, when one emerges from shelter and looks out, and it's awful. One oughtn't to give way to them. One ought to go home and have an extra-special tea. But at the very instant of thinking that, a young girl, thin dark, shadowy-where had she come from?-was standing at Rosemary's elbow and a voice like a sigh, almost like a sob, breathed: "Madam, may I speak to you a moment?" Here, personifications are: dark came and sad were the lights that used also to create emotiveness in the story.

Moreover, we can see an example of repetition of first letter that explains fear of the speaker in the dialogue: "M-madam, stammered the voice. Would you let me have the price of a cup of tea?" and again personification was used: "None, madam," came the answer. We saw repetition of letter in above example. Repetition of the word was also used to define the same meaning in the following sentence (fear, hesitation): "You-you don't mean it madam," said the girl, and there was pain in her voice." Continuing the dialogue answer of the partner Rosemary Fell was represented with short sentences in order to show the speaker's strong desire: "But I do," cried Rosemary. "I want you to. To please me. Come along."

During analysis of this story it has been known that most of the repetition (letter, word, word-combination) were used to express fear of hero (heroine) as the following sentence: "You're-you're not taking me to the police station?" she stammered.

Futhermore, usage of metonymy and metaphor can be seen in the story: "She was going to prove to this girl that-wonderful things did happen in life, that-fairy godmothers were real, that-rich people had hearts, and that women were sisters. She turned impulsively, saying."

As it is mentioned above most of the repetitions in the story showed fear and hesitation, but differing from those extracts the following one describes happiness of speaker: "Come, come upstairs," "Come up to my room", "Come and sit down" "Come and get warm." In these example, quite identical syntactical structures such as you are walking, "Come, come upstairs," "Come up to my room", "Come and sit down" "Come and get warm." help to create emotiveness with the help of parallel construction.

“And gently she half pushed the thin figure into its deep cradle.”

“Don’t cry, poor little thing,” she said. “Don’t cry.” And she gave the other her lace handkerchief. She really was touched beyond words. She put her arm round those thin, bird-like shoulders.” In the above examples obvious description of encouragement through repetition Don’t cry, Don’t cry and empathy through metonymy thing, figure were skillfully expressed.

Several examples of repetition in diversity of meanings have been seen in the story. But, the following example of repetition shows its usage in the meaning of complaint: “I can’t go on no longer like this. I can’t bear it. I can’t bear it. I shall do away with myself. I can’t bear no more.” Each repetition shows raising gradation of speaker’s emotions.

It should be mentioned that the author used metonymy masterfully. She used different types of it to mean the word “girl” (thing, figure, little creature). It also helps readers to feel the sense of relax and not to get bored coming across with the same word in each paragraph: “She plied the poor little creature with everything, all the sandwiches, all the bread and butter, and every time her cup was empty she filled it with tea, cream and sugar.”

“Oh yes,” said Philip.”Quite” and his eye caught sight of the coat and hat on the floor. He came over to the fire and turned his back to it. “It’s a beastly afternoon,” he said curiously, still looking at that listless figure, looking at its hands and boots, and then Rosemary again.” Usage of personification through ”eye caught sight of the coat” was used to describe short physical movement of hero effectively instead of using “looked to the coat”.

Masterful usage of repetition plays a great role in the growth of emotiveness and efficiency of the story, being faced in nearly each paragraph: “Be nice to her,” said Rosemary quickly. “Be frightfully nice to her. Look after her. I don’t know how. We haven’t talked yet. But show her-treat her-make her feel-“ Different types of repetition (parallel construction, anaphora, epiphora) serves to demonstrate speaker’s commanding and irate mood here, while meaning fear, hesitation, happiness in above extracts that were analyzed before. It is also should be said there is something noticeable that there is no coma in the last sentence that means speaker’s opinion is not ended.

Additionally, in the following two extracts metonymy is used to describe sense of indignity (my child) and anger (absurd creature): “Philip struck a match. “She’s absolutely lovely. Look again, my child. I was bowled over when I came into your room just now. “You are absurd creature!” said Rosemary, and she went out of the library, but not back to her bedroom.

Another example of repetition lets readers to find out angry mood of Rosemary Fell who is displeased hearing compliment from her husband towards another poor girl: “She went to her writing-room and sat down at her desk. Pretty! Absolutely lovely! Bowled over! Her heart beat like a heavy bell. Pretty! Lovely! She drew her check-book towards her. But no, checks would be no use, of course. She opened a drawer and took out five pound notes, looked at them, put two back, and holding the three squeezed in her hand, she went back to her bedroom.”

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## **IMPROVING THE METHODOLOGY OF TEACHING PHYSICS "MECHANICS" AT SCHOOL IN INTERDISCIPLINARY SYNCHRONOUS AND ASYNCHRONOUS COMMUNICATION**

*Annotation: This article provides some information about effective methods of teaching physics to school-age students, as well as the mechanics of physics.*

*Keywords: Classical mechanics, molecular kinetic theory, material point, soil mechanics, law of inertia, trajectory, magnetic hydrodynamics, aeroelasticity theory*

The school physics course is structured around four basic physical theories: classical mechanics, molecular kinetic theory, electrodynamics, and quantum theory. The theoretical core of the school physics course incorporates four basic theories tailored specifically for the school course. "This will allow us to highlight the general directions of the teaching and methodological direction of the physics course, as well as the formation of all the materials. Such generalization of educational material allows to provide students with the formation of sufficient ideas about the structure of modern physics and the implementation of the theoretical method of teaching ...

Mechanics is a branch of physics that, with its rigid and logical structure, contributes greatly to the development of students' thinking. Successful study and understanding of other sections of a physics course depends on the degree to which mechanics has been mastered. Because they widely use the concepts of mechanics (speed, acceleration, mass, force, work, energy, etc.). The content of the physics course in the education system and the reason why its study begins with mechanics: mechanical motion is more visual among all forms of motion of matter, and modeling of physical phenomena in classical physics often reflects the structure of physical systems and the mechanical image of the processes occurring in them. is related to the creation.

Improving the teaching of theoretical mechanics against the background of modern problems of education is a task that will be relevant for many years and has various approaches and solutions. Weak school preparation of applicants in mathematics and physics, reduction of hours for class work with students, inability of many of them to work independently often poses additional tasks for first-second year teachers to develop interest in educational activities, to a specific academic discipline, to form guidelines for independent work over the course

Theoretical mechanics is a fundamental natural science discipline that underlies modern science and technology. The study of theoretical mechanics greatly contributes to the formation of a system of fundamental knowledge that allows a future specialist to scientifically analyze the problems of his professional field, to put into practice the basic knowledge he has acquired, independently, using modern educational and information technologies, to master the new information that he will encounter in production and scientific activity.

In applied mechanics, methods of controlling the motion of a mechanical system are considered on the basis of the general laws and principles of theoretical mechanics, and ways to obtain the appropriate properties of a mechanical system are determined. Applied mechanics play an important role in the control of control systems. The object of control is mechanical objects, such as self-propelled and flying machines (ships, planes, rockets and helicopters), various machines (machines, turbines, electric and electronic machines, combustion and rolling machines) and test mechanical devices, adjusters, jet engines and another is seen. The motion of deformable solids and gaseous liquids is studied in the mechanics of contiguous media. The theory of elasticity and plasticity, hydrodynamics and aeromechanics, gas and wave dynamics are the most advanced fields of the mechanics of contiguous media. In the mechanics of contiguous media, the structure of solids, liquids, and gases is considered to be a continuous structure, and each element of the volume of the contiguous medium interacts with neighboring elements. Magnetic hydrodynamics, aeroelasticity theory, and cracking theory are areas of mechanics of contiguous media.

Mechanics is a key factor in solving many problems. Some of them are: reduction of resistance to objects moving in water at high speeds (100 m / s and above); creation and storage of plasmas with a temperature of one million degrees; to determine the properties of materials under the influence of high pressures and temperatures, the effect of explosive power on structures; explanation of air circulation; weather forecasting; study of mechanical processes in plants and living organisms; Mechanics of variable bodies, space flight dynamics, plasma magnetic field motion, and many other issues related to stellar evolution and solar phenomena are considered in classical mechanics, quantum mechanics, statistical physics, electrodynamics, and others.

The phenomena of a system moving at high speed cannot be explained by the laws of classical mechanics. These phenomena are considered in the relativistic mechanics of A. Einstein. The phenomena of the atom and the nucleus are presented in quantum mechanics, which deals with methods for converting mechanical problems into mathematical problems. However, any problem in mechanics cannot be solved mathematically. In such cases, the problems are roughly solved on the basis of various mechanical hypotheses and intuitions. Under the influence of mechanics, a number of branches of mathematics developed. In the field of mechanics in Uzbekistan, economic research is conducted in the fields of machines and mechanisms, strength of structures, seismodynamics of buildings, multi-phase and multi-component environments, fabric strength, parachute theory, mechanisms



of the cotton complex, shell theory, economic cybernetics, environmental mechanics and others.

The study of mechanics begins with the kinematics of a material point. To classify mechanical motion, it is necessary to introduce the concepts of material point motion trajectory. The notion that a line formed by any point on an object during motion is called a trajectory is not complicated. This concept is illustrated by specific examples: the trace of chalk on the board, and so on. The concept of material point is very abstract. Therefore, the introduction of this concept should be explained to students in sufficient detail. It is important to understand the need for and use of this concept in the study of certain types of motion of objects. We solve many kinematic problems using the modeling method in the study of the mechanics of physics. For example, to learn to write the forward motion of an object, it is enough to know the laws of motion of a point. Therefore, in the study of the motion of an object, it can be modeled and explained as a material point.

Synchronous distance learning occurs when teachers and students interact in different places at the same time. Students admitted to synchronous courses usually need access to a computer at least once a week. Synchronous distance learning can include multimedia components such as group conversations, webinars, video conferencing, and phone calls. Synchronous learning is usually good for students who plan scheduled days and times for study. works. People who like students' noisy structured courses usually prefer synchronous learning.

In order for students to master the ability to determine the position of an object by its coordinates, they should be asked to record several different positions of a moving object and to determine the coordinates of the position relative to the chosen number system.

To do this, a number of areas of the school mechanics course are deliberately complicated. For example, the law of inertia is expressed in the general physics textbook and school textbook for universities by D.V .Sivukhin:

In many school physics classes, the first law was expressed as simple, close to Newton's tariff. In particular: "Anybody maintains its initial state in a temporary or linear straight motion until it is affected by other objects and removed from it."

Mechanics is an integral part of both classical physics and modern physics. Almost all important branches of modern physics are based on the laws of classical mechanics. The study of mechanics in general secondary education solves part of the main problem of many general education. In this section, students will be introduced to the concepts needed to master the entire physics course. These concepts include material point, coordinate system, number system, displacement, velocity, average and instantaneous velocity, acceleration, velocity and its projections. Also, in this death, students are introduced to the concept of the theory of relativity of motion, which is necessary to master the whole course of physics. The concepts formed on this topic are widely used in other sections of the physics course. Therefore, it is important to master these concepts.

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## **THE IMPORTANCE OF PATRIOTIC EDUCATION OF CHILDREN IN PRESCHOOL EDUCATION**

*Annotation: This article encourages the younger generation to love the country, to feel the sorrow and compassion of country. It is written to raise awareness of preschool children about our ancestors and their work for our country and the younger generation.*

*Key words: Young generation, patriotism, the sense of homeland, the spirit of the ancestors, education.*

One of the inherited traditions of our ancestors is a sense of boundless respect for the homeland, the family, the country where he was born and raised. The saying, "Be a beggar of your own country rather than a sultan of another country" has also survived from the sages.

Our ancestors were the true devotees of their country, the benefactors of their compatriots. They did not exchange a handful of umbilical cord blood for the worldly riches of another country and for the innumerable dice.

This custom is ingrained in the blood of the Uzbek people. He never wants to exchange his corner for someone else's castle.

"Your homeland is your golden cradle", "My home is my bed of death", he said, sharing his love for his country, his homeland and his family.

This quality is called patriotism. In Uzbek folklore, in large and small genres of folklore, from small articles to major epics: heroic, romantic epics, the main theme has been patriotic tones.

Indeed, the virtue of self-sacrifice in the world of the motherland and the character of the people, in the actions of the heroes he brought up, he leads through the deserts, saving from the onslaught of enemies.

At the end of the play, the heroes reach their goal and return home safe and sound. The fact that Uzbek folk epics create an invaluable image of the motherland further beautifies their ideological content. There is no more sacred place for the heroes of the saga than the homeland. The main goal of our developing independent state is to bring up educated, highly spiritual youth.

And also, the main goal of the education system, as in all areas, is to educate young people in the spirit of patriotism.

As our children grow up, they adapt to social life, try to express their views and understanding of life. Therefore, it is no secret that children see patriotism first of all in family, friends and people and learn from it. The feeling of love for the homeland is deeply ingrained in the blood of our children with the mother

goddess. And we can also understand this from the sense of excitement and pride of face of children that arises every time we tell them a myth or fairy tale.

The following processes must be used to form a sense of patriotism:

- introduce children to history;
- to preserve national values, traditions, customs and teach them to pass on to young people;

- teaching humanities;
- contribute to the future of our country by studying well;
- teach honestly and kindness;
- teach patience, endurance and diligence.

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Effective ways to cultivate a patriotic spirits in children:

- a) conversation;
- b) minutes of answers and questions;
- c) organising trips;
- d) spend different nights;
- e) meeting nights.

In preschool, children need to be strengthened by talking about the living of various historical figures, the heroes who sacrificed their lives for our country and through questions and answers, and conversations.

I found it appropriate to mention once again the feeling of homeland:

the feeling of homeland is to remember dozens of thinkers like Musa Al Khwarizmi, Al-Fergani, Abu Nasr Ferabi, Abu Mansur Samarkandi, Abu Abdullah Khwarizmi, Abu Reyhan Beruni, Abu Ali Ibn Sina, Abu Fazil Nasafi, Nasr Samarkandi, Makhmud az-Zamkhshari, Abul Kadir Jurjoniy, Fakhriddin ar-Rozi, Mirza Ulugbek who with their intellect made a great contribution to world civilization.

The feeling of homeland is to remember the owners of classical pens, such as the writer Akhmad Yugnaki, Nasir Xusrav, Yusuf Khos Khojib, Makhmud Koshgari, Akhmad Yassavi, Sulayman Bakirgani, Nosiriddin Rabguzi, Abdurakhmon Jomi, Alisher Navai, who created immortal works with high artistic potential. The feeling of homeland is to remember the name of Imam Bukhari, Abu Iso Mukhammad Termizi, Imam Akhmad Nasoi, Imom ad-Dorimi one of the six great muhaddiths recognized by the whole Muslim world, and to be a worthy follower of them.

The sense of homeland is also a remembrance of dozens of great people, such as Kaffoli Shoshi, Suhra Vardi, Burkhaniddin Marginoni, Bakhaiddin Nakshband, who made an invaluable contribution to the development of Islamic teaching.

Effective tools that can be used to educate preschool children in the spirit of patriotism are the teachings of our ancestors, wise words, exemplary lives.

We can promote the love of the homeland through the effective use of their writings, deeply ingrained in their minds.

We can teach them out national culture,our identity,our traditions.Young people need to be provided about protection from public culture.

Also:

- respect for mother, respect for women;
- explain the sanctity of the family;
- teaching that common values are a means of interethnic harmony, tolerance,the pursuit of secular sciences and the formation of an advanced culture.We must begin to educate true patriotic youth through the use of these tools.

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## **SPECIFIC FEATURES OF STYLISTIC DEVICES IN ENGLISH**

*Annotation: Sometimes a word diverges from its normal meaning, or a phrase has a specialized meaning not based on the literal meaning of the words in it. Examples are metaphor, simile, or personification. Stylistic devices often provide emphasis, freshness of expression, or clarity. This article will delve into some of these stylistic devices and explains specific features of them*

*Key words: stylistic devices, emotional emphasis, emotional elements, linguistic points of view, expressiveness, verbal actualization, positive emotiveness*

The idea of taking various type of selection as criteria for distinguished styles seems to be a sound one. It places the whole problem on a solid foundation of objective criteria, the interdependence of optional and obligatory features.

There is no point in quoting other definitions of style. They are too many and too heterogeneous to fall under one more and less satisfactory unified notion. Undoubtedly all these diversities in the understanding of the word "style" stem from its ambiguity. But still all these various definitions leave an impression that by and large they all have something in common. All of them point to some integral significance, namely, that style is a set of characteristics by which we distinguish one author from another or members of one subclass from members of other subclasses, all of which are members of the same general class. What are these sets of characteristics typical of a writer or of a subclass of the literary language will be seen in the analysis of the language means of a given writer and of the subclasses of the general literary standard.

Another point the above quotations have in common is that all of them concentrate on the form of the expression almost to the detriment of the content. In other words, style is regarded as something that belongs exclusively to the plane of expression and not to the plane of content. This opinion predominantly deals with correspondence between the intention of the writer whoever he may be - a man of letters, the writer of a diplomatic document, an article in a newspaper, or a scientific treatise - and the effect achieved. The evaluation is also based on whether the choice of language means conforms with the most general pattern of the given type of text-a novel, a poem, a letter, a document, an article, an essay and so on.

It must be noted that to draw a hard and fast distinction between logical and emotional emphasis may color the utterance with emotional elements, thus causing a kind of expressiveness which is both logical and emotive.

However, the extremes are clearly set one against the other. The idea of individual style brings up the problem of the correspondence between thought and expression. Many great minds have made valuable observations on the interrelation between these concepts. There is a long list of books in which the problem is discussed from logical, psychological, philosophical, aesthetic, pragmatic and purely linguistic points of view. Here we shall only point out the most essential sides of problem, with, a) thought and language are inseparable; b) language is a means of materializing thought. It follows then that the stylistics cannot neglect this interrelation when analyzing the individual style of an author. But it is one thing to take into account – a certain phenomenon as a part of general notion and another thing substitute one notion for another. To define style as the result of thinking out into language would be on the same level as to state that all say is style. The absurdity of this statement needs no comment.

What then is a stylistic device? Why is it important to distinguish it from the expressive and neutral means of the language? To answer these questions it is first of all necessary to elucidate the notion “expressiveness.”

The category of expressiveness has long been the subject to heated discussions among linguists. In its etymological sense expressiveness may be understood as a kind of intensification of an utterance or of a part of it depending on the position in the utterance of the means that manifest this category and what these means are.

But somehow lately the notion of expressiveness has been confused with another notion, with emotiveness. Emotiveness and correspondingly the emotive elements of language, are what reveal the emotions of writer or speaker. But these elements are not direct manifestations of the emotions – they are just the echoes of real emotions, echoes which have undergone some intellectual recasting. They are designed to awaken co-experience in the mind of the reader.

Expressiveness is a broader notion than emotiveness and is by no means to be reduced to the latter. Emotiveness is an integral part of expressiveness and as a matter of fact, occupies a predominant position in the category of expressiveness.

But there are media in language which aim simply at logical emphasis of certain parts of the utterance. They do not evoke any intellectual representation of feeling but merely serve the purpose of verbal actualization of the utterance. Thus, for example, when we say:

“It was in July 1975 that the cosmos experiment of a joint American-Soviet flight took place“ we make the utterance logically emphatic by a syntactical device which will be described in due course. The same thing is to be observed in these sentences:

- (1) Mr. Smith was an extremely unpleasant person.
- (2) Never will he go to that place again.
- (3) In rushed the soldiers!
- (4) It took us a very, very long time to get there.

In sentence (1) expressiveness is achieved by lexical means - the word “extremely”. In (2) and (3) syntactical means – different types of inversion. In (4) the emphasis is materialized by the repetition of the word “very” which is in itself a word used to intensify the utterance.

But in the sentences:

- (1) Isn't she cute?
- (2) Fool that he was!
- (3) This goddam window won't open!
- (4) We buddy- buddied together.
- (5) This quickie tour didn't satisfy our curiosity.

We can register positive emotiveness, in as much as there are elements that evoke certain representations of the feeling of the speaker. In sentence (1) and (2) there are syntactical means which evoke this effect. In (3) and (4) there are lexical means -“goddam”, “buddy-buddied”(=were on very friendly relations );

in (5) – a morphological device (the suffix – i.e. ).

Now it should be possible to define the notion of expressive means. The expressive means of a language are those phonetic, morphological, word-building, lexical, phrase logical and syntactical forms which exist in language as -a-system for the purpose of logical and or emotional in densification of the utterance. These intensifying forms, wrought by social usage and recognized by their semantic function, have been singled out in grammars, courses in phonetics and dictionaries (including phraseological ones ) as having special functions in making the utterance emphatic. Some of them are normalized and good dictionaries label them as “intensifiers”. In most cases they have corresponding neutral synonymous forms. Compare, for example, the following pairs:

- (1) He shall do it! = I shall make him do it.
- (2) Isn't she cute! = She is very nice, isn't she ?

Expressiveness may also be achieved by compositional devices in utterances comprising a number of sentences – in syntactical wholes and in paragraphs.

This will be shown in the chapter on syntactical stylistic devices. Stylistics studies the expressive means of language, but from a special angle. It takes into account the modifications of meanings which various expressive means undergo when they are used in different functional styles. Expressive means have a kind of radiating effect. They noticeably color the whole of the utterance no matter whether they are logical or emotional. What then is stylistic device? It is a conscious and intentional intensification of some typical structural or semantic property of a language unit (neutral or expressive ) promoted to a generalized status and thus becoming a generative model. It follows then that an Stylistic – Device is an abstract pattern, a mould into which any content can be poured. As is known, the typical is not only that which is in frequent use, but that also which reveals the science of a phenomenon with the greatest and most evident force. Stylistic -Devices



function in texts as marked units. They always carry some kind of additional information, either emotive and logical. That is why the method of free variation employed in descriptive linguistics cannot be used in stylistics because any substitution may cause damage to the semantic and aesthetic aspect of the utterance. A.W. De Groot points out the significance of Stylistic –Devices in the following passage: "Each of the aesthetically relevant features of the text serves to create a feature of the gestalt of the poem. In this sense the relevant linguistic features may be said to function or operate as gestalt factors."

The idea of the function of Stylistic - Devices is expressed most fully by V. M. Zirmunsky in the following passage: "The justification and the sense of each device lies in the wholeness of the artistic impression which the work of art as a self-contained thing produces on us. Each separate aesthetic fact, each poetical device (emphasis added) finds its place in the system, the sounds and the sense of words, the syntactical structures, the scheme of the plot, the compositional purport – all in equal degree express this wholeness and find justification." The motivated use of Stylistic – Device in a genuine work of emotive literature is not easily discernible, though they are used in some kind of relation to the facts, events, or ideas dealt with in the artistic message. Most Stylistic-Devices display an application of two meanings: the ordinary one, in other words, the meaning (lexical or structural) which has already been established in the language - as - a-system and a special meaning which is superimposed on the unit by the text, i.e. a meaning which appears in the language in-action. Sometimes however, the twofold application of a lexical unit is accomplished not by the interplay of two meanings but by two words (generally synonyms) one of which is perceived against the background of other. This will be shown in subsequent chapters. The conscious transformation of a language fact into a stylistic device has been observed by certain linguists whose interests in linguistic theory have gone beyond the boundaries of grammar. Thus A.A. Potebnya writes:

"As far back as in ancient Greece and I and with few exceptions up to the present time, the definition of a figurative use of a word has been based on the contrast between ordinary speech used in its own natural, primary meaning and transferred speech." The contrast which the author of the passage quoted points to, can not always be clearly observed. In some Stylistic –Devices it can be grasped immediately; in others it requires a keen eye and sufficient training to detect it. It must be emphasized that the contrast reveals itself most clearly when our mind perceives twofold caption meanings simultaneously. The meanings run parallel: one of them taking precedence over the other. Thus in "The night has swallowed him up" the word "swallow" has two meanings:

a) a referential and b) contextual (to make disappear, to make vanish)  
The meaning (b) takes precedence over the referential (a).

The same can be observed in the sentence: "Is there not blood enough upon your penal code that more must be poured forth to ascend to Heaven and testify against you?" (Byron )

The interrogative form, i.e. the structural meaning of a question, runs parallel with the imposed affirmative thought, i.e. the structural meaning of a statement and it is difficult to decide which of the two structural meanings- established or the superimposed - takes the upper hand.

In the following chapters were detailed analysis of the different Stylistic-Devices will be carried out, we shall try; where possible, to consider which of the two meanings realized simultaneously outweighs the other. The birth of Stylistic - Devices is a natural process in the development of language media. Language units which are used with more or less definite aims of communication in a various passages of writing and in various functional styles begin gradually to develop new features, a wider range of functions, thus causing polyfunctionality. Hence they can be presented as invariants with concrete variables.

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. An other line is when the author finds it possible to substitute one object for another on the grounds that there is some kind of interdependence or interrelation between the two corresponding objects. A third line is when a certain property or quality of an object is used in an opposite or contradictory sense.

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**POSSIBILITIES OF ENSURING THE ECONOMIC EFFICIENCY OF  
AGRICULTURAL PRODUCTION BASED ON INNOVATION**

*Abstract: The article substantiates the possibilities of ensuring economic efficiency in agriculture of the Republic of Uzbekistan on the basis of innovations. The main attention is paid to substantiating the possibility of using advanced foreign experience in the country's agriculture.*

*Key words: agriculture, innovation, investment project, economic efficiency, financing, technopark, government order, material incentives.*

**Introduction**

Deepening structural changes and consistent development of agricultural production in the Action Strategy for five priority areas of development of the Republic of Uzbekistan for 2017-2021, further strengthening the country's food security, expanding the production of environmentally friendly products, significantly increasing the export potential of the agro-industrial complex. The priority area of development and reform of the agro-industrial complex is the implementation of investment projects for the construction of new processing enterprises equipped with the most modern high-tech equipment for the production of deep processing, semi-finished products and finished food and packaging products, reconstruction and modernization of existing ones are recognized [1].

In addition, in accordance with the Decree of the President of the Republic of Uzbekistan No. PP-4700 of May 1, 2020 "On additional measures to ensure food security, rational use of available resources, state support for agriculture during the coronavirus pandemic" use the available resources and opportunities in agriculture in the event of food shortages, double the harvest of food crops, obtain high yields, create new jobs in agriculture and increase interest. [2]

**Analysis of the relevant literature.**

The above circumstances dictate the need to ensure the economic efficiency of the country's agriculture based on innovation.

According to Schumpeter's business theory, product innovation manifests itself in:

- the use of new techniques and technologies;
- introduction of products with new functions;
- the use of new raw materials [3].

According to F. Knight's theory of uncertainty, innovations are triggered by a number of factors, as a result of which they act in conjunction with exogenous factors, such as new laws, the global external environment [4].

According to H. Neubauer, all innovations that were first introduced into the activities of enterprises and brought them real economic and social benefits can be considered as innovations [5].

The experience of economically developed countries shows that the effectiveness of innovation in agriculture and the degree of involvement of producers in innovation processes determine the success of entering the world agricultural market and the competitiveness of agricultural producers [6].

According to E. Idzhmulkina, the world's leading agricultural economies have the sixth level of technological development in terms of agriculture and technology, and its development is associated with the successful transfer of innovations to nanotechnology, biotechnology, alternative energy, new information technologies [7].

**Table 1**

**Specific economic indicators of agriculture of the Republic of Uzbekistan [8]**

Indicators	2018 y.	2019 y.	2020 y.	Change in 2020 compared to 2018
Agricultural production, billion soums	187 425	216 283	249 754	133,3 %
Growth rate of agricultural production,%	100,2	103,3	102,8	2,6
Share of agricultural exports in total exports,%	9,4	10,4	10,5	1,1
Share of agricultural exports in total imports,%	8,1	7,8	10,2	2,1

The data in Table 1 show that in 2018-2020, the volume of agricultural production in the Republic of Uzbekistan tended to grow. In addition, agricultural production in 2020 grew at a faster pace than in 2018. This is the result of ongoing reforms in agriculture.

From the data in Table 1, it can be seen that the growth rate of agricultural production in 2019 increased significantly compared to 2018, but in 2020 this indicator decreased compared to 2019. This is because the coronavirus pandemic has negatively impacted agricultural production. However, the growth rate of agricultural production in 2020 compared to 2018 was 2.6 percentage points.

The data in Table 1 show that in 2018-2020 there is a trend towards an increase in the share of agricultural exports in the total export volume of the Republic of Uzbekistan. This is a positive development in terms of increasing the export potential of agriculture.

From the data in Table 1, it can be seen that in 2019, although the share of agricultural imports in the country's total imports decreased compared to 2018, this indicator increased in 2020 compared to 2019.

Conclusion.

In our opinion, in order to increase the economic efficiency of agriculture based on innovations, it is necessary to take the following measures:

1. It is necessary to form a technology cluster through the development of agriculture and related industries through the creation of technology parks in rural areas with relatively low incomes.

Foreign experience in the formation of technological clusters in the agricultural sector shows:

firstly, high productivity of firms based on narrow specialization included in the cluster is ensured (in today's conditions, when many operations are specialized and technologically complex, specialization in individual technological operations prevails in competition);

secondly, the opportunities for the production of innovative products in clusters will be expanded, since the scientific potential will be accumulated within the cluster, combined with the production base and provided with adequate sources of funding;

thirdly, it reduces the time of implementation of the created innovative developments in agriculture and related industries, and allows to reduce costs.

To develop the activities of companies producing innovative technologies and equipment for agriculture, it is necessary to take the following measures:

- it is necessary to introduce the practice of supporting these companies through companies financed from public funds;

- it is necessary to increase the volume of government orders for these companies;

- it is necessary to strengthen cooperation between universities and research institutes in the field of agriculture with innovative companies in the development and commercialization of innovative products.

3. To expand the scale of the introduction of modern information, communication and digital technologies in the activities of agricultural enterprises, it is necessary to introduce technologies of crowdfunding, crowdsourcing, big data and geolocation.

For information, crowdfunding is a collective collaboration of people in which people voluntarily pool their money or other resources. These funds will be used to finance various forms of activity, including start-ups and small businesses, with the aim of investing for profit.

Huge data technology is a technology that can process very large amounts of data with high speed and accuracy.

Geolocation technology creates new opportunities for the provision of information services, taking into account the user's location. For example, satellite tracking services (GPS, GLONASS). This tracking service allows you to detect deviations from the route, misuse of transport, and control fuel costs.

Thanks to modern information and communication technologies, new types of goods and services will appear in the agricultural sector, and the speed of service provision will increase significantly.

Digital technologies make it cheaper, faster and easier to complete large-scale operations tasks without intermediaries.

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## **BOLALAR DUNYOQARASHINING SHAKLLANISHIDA BADIY ADABIYOTLARNING RO'LI**

*Annotatsiya: Maqolada "Badiiy adabiyotni o'qish" ning mazmuni ochib berilgan. Adabiyot o'qishning maqsad va vazifalari bolalarning yoshiga qarab intellektini rivojlantirishning asosiy vositasi sifatida belgilanadi. O'qishning bolaga ta'sirining xarakteristikasi berilgan, ta'lim dasturida "Badiiy adabiyotni o'qish" ni amalga oshirishning amaliy asoslari tahlil qilingan.*

*Kalit so'zlar: ta'lim, tarbiya, tarix, barkamol avlod, adib, adbiyotshunos, badiiy adabiyot.*

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## **THE ROLE OF FICTION IN THE FORMATION OF THE CHILDREN'S WORLDVIEW**

*Annotation: the content of "reading fiction" is revealed in the article. The aims and objectives of the literature review are defined as the main tool for the development of OI depending on the age of the children. The characteristic of the impact of reading on the child is given, the practical basis for the implementation of "reading fiction" in the educational program is analyzed.*

*Keywords: education, upbringing, history, harmonious generation, writer, adbiologist, artistic literature.*

O'zbekiston Respublikasi birinchi prezidenti I. A. Karimov o'zining „Yuksak ma'naviyat — yengilmas kuch“ kitobida ma'naviyat masalasiga alohida e'tibor

berib: „Biz xalqimizning dunyoda hech kimdan kam bo‘lmasligi, farzandlarimizning bizdan ko‘ra kuchli, bilimli, dono va albatta, baxtli bo‘lib yashashi uchun bor kuch va imkoniyatlarimizni safarbar etayotgan ekanmiz, bu borada ma‘naviy tarbiya masalasi, hech shubhasiz, beqiyos ahamiyat kasb etadi. Agar biz bu masalada hushyorlik va sezgirligimizni, qat‘iyat va mas‘uliyatimizni yo‘qotsak, bu o‘ta muhim ishni o‘z holiga, o‘zibo‘larchilikka tashlab qo‘yadigan bo‘lsak, muqaddas qadriyatlarimizga yo‘g‘rilgan va ulardan oziqlangan ma‘naviyatimizdan, tarixiy xotiramizdan ayrilib, oxir-oqibatda o‘zimiz intilgan umumbashariy taraqqiyot yo‘lidan chetga chiqib qolishimiz mumkin“, — deb yozadi. Ma‘naviyat insonga havodek, suvdek zarur. Sahrodagi sayyoh har doim buloqdan chanqog‘ini bosadi. Xuddi shuningdek, inson ham necha-necha azoblar va qiyinchiliklar bilan ma‘naviy chashmasini izlaydi. Yer, oila, ota-ona, bolalar, qavm-qarindoshlar, qo‘niqo‘shnilar, xalq, mustaqil davlatimizga sadoqat, insonlarga hurmat, ishonch, xotira, vijdon, erkinlik — ma‘naviyatning ma‘nosi ana shunday juda keng. Inson o‘zini xalqining bir zarrasi deb sezgandagina, u haqda o‘ylab, o‘qib, mehnat qilib yashagandagina ma‘naviyat bilan tutashadi. Bunday mas‘uliyatli vazifani amalga oshirishda kattalar adabiyotining ajralmas bir bo‘lagi bo‘lgan bolalar adabiyotining ham alohida o‘rni bor. Xalqda „Adabiyotga e‘tibor — ma‘naviyatga e‘tibor“ degan gap bor.

“Yozuvchi bo‘lishdan avval o‘quvchi bo‘lish kerak”. Bu -aksioma. Zero Abdulla Qodiriy takidlaganidek, “Yozuvchi bironi takrorlab qo‘ymasligi uchun ham o‘qishi kerak”. Agar tarixga nazar tashlansa, ko‘plab buyuk adiblar mutola orqali maxoratini oshirganini ko‘rish mumkin. Yer yuzida yashovchi turli millatlar o‘rtasidagi madaniy va adabiy aloqalar kecha yoki bugun boshlangan hodisa emas. Mamlakatimizning buguni, kelajak taraqqiyoti ko‘p jihatdan yoshlarning intellektual salohiyatiga, vatanparvarligiga bog‘liq. Agar ularni sog‘lom, bilimdon, xalqparvar qilib tarbiyalasak, shubhasiz, ular Vatan ravnaqi uchun hissa qo‘sha oladigan, uning yuksalishiga dahldor bo‘lgan barkamol va ijtimoiy faol shaxslar bo‘lib shakllanishi muqarrar. Albatta, bu borada biz ta‘limning ichiga singib ketgan tarbiyaning beqiyos kuchi va mas‘uliyatini his qilishimiz, undan oqilona foydalanishimiz joiz. Yoshlar ongiga va turmushiga odo va axloq haqidagi qarashlarni singdirib borish, bo‘sh vaqt tushunchasini hayot tarzlaridan chiqarib tashlashga ko‘maklashish, ilm-u ziyoning inson hayotidagi ahamiyati nechog‘lik ulkan ekanligini uqtira bilish nihoyatda zarur. Prezidentimiz Shavkat Mirziyoyevning “Gap yoshlar tarbiyasi haqida borar ekan, bu borada shoshmaslik, yoshlar va ota-onalarning talab-istaklaridan kelib chiqib, har tomonlama puxta o‘ylab ish tutish kerak”, - degan fikrlari har bir pedagogning dasturil amali bo‘lishi zarur. Chunki, ta‘lim va tarbiya doimo bir-biri bilan chambarchas bog‘liqdir.

Mustaqil O‘zbekistonimiz bugungi dunyodagi yetakchi davlatlar safiga kirish yo‘lida asosiy kuch yeytishib kelayotgan yosh avlod deb hisoblaydi va bunga ishonadi. Shuning uchun yoshlarning ta‘lim olishlari uchun barcha sharoitlar yaratilib berilmoqda. Kelajagi porloq, intiluvchan, izlanuvchan, o‘ziga ishongan, mustaqil fikrlovchi yoshlarni tarbiyalashda badiiy adabiyotlarning o‘rni beqiyos.



Yuqori natijalarga erishish, o'zini namoyon etishdan oldin avvalo kim ekanliklarini, kimlarning davomchilari ekanliklarini, boy ta'riximizni o'rganish uchun kitoblarga murojaat qiladi. Bu borada yoshlarga tavfsiyalarni o'qituvchilar to'g'ri berishi kerak. Faqatgina milliy adabiyotlarimiz emas, jahon adabiyotining durdona asarlaridan ham o'qib, bilim saviyasini oshirib borish lozim. Kitoblarning tanlanishi odamning fikr dunyosini, uning hayotiy qadriyatlarini ochib beradi (Jim Rohm). Biz pedagoglarning kelajagimiz bo'lmish yosh avlodni ta'lim-tarbiya olishlari uchun shart-sharoit yaratish, sog`-salomat ulg'aytirish, ularga ota-ona kabi mehr berish oliy maqsadimiz. Bolaning barkamol shaxs bo'lib ulg'ayishida ularning hayotida kitobning hayoti beqiyosdir. Ular qachon kitobga mehr beradi degan savolga yagona javob bor. Qachonki bolalarga o'zlarining dunyo qarashi va yoshiga mos kitob tanlay olsak, bolada kitobga muhabbat uyg'otadi. Aslida, tadqiqotlar shuni ko'rsatadiki, yosh o'quvchilar o'z adabiyotlarini to'g'ri tanlaganlarida, ular yaxshi o'qiydiganlar bo'ladi.

O'qiyotgan kitobida yashashga, qahramonlar hayotini muhokama qilishga, qahramonlarning yutuqlaridan andoza olishga, xatolaridan to'g'ri xulosa chiqarishga o'rgatadi. Kichkintoylarning dunyoqarashini shakllantirish, ularni to'g'ri yo'lga solishda kitobdan muhimroq vosita yo'q. Shuning uchun ham otanalar, o'qituvchilar va kutubxonachilarning birinchi vazifasi yosh avlodda mutolaaga qiziqish va mehr uyg'ota olishdir.

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## PECULIARITY OF CORRUPTION

*Annotation: The article highlights the work done in our country in recent years in the fight against corruption, as well as the negative consequences of corruption, types of corruption and the essence of proposals for improving legislation.*

*Keywords: corruption, corruption crime, corpus delicti of corruption offenses, abuses related to the official activities of civil servants, types of corruption, criminal liability*

In recent years, Uzbekistan has been taking comprehensive measures in the field of the judicial and legal system, including combating crime, early crime prevention and crime prevention, strengthening the rule of law and the rule of law, and reliable protection of human rights and interests.

There is no single universal approach to combating corruption in the world - it is individual for each historical period and each state, each country has its own national characteristics, methods and mechanisms of combating corruption [1].

Corruption is illegal actions of an official, which are aimed at obtaining material and non-material benefits for committing or refraining from committing certain actions using their powers [2].

Corruption is a social phenomenon that consists in the decomposition of society and the state, when civil servants, persons authorized to perform state and other administrative functions, including in the private sector, use their official position, status and authority of the position they hold against the interests of the service and the established norms of law and morality for the purpose of personal enrichment or in group interests.

The norm of Article 3 of the Law of the Republic of Uzbekistan dated January 3, 2017, No. 419 "On Combating Corruption" defines corruption as "illegal use by a person of his official or official position in order to obtain material or non-material benefits in personal interests or in the interests of other persons, and equal to the illegal provision of such benefits"[3].

Today, corruption crime is one of the topical issues of our time not only for Uzbekistan, but also for all countries of the world.

As the President of the Republic of Uzbekistan Sh.M. Mirziyoyev rightly pointed out: "Intolerance to any manifestations of corruption should become an integral part of our daily life. All state bodies, political parties, public organizations, mass media, every citizen must mobilize to fight this evil. We need to instill in children from an early age the understanding that corruption is a very serious crime,

foster intransigence towards it, teach honest work and conscientious entrepreneurship. It is extremely important to prevent corruption and ensure transparency of decision-making processes in all state bodies ”[4].

Since gaining independence, Uzbekistan has attached great importance to the issues of combating corruption. This problem has been given special attention in recent years. Practically in all his speeches, approved by the normative legal documents by the President of Uzbekistan Shavkat Mirziyoyev, demands are made to eradicate this social evil from the life of the country [5].

Main characteristics of this offence are

1. A social phenomenon that entails the decomposition of the entire civil society and the state, when acts of corruption become a daily norm in the life of society;

2. The range of subjects of this offense - civil servants, persons authorized to perform public functions, as well as persons authorized to perform management functions in the private sector;

3. The use by these entities (through action or inaction) of their official position, their legal status and authority of the position held, contrary to the interests of the service (ie civil service and service in private sector organizations) and the established norms of law and morality;

4. The activities of the above entities both for the purpose of personal enrichment and in the interests of other persons or corporate interests.

It seems to us that corruption can be conditionally classified into several main types:

1) by the status of subjects:

a) corruption in government;

b) corruption in the private sector;

c) corruption in politics or political corruption;

2) by levels:

a) grassroots;

b) apical;

c) vertical [6];

3) according to the degree of public danger:

a) corruption-misconduct;

b) corruption is a crime.

In our opinion, considering corruption, the corpus delicti of corruption crimes can be conditionally divided into: direct (main) corruption; indirect, i.e. optional.

In order to exclude various abuses related to the official activities of civil servants, it became necessary to introduce norms aimed, first of all, at preventing the merging of senior officials with commercial and other organizations, as well as prohibiting to engage in entrepreneurial activities through their family members in cases where the organization, where a family member of a civil servant works is in some way dependent on a government authority.

In the system of government bodies of the republic, the authors propose to create subdivisions of a kind of "internal audits", as it is done in Germany, to

identify and suppress the facts of corruption in government bodies. In other structures, it is proposed to create a kind of "subdivisions (departments) of their own security", as is done, for example, in the Ministry of Internal Affairs of the Republic of Uzbekistan.

According to the objects of encroachment, corruption crimes should be classified into the following types:

- corruption crimes related to the theft of someone else's property (clause "d", part 2 of article 167 of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes against the foundations of the economy (Article 175, item "g", Part 2, Article 182, Criminal Code of the Republic of Uzbekistan);

- corruption crimes in the economic sphere (item "g", part 2 of article 186<sup>1</sup>, item "g", part 2 of article 186<sup>2</sup>, item "g", part 2 of article 186<sup>3</sup> of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes related to obstruction, illegal interference in entrepreneurial activity, and other crimes that infringe on the rights and legitimate interests of economic entities - (Articles 192<sup>1</sup>-1921<sup>1</sup> of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes in the field of ecology (Art. 194, item "b", Part 3, Art. 202 of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes against the order of functioning of authorities, administration and public associations - (Articles 205-206, 209-211, 213, 214, Articles 230, 231, Part 2 of Article 232, Articles 234, 235, Part 2. Article 236, 241<sup>1</sup> of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes against public safety and public order (clause "c", part 2 of article 247, cl. "g", part 2 of article 250<sup>1</sup>, cl. "c", part 2 of article 251, cl. "c »Part 2 of article 252 of the Criminal Code of the Republic of Uzbekistan);

- crimes constituting illegal circulation of narcotic drugs or psychotropic substances (clause "d", part 2 of article 271 of the Criminal Code of the Republic of Uzbekistan);

- corruption crimes in the field of information technology (clause "c" part 2 of article 278<sup>2</sup>, clause "c" part 2 of article 278<sup>3</sup> of the Criminal Code of the Republic of Uzbekistan);

- Corrupt military official crimes (Article 301 of the Criminal Code of the Republic of Uzbekistan).

It seems that in order for Article 190 of the Criminal Code of the Republic of Uzbekistan (Engaging in activities without a license) to work properly, as well as to significantly reduce the level of corruption among civil servants, it is necessary to strengthen responsibility for crimes committed under this article.

The prevalence of bribes has led to the fact that in many institutions a multi-stage system of bribery has developed, in which tariffs for the provision of services are rather rigidly prescribed, depending on their complexity and the position of the person. The technology of bribery, worked out over the years, has made the fight against this phenomenon quite difficult.

In this regard, it seems necessary to supplement Chapter XV of the Criminal Code of the Republic of Uzbekistan with the following articles: Art. 214<sup>1</sup> "Office forgery in commercial and other organizations", Art. 214<sup>2</sup> "Negligence in commercial and other organizations."

Most ordinary citizens communicate directly with ordinary civil servants (chief, leading specialists, etc.) who do not belong to the category of officials. Often, the solution of a particular issue for a citizen depends on this communication, and based on the results of this communication, an assessment of all power as a whole is given. In the case of extortion of illegal remuneration from civil servants, citizens develop an appropriate opinion that all power is for sale, which affects, first of all, the authority of state power and the interests of civil service and service in local self-government bodies.

In this regard, it seems advisable to supplement Chapter XV of the Criminal Code of the Republic of Uzbekistan with Article 214<sup>3</sup>, which provides for criminal liability for illegal receipt of remuneration by extortion from civil servants who do not belong to the category of officials, in the following wording:

“Article 214<sup>3</sup>. Receiving illegal remuneration

Illegal receipt by an employee of a state organization who is not an official, as well as an employee of a non-governmental organization who does not perform managerial functions, material remuneration, benefits or services of a property nature for the performance of work or the provision of services that are within the scope of his duties, if this act is associated with extortion, -

shall be punishable by a fine up to one hundred minimum monthly wages, or by deprivation of the right to occupy certain positions or engage in certain activities for a term of up to two years, or to engage in community service for a term of up to one hundred and fifty hours, or to correctional labor for a term of up to one year.

The same act, committed repeatedly or connected with the receipt of remuneration in a large amount, -

is punishable by deprivation of the right to hold certain positions or engage in certain activities for a term of five years, or restraint of freedom from three to five years, or imprisonment for up to two years with the deprivation of the right to occupy certain positions or engage in certain activities for a term of up to three years.”

It seems advisable to introduce additional norms providing for liability for cashing out funds and violating the rules of accounting and reporting, placing them in Chapter XII of the Criminal Code of the Republic of Uzbekistan (Crimes against the fundamentals of the economy): Article 184<sup>2</sup> “Illegal cashing of funds”.

As some scholars rightly point out, the problems that give rise to corruption can be roughly divided into general and specific.

The common ones include those that are characteristic not only of Uzbekistan, but also of most countries undergoing a transition period from a centralized to a market economy. Some of these problems are:

- 1) unrooted democratic political traditions;
- 2) weakness of civil society, separation of society from power;

- 3) inefficiency of government institutions;
- 4) underdevelopment and imperfection of legislation;
- 5) difficulties in overcoming the inheritance of the totalitarian period;
- 6) economic decline and political instability.

Specific modern problems are a continuation of those that, in manifestation or origin, are rooted in the Soviet period. Some of them are exacerbated by the conditions of the transition period:

- low efficiency of the ships;
- underdevelopment of the legal consciousness of the population;

The habitual focus of law enforcement agencies and their representatives on the protection of exclusively “interests of the state” and “public property”.

The tradition of subordinating officials not to the law, but to instructions and to the boss.

Many domestic experts consider inadequate legal regulation of certain areas of activity and shortcomings in the current legislation to be the legal factors that determine corruption. Among these, the most often stand out:

- improper regulation of the official powers of officials of state power and management bodies;
- insufficient effectiveness of the current criminal legislation on responsibility for specific forms of manifestation of corruption;
- inadequate legal regulation of the financing of pre-election campaigns to state and local authorities;
- lack of a comprehensive legal framework aimed at combating corruption, including a political one;
- the presence of legislative consolidation of immunity from criminal prosecution of certain subjects of politics, both representatives of state power and applicants for these positions (candidates for the President of the Republic of Uzbekistan, deputies of the Parliament of the Republic of Uzbekistan, etc.);
- the mechanism of electoral legislation requiring perfection, ensuring the real independence of the elected persons from their voters.

The group of organizational and managerial factors that determine corruption includes:

- a) an insignificant number of competitions for the replacement of rolling top government posts, the presence of a system of professional employees and political appointees;
- b) lack of effective financial and other control over the activities of policy subjects;
- c) instability of the civil service;
- d) the absence of special independent services that exercise financial control during elections or competitions for taking up an appropriate position in government bodies;
- e) ineffectiveness of the activities of state bodies in the fight against corruption;

f) the lack of appropriate forms of social control over the sphere of political relations and the activities of representatives of public authorities and candidates for these positions both from the state and society;

g) the lack of political will of the highest officials of the state, both in relation to the fight against corruption throughout the country, and to individual cases of its manifestation.

The ideological and educational factors that determine corruption include:

- carrying out so-called campaigns to combat corruption in all its forms and manifestations, which are more likely to be harmful than positive, since they most often pursue political goals and are one of the ways to achieve them, because often the persons who have achieved the goals set before themselves political goals (taking or retaining the relevant position), after that they forget about their promises about increasing the effectiveness of the fight against this social phenomenon;

- the lack of formation of the political culture of civil society, which is reflected primarily in the election process, when some voters cast their votes for small sums of money or material values, receiving insignificant property benefits, and secondly, in praise or, on the contrary, in indiscriminate criticism subjects of politics without any serious preliminary study and analysis of their election programs;

- absence or insufficiently well-established work in the educational system for anti-corruption education of the younger generation;

- insufficient work of the mass media on anti-corruption education of the population.

Socio-economic conditions of corruption:

- privatization of state property;
- distribution of budgetary funds;
- provision of exclusive rights (privileges, including for export and import, taxes, licensing, etc.).

Banking sector:

- illegal lobbying in the legislature;
- law enforcement and economic crime;

Conditions for grassroots corruption:

- housing and communal services;
- law enforcement agencies;
- taxes and customs duties;
- conscription for military service;

Thus, the following conclusions can be drawn:

Firstly, it is possible to reduce and limit corruption only by simultaneously solving the problems and conditions that give rise to it: secondly, countering corruption with all decisiveness and in all directions will contribute to solving these problems.

The problems that give rise to corruption include those that are characteristic not only of Uzbekistan, but also of most countries that are in the stage of modernization, primarily those undergoing a transition period from a centralized to

a market economy. First, various interpretations of the causes of corruption contradict each other, and secondly, none of them can be considered perfect. In our opinion, the truth should be somewhere in between.

Any society has its negative sides. The most dangerous of them for the state and the people is corruption. This phenomenon occurs in all states, regardless of their level of development and volume of territory. Struggle and opposition must first of all begin with family education and climate [7].

Only after properly studying the causes and conditions that give rise to corruption, it is possible to determine and develop specific measures to limit and reduce it.

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## **PEDAGOGIKA OLIY O'QUV YURTLARIDA GENETIKA VA SELEKSIYA ASOSLARIGA OID MAVZULARNI O'QITISHDA AMALIY MASHG'ULOTLAR TAHLILI VA AHAMIYATI**

*Annotatsiya: Ushbu maqolada uzluksiz ta'lim tizimida genetika va seleksiya asoslari bo'limlariga oid mavzularni o'qitishda amaliy mashg'ulotlar mazmuni va tahlili bayon etilgan. Amaliy mashg'ulotlarning ta'lim tizimidagi o'ziga xos jihatlari talqin etilgan.*

*Kalit so'zlar: umumiy o'rta ta'lim, professional ta'lim, oliy ta'lim, barkamol avlod, raqobatbardosh kadr, biologiya, genetika va seleksiya asoslari, dars, amaliy, laboratoriya mashg'uloti, ekskursiya, allel, noallael, chatishtirish.*

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## **ANALYSIS AND IMPORTANCE OF PRACTICAL TRAININGS IN TEACHING SUBJECTS ON THE BASIS OF GENETICS AND SELECTION IN PEDAGOGICAL UNIVERSITIES**

*Abstract: The articles of the section describe the context and analysis of practical training on topics related to the basics of genetics and selection in the system of continuing education. Peculiarities of practical training in the education system are interpreted.*

*Keywords: general education, vocational education, higher education, harmoniously developed generation, competitive personnel, basics of biology, genetics and selection, lessons, practical, laboratory classes, excursion, allele, noallael, crossbreeding articles.*

Mamlakatimizda ham uzluksiz ta'lim tizimini tubdan isloh qilish borasida keng qamrovli ishlar amalga oshirilmoqda. Bu borada O'zbekiston Respublikasi Prezidentining 2017 yil 7 fevraldagi "O'zbekiston Respublikasini yanada rivojlantirish bo'yicha Harakatlar strategiyasi to'g'risida"gi PF-4947-son Farmoni, O'zbekiston Respublikasi Prezidentining 2020 yil 12 avgustdagi "Kimyo va biologiya yo'nalishlarida uzluksiz ta'lim sifatini va ilm-fan natijadorligini oshirish chora-tadbirlari to'g'risida" qarorlarida zamonaviy talablar asosida bo'lajak o'qituvchilar, pedagoglarni malakasini oshirish jarayonlarining mazmunini takomillashtirish hamda ularning kasbiy kompetentligini uzluksiz oshirib borish asosiy maqsad etib belgilangan[1].

O'quvchilar tomonidan biologiya o'quv fani dasturlari va DTS (oliy ta'lim muassasalarida esa malaka talablari) bilan me'yorlangan muayyan bilim, ko'nikma va malakalarni o'zlashtirish, ularni tarbiyalash va rivojlantirish jarayoni

o'qitishning turli shakllaridan foydalanishni taqozo etadi. Biologiya o'qitish metodikasida o'qitish jarayonini tashkil etishning turli shakllari belgilangan. Ularga dastur talablarini amalga oshiradigan o'qitishning asosiy shakli bo'lgan dars, laboratoriya va amaliy mashg'ulotlar, ularga bog'liq holda ekskursiyalar, uy ishlari, darsdan va ixtiyoriy shaklda tashkil etiladigan sinfdan tashqari mashg'ulotlar kiradi. Biologiyaning barcha sohalari kabi "Genetika va seleksiya asoslari" bo'limlaridan o'rin olgan mavzularni o'qitish jarayonida ham yuqorida nomlari sanab o'tilgan o'qitish shakllari muhim sanaladi. Genetika va seleksiya asoslaridan o'rin olgan mavzularni o'qitish jarayonida o'qitishning asosiy shakli dars markaziy o'rinni egallashi bilan bir qatorda amaliy mashg'ulotlardan ham samarali foydalanish muhim ustuvor ahamiyat kasb etadi[3].

Bu borada O'zbekiston Respublikasi Prezidentining 2020 yil 12 avgustdagi "Kimyo va biologiya yo'nalishlarida uzluksiz ta'lim sifatini va ilm-fan natijadorligini oshirish chora-tadbirlari to'g'risida" qarorida 2020-2021 o'quv yilida umumiy o'rta ta'lim muassasalarida kimyo va biologiya fanlariga qiziqishi bo'lgan o'quvchilar uchun tajriba-sinov sifatida joriy etilayotgan **tabiiy fanlar yo'nalishidagi variativ (o'zgaruvchan) o'quv rejalarini** bosqichma-bosqich o'quv jarayonida foydalanishni yo'lga qo'yish, shuningdek, o'quvchilarning amaliy ko'nikmalarini shakllantirish maqsadida tabiiy fanlar o'quv dasturlarida **amaliy mashg'ulotlarning ulushini ko'paytirish** chora tadbirlari bo'yicha alohida vazifalar belgilab berilgan[1].

Mazkur vazifalarni amaliyotga tadbiriq etish jarayonida bevosita xalq ta'limi xodimlarini qayta tayyorlash va ularning malakasini oshirish hududiy markazi tinglovchilari va oliy ta'lim muassasalari professor-o'qituvchilari bilan bir qatorda oliy o'quv yurti bitiruvchilarining zimmasiga katta ma'suliyatni yuklaydi. Chunki, mamlakatimizda raqobatbardosh kadrlar va barkamol avlodni yoyaga yetkazish jarayonida uzluksiz ta'lim tizimida faoliyat ko'rsatayotgan pedagoglar va bo'lajak o'qituvchilarning kasb darajasi va malakasi, kasbiy pedagogik kompetentligini zamon talablariga mos ravishda takomillashgan bo'lishlari shart. Amaliy mashg'ulotlar nazariy bilimlarni mustahkamlaydi. Biologiyani o'qitishda amaliy mashg'ulotlarni tashkil etish muhim ahamiyat kasb etadi. Amaliy mashg'ulot darslariga o'qituvchi puxta tayyorgarlik ko'rishi talab etiladi. U amaliy mashg'ulotlar davomida paydo bo'ladigan har qanday muammolarni atroflicha o'quvchilarga tushuntirib berish qobiliyatiga ega bo'lishi lozim. O'qituvchi har bir amaliy mashg'ulot darsini o'tkazish rejasini izchil ravishda tuzib chiqishi kerak. Zarur ko'rsatma va tarqatma materiallarini oldindan tayyorlab qo'yish maqsadga muvofiq sanaladi. Shunga ko'ra o'quv dasturlaridan o'rin olgan amaliy mashg'ulotlar haqida o'qituvchida to'liq tassavvur shakllangan bo'lishi lozim.

Quyida uzluksiz ta'lim tizimi bo'yicha va "Genetika va seleksiya asoslari" bo'limlarga oid amaliy mashg'ulotlar tahlil qilindi hamda ular quyida berilmoqda.

I. Umumiy o'rta ta'lim tizimida: ma'lumki, umumiy o'rta ta'lim tizimida biologiya o'quv fani sifatida 5-11-sinflarda o'qitiladi. Biologiya 9-sinf o'quvchilariga ham jami 68 soat ajratilgan bo'lib, shundan 3 soati amaliy mashg'ulotlar uchun ajratilgan. Jami o'quv soatlarining 4,4 foizini tashkil etadi.

Biologiya 10-sinf o'quvchilariga ham jami 102 soat ajratilgan bo'lib, shundan 9 soati amaliy mashg'ulotlar uchun ajratilgan. Jami o'quv soatlarining 8,8 foizini tashkil etadi. Biologiya 11-sinf o'quvchilari uchun jami 68 soat ajratilgan bo'lib, shundan 17 soati amaliy mashg'ulotlar uchun ajratilgan. Jami o'quv soatlarining 25 foizini tashkil etadi[3].

Rivojlangan davlatlarni ish rejalari tahlil qilinganda umumiy yuklamaning 40-50 foizi amaliy ahamiyatga ega bo'lgan darslar tizimini tashkil etishi ma'lum bo'ldi.

Amaliy xarakterga ega bo'lgan "Genetika va seleksiya asoslari" bo'limlarga oid mavzular uchun amaliy mashg'ulotlar jami 10 soat vaqt ajratilgan vaholanki bu mavzular bo'yicha 18-20 soat vaqt ajratilishi maqsadga muvofiq hisoblanadi. Buning natijasida oliy ta'lim muassasalari uchun asosiy poydevor yaratilgan bo'lardi.

III. Oliy ta'lim tizimida: Oliy ta'lim muassasalari bakalavr bosqichi "Biologiya o'qitish metodikasi" ta'lim yo'nalishi talabalar uchun jami umumiy o'quv yuklamasi 7344 soatni tashkil etadi shundan 4352 jami auditoriya mashg'ulotiga ajratilgan. Mazkur 4352 soatni 1728 soatini laboratoriya, 944 soatini amaliy mashg'ulotlar (jami: 2672 soat) uchun ajratilgan.

Biologiya o'qitish metodikasi ta'lim yo'nalishi talabalari uchun yaratilgan o'quv rejasining 2.07. bandida "Genetika. Evolyutsiyon ta'limot" fani joylashgan. O'quv rejaga binoan umumiy yuklamaga 348 soat vaqt ajratilgan bo'lib, 208 soati jami auditoriya mashg'ulotlariga, shundan 88 soat ma'ruza, 40 soat amaliy, 80 soat laboratoriya mashg'ulotlariga ajratilgan. Genetika va seleksiya asoslari bo'limidan o'rin olgan mavzularga jami 26 soat vaqt ajratilgan. Bu esa mazkur fanga ajratilgan soatning 12.5 foizini tashkil etadi. Amaliy mashg'ulotlar bilan birga laboratoriya mashg'ulotlarini hamda seminar mashg'ulotlari ham bo'ishi lozim. Ta'limning barcha bosqichlarida shu jumladan oliy ta'lim tizimida ham amaliy mashg'ulotlar mavzularida takrorlanishlar uchraydi. Takrorlangan mavzular o'rniga yangi amaliy xarakterdagi mashg'ulotlarni kiritish bugungi kunning dolzarb masalasi sanaladi[4].

Uzluksiz ta'lim tizimida laboratoriya va amaliy mashg'ulotlar mavzu mazmunidan kelib chiqqan holda tanlanishi lozim. Yuqorida nomlari tilga olingan ta'lim tizimining har bir bosqichlarni taqvim-rejalari mazmunan tahlil qilinganda laboratoriya va amaliy mashg'ulotlari mavzulari aralashib ketganligi ko'zga tashlanadi. Ba'zi amaliy mashg'ulot mavzularini laboratoriya mashg'uloti, laboratoriya mazmunidagi mashg'ulotlarni esa amaliy mashg'ulot sifatida keltirilgan. Bu esa o'quvchilarni bilim olish jarayonidagi asosiy kamchiliklardan biri sanaladi. Biologik ta'lim mazmunidan o'rin olgan mavzularni qaysi amaliy mashg'ulot, laboratoriya yoki seminar mavzulari sifatida yakdil fikr asosida ajratilib olinishi ta'lim tizimini tubdan isloh qilishdagi muhim tashlangan qadam hisoblanadi.

Biologiya o'quv dasturidan o'quvchilarning o'quv va amaliy mehnat ko'nikma-larini rivojlantirish maqsadida amaliy mashg'ulotlar muhim ahamiyat ksb etadi. O'qituvchi mazkur amaliy mashg'ulotlarning samaradorligini oshirish maqsadida quyidagilarga e'tiborini qaratishi lozim:

- o'quv dasturidan o'rin olgan amaliy mashg'ulotlarni istiqbol va taqvim-mavzuli rejadagi va ta'lim-tarbiya jarayonida tutgan o'rnini aniqlashi;
- amaliy mashg'ulotlarining didaktik maqsadini aniqlashi;
- amaliy mashg'ulotini o'tkazish uchun zarur bo'ladigan jihozlarni tayyorlashi;
- amaliy mashg'ulotda o'quvchilarning bilish faoliyatini tashkil etish yo'llarini belgilashi va shu asosda mashg'ulotning borishini loyihalashi;
- o'quvchilarning tajriba va kuzatish o'tkazish jarayonida zarur bo'ladigan topshiriqlar uchun ko'rsatmalar tayyorlashi;
- amaliy mashg'ulotning borishi va olingan natijalarni tahlil qilishi, zarur hollarda tegishli o'zgartirishlar kiritishi lozim[3].

Xulosa qilib aytganda, biologiya o'qituvchisi o'quv yili boshida o'quv fanini o'qitishni rejali va tizimli amalga oshirish maqsadida istiqbol reja tuzishi, unda fanlararo bog'lanishlar, ekskursiya va sinfdan tashqari ishlarni belgilashi, shu asosda mavzuli-taqvim reja tuzishi zarur. Mazkur mavzuli-taqvim rejada dars, darsdan tashqari ishlar, laboratoriya va amaliy mashg'ulotlarni belgilashi, dars va mashg'ulotlarni talab darajasida tashkil etilishi va o'tkazishiga erishishi lozim.

#### **Foydalanilgan adabiyotlar ro'yxati:**

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## **CLASSIFICATION OF BORROWINGS ACCORDING TO THE DEVELOPMENT OF THE LANGUAGE**

*Annotation: This article analyzes the prediction of words from other languages and discusses historical cases of words from Latin, Scandinavian dialects, Norman and French, and many other languages. This article also assays to estimate borrowing words from other languages and historical circumstances.*

*Key words: Cultural communication, borrowed words, loan words, characteristics of borrowings, ancient borrowings, classification of borrowings, source language.*

Borrowed words are words borrowed from other languages. Many linguists believe that foreign influence plays the most important role in the history of any language. But grammar and phonetic systems are very stable and often not influenced by other languages. For example, in the 15th-century history of written manuscripts, English was in long and close contact with other Latin, French, and Old Norse languages. The large influx of borrowing from these sources can be attributed to a number of historical reasons. Due to the great influence of Roman civilization, Latin has long been used as the language of education and religion in England. The ancient Scandinavian was the language of social and cultural development at the same level and the language of the invaders who pushed much easier with the 9th, 10th, indigenous peoples and the first half of the 11th century. French (Norman dialect) was the language of other invaders. Who developed a high social system with them brought a lot of new peoples to feudalism. It was the language of the upper classes, official documents, and schooling from the middle of the eleventh century to the end of the fourteenth century.

Uzbek also developed under the influence of Persian, Arabic, and later Russian. Persian spread in our region in 500-300 years, and since then the peoples of Central Asia have been in close contact with Iran, the homeland of Persian. Until the fifteenth century, writing poems and prose works in Persian was 'fashionable' and expedient, but the Old Turkic language was also used among the people mainly by ordinary people. In the 7th century, the Arabs conquered Central Asia by spreading their religions and languages to the peoples. Thus, until the XI-XII centuries, the Arabic language was predominant. Books were written in the Arabic language too. e.g. outstanding scientists and scholars Ibn Sina, Farabi, Beruni created their works in the Arabic language. It was only in the 15th century that the

great writer and statesman Alisher Navoi, proving the beauty and importance of the Turkic language, began to write his best masterpieces in this language, although he knew Persian and Arabic very well. From the 18th century, the Uzbek language was influenced by the Russian language. In the study of the borrowed element in English, the main emphasis is as a rule placed on the middle English period, and in Uzbek, it is the middle Turkic language. Borrowings in later periods have only been the subject of investigation in recent years. These investigations have shown that the flow of borrowings has been steady and uninterrupted. They see different areas of socio-political, scientific, and cultural life. A large portion of them (41%) is scientific and technical terms. When it comes to the role of local and mastered words in the language, it is not their number but their spiritual, methodological properties, word formation ability, frequency value, coherence (valence), and productivity that should be taken into account. If we approach the study of the role of local and assimilated words from this perspective, we find that local words play an important role in English and Uzbek, even though they are not so numerous. Almost all words of native origin belong to very important semantic groups. The number and nature of the words borrowed give us information about the relations between nations, their level of culture, and so on. That is why debts are often referred to as important milestones in history. It is for this reason that borrowings have often been called the milestones of history.

The well-known linguist Shuchard said «No language is entirely pure», that all the languages are mixed. It should be noted that although the general historical reasons for borrowing from different languages have been studied, the purely linguistic reasons for borrowing are still open to investigation. The number and characteristics of borrowings depend not only on the nature and length of the relationship, historical conditions but also on the degree of genetic and structural similarity in the respective languages. The closer the languages are, the deeper and more multifaceted the impact. Borrowed words enter the language as a result of the influence of two main causes or factors: linguistic and non-linguistic. The economic, cultural, industrial, and political relations of the speakers of the language with other countries represent extralinguistic factors. For example, due to the great influence of Roman civilization, Latin has long been used as the language of education and religion in England. Ancient Norway of the Scandinavian tribes was the language of the conquerors. French (the Norman dialect) was the language of other conquerors who developed feudalism, which brought with them many new concepts of higher social order. It was the language of upper classes, official documents, and school. The same thing is available in Uzbek. Due to the expansion of Islam, Arabic was used as the language of science and religion in Central Asia for centuries. For about two centuries, the Russian language dominated the peoples of the former Soviet Union. Knowledge of Russian was a priority and it was a language of communication and friendship. These factors are extra-linguistic ones. The lack of equivalent words to express new topics or events in a language forces people to borrow words. E.g. the words football, volleyball, pitchman in Uzbek; saving linguistic means, i.e. using a foreign word instead of distant local

expressions, etc. are called linguistic reasons. The closer the two interacting languages are to the structure, the easier it will be for words from one language to penetrate the other. We distinguish translation loans, borrowing proper and semantic loans. Translation loans are words and expressions formed from the material already existing in the language but according to patterns taken from another language, by way of literal morpheme – for – morpheme translation, e.g. wall-newspaper – devoriy gazeta.

The term «semantic loan» is used to denote the development in a word of a new meaning due to the influence of a related word in another language. The English word pioneer meant «explorer» and «one who is among the first in new fields of activity.» now under the influence of the Russian word «Пионер» it has come to mean «a member of the Young Pioneers' Organization" Borrowings proper are words which are taken from another language with their sound graphic forms and their meaning. The “guests from another language,” or borrowed words, permeate the English language. Through linguistic osmosis, these many thousands of words were taken over from one language by another during the course of English history mainly due to the constant uninvited arrival of invaders to the island. If borrowings are testimonials to our “physical mobility and mental laziness” then the British would probably win the gold medal. As the invaders settled in, they transformed both the written and spoken words of the English residents, who were able to adapt through the assimilation of borrowed words.

In general, this article deals with English language borrowing. Borrowing is the result of cultural communication between two language communities. Borrowing of words can go in both directions between the two languages in contact, but often there is an asymmetry, such that more words go from one side to the other. In this case, the source language community has some advantages of power, prestige, and/or wealth, which makes it necessary and useful for the language community to borrow objects and ideas. The actual process of borrowing is complex and involves many usage events (i.e. the use of a new word). In general, some speakers of borrowed language also know the source language, or at least use a sufficiently relevant word from it. They adopt a new word when they speak the language of borrowing (often consciously) because it is almost entirely consistent with the idea they are trying to convey. If they are bilingual in a common source language, they may pronounce words similarly or similarly to the pronunciation in the source language. In this article, we have analyzed the classification of borrowings. And the influence of borrowings to enrich the vocabulary is also discussed.

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## ASSIMILATION OF BORROWED WORDS IN THE LANGUAGE

*Annotation: This article discusses the assimilation of borrowed words and its types such as: completely assimilated borrowed words, partially assimilated borrowed words, unassimilated borrowed words or barbarism.*

*Key words: grammatical features, unassimilated borrowed, historical analysis, grammatical categories, paradigms.*

Now our task is to see how our borrowings in English change and are subject to their specific characteristics. All types of borrowed items can be divided into two major groups. On the one hand, there are only changes specific to the word borrowed.

These changes are aimed at adapting foreign words to the norms of the language of borrowing, e.g. the constant compounds [pn], [ps], [tpt] in the Greek words "pneumatics", "psychology", "ptolemy" are simplified to [n], [s], [t] because consonant compounds [ps], [pt], [pn] are very often used at the end of English words in the initial state. It is important to distinguish between the two processes: adapting the borrowed material to language norms and developing these words according to language laws. In many cases, we need to turn to historical analysis before we can draw clear conclusions. There is nothing in the form of the words "walk" and "progress," indicating that the former was used in England in the eleventh century, and the latter before the fifteenth century. The history of these words shows that the word *cortege*, along with other words in the English language, underwent a number of changes, including decline, accentuation, structure, change of sounds, and the word 'progress'. In the course of its historical development, borrowing has acquired new meanings that are sometimes not found in the previous semantic structure. As a rule, the development of new meanings takes place 50–100 years after the word is borrowed.

The role of loan words in the formation and development of English vocabulary is dealt with in the history of the language. It is there that the historical circumstances are discussed under which words borrowed from Latin, from Scandinavian dialects, from Norman and Parisian, French and many other languages, including Russian, were introduced into English. Lexicology, on the

other hand, has in this connection tasks of its own, being chiefly concerned with the material and the results of assimilation. The main problems of etymology and borrowed words as they concern the English language are comprehensively and consistently treated in Professor A.I. Smirnitskiy deals with these issues mainly in terms of word. Unassimilated words differ from assimilated words in their pronunciation, spelling, frequency, semantic structure and sphere of application. However, there is no distinct borderline between the two groups. So far no linguist has been able to suggest more or less comprehensive criteria for determining the degree of assimilation depends in the first place upon the time of borrowing. A classification of loan words according to the degree of assimilation can be only very general as no rigorous procedure for measuring it has so far been developed. The following three groups may be suggested:

1. Completely assimilated borrowed words
2. Partially assimilated borrowed words
3. Unassimilated borrowed words or barbarism.

The group of partially assimilated words may be subdivided depending on the aspect that remains unaltered, i. e. according to whether the word retains features of spelling, pronunciation, morphology or denotation that are not English. The third group is not universally accepted, as it may be argued that words not changed at all cannot form part of the vocabulary of language, because they occur in speech only, but do not enter the language.

Completely assimilated borrowed words are found in all the layers of older borrowings. They may belong to the first layer of Latin borrowings, e, g: cheese, street, wall, or wine. Among Scandinavian borrowed words we find such frequent nouns as husband, fellow, gate, root, wing; such verbs as call, die, take, want and adjectives like happy, ill, low, odd and wrong. Completely assimilated French words are extremely numerous and frequent. Suffice it to mention such everyday words as table, chair, face, figure, finish, matter. A considerable number of Latin words borrowed during the revival of learning are at present almost indistinguishable from the rest of the vocabulary. Neither animal nor article differ noticeable from native words. Uzbek language like English is vulnerable to new nations. It mainly enriches its word stock by loaning words from Persian, Arabic Russian and via Russian from European languages. A large number of words in Uzbek language are the words from Persian.

The second group containing partially assimilated borrowed words can be subdivided into subgroups. The oppositions are equipollent.

a) Loan words not assimilated semantically, because they denote objects and notions peculiar to the country from which they come. They may denote foreign clothing: mantilla, sombrero; foreign titles and professions: shah, rajah, sheik, bei, toreador; foreign vehicles: caique (Turkish), rickshaw (Chinese), food and drinks: pillow(Persian) sherbet(Arabian); foreign currency: krone (Denmark), rupee(India), zloty(Poland), peseta(Spain).

b) Borrowed words not assimilated grammatically, for example, nouns borrowed from Latin Greek which keep their original plural forms: bacillus; bacilli,

crisis; crises, formula; formulae, index; indices. Some of these are also used in English plural forms, but in that case there may be a difference in lexical meaning as in: indices: indexes.

c) Loan words are not completely assimilated phonetically. The French words borrowed after 1650 afford good examples. Some of them emphasize the last syllable: car, cartoon, police.

d) Borrowed words are not grammatically fully mastered. This group, as V.I. Balinskaya shows are fairly large and varied. For example, there are words derived from French that do not say the last consonant, for example, battet, buffet, corpus. Some may retain a diacritical mark: café, cliché. In particular, French digraphs (ch, qu, ou) can be preserved in the spelling: bouquet, brioche. It is self-evident that these sets intersect, i.e., the word single and single credit often indicates incomplete assimilation in several respects at the same time. The third group of borrowings comprises the so-called barbarism, i. e. words from other languages used by English people in conversation or in writing but not assimilated in any way, and for which there are corresponding English equivalents.

In conclusion, English has gone through many periods of learning a large number of words from a particular language. These periods coincide with a period of great cultural exchanges between English speakers and speakers of other languages. Especially in times of strong cultural ties, debt waves are not sharply limited and can overlap. For example, the influence of the Norwegians on English began in the 8th century AD and continued very well after the Norman conquest brought a large amount of French into this French language. It is part of the cultural history of English speakers that they have always adopted loanwords from the languages of whatever cultures they have come in contact with. There have been few periods when borrowing became unfashionable, and there has never been a national academy in Britain, the U.S., or other English Speaking countries to attempt to restrict new loanwords, as there has been in many continental European countries. In this paragraph, attention should be paid to the assimilation of debt words as a method of interaction with the language system in general. The term assimilation of the borrowed words is used to denote partial or complete conformity to the phonetic, graphic, and morphological norms of the host language and its semantic system. The degree of assimilation depends on the duration of the period of its use in the language receiving the word, its frequency. Oral borrowings due to personal contacts are assimilated more completely and more rapidly than literary borrowings, i. e. borrowings through written speech.

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## **ABOUT SOME ASPECTS OF FAMILY EDUCATION**

*Annotation: This article provides a scientific analysis of the views and methods of upbringing of families that make up society, the worldview of parents and their level of education, the specific characteristics and values of each family and the direct impact of upbringing on the human psyche.*

*Keywords: Family, upbringing, education, pedagogical, psychological and religious knowledge, society, father, mother, child.*

The family has come a long and difficult way during its historical development. One of the distinctive features of this path was the radical change in the interrelationships and social functions of society. When it comes to family, many imagine it as if they know a lot about it. In fact, frivolous ideas about the family are far from the essence of the family. To fully understand the family, it is necessary to study it comprehensively. This includes the following issues:

- \* historical roots of the family;
- \* views of Eastern and European thinkers on the family;
- \* family and community relations;
- \* family functions;
- \* gender relations in the family;
- \* study of the family in modern pedagogy and psychology.

Changes in the material, technical and spiritual direction of society are causing changes in family activities. Such changes are reflected in marriage, love, mutual friendship, and planning for childbearing. The most important function of the family is the reproductive function, which is to reproduce the human race. Hence, having children is the first and most important function of a family. It follows that family planning remains one of the most important attributes of the modern family. Family planning is about keeping the distance (interval) between children born. Our holy religion, Islam, has also paid special attention to this. The need to prevent unwanted pregnancies is also considered positively in Islamic law. The basis of family planning is to give birth to a healthy generation and bring it up fully. The concept of "educational functions of modern families" is broader than the concept of raising children. Sociological research suggests that there are many problems in these tasks. This is especially reflected in the emergence of new aspects of family upbringing and the enrichment of the content of traditional traditions. The content, form, and methods of moral education are undergoing significant changes. The study of the problems of family upbringing is carried out mainly in two directions. First; family upbringing is being studied as a traditional part of pedagogy

and this is a very correct way in our view. On the other hand, the family is also studied in various disciplines, including sociology, psychology and philology.

Pedagogical, socio-psychological research shows that nothing but the family can suppress the role of family upbringing in the moral development of emotional children, the formation of personality. Raising children separately from their parents is a huge blow to the formation of the maturity of the younger generation, as well as weakens the feelings of parenthood, undermines the moral foundations of marriage. Prolonged stay of children in kindergarten has a negative impact on their maturity, needs, interests and behavior. The period from one to seven years is a very important period in the formation of a child's personality. The great Russian writer and educator Leo Tolstoy, in one of his last works, stated that "the distance from me to a seven-year-old child is one step, and the period from one to seven years is a great distance." So, the period before the child goes to school can be called the foundation of the formation of the child's personality.

Another aspect of family upbringing is that it is inextricably linked with social upbringing. For us, the moral and spiritual ties that ensure the stability of the family are very important. The same connection satisfies the needs of family relationships, full-fledged emotional fatherhood or motherhood, family happiness. It is expedient to provide parents with pedagogical knowledge, to exchange education on family upbringing, to invite parents to school, neighborhood committees in order to attract their interest in educational work. The most important task of parents in this regard is to be able to anticipate the maturity of children, to determine the purpose of education. It is known that no style is used separately in the family, but all styles are used in combination. So the choice of methods and techniques of upbringing, their improvement and implementation is an important form of family life. The success of the upbringing of the younger generation depends not on any isolated methods, but on a well-organized system of methods. In the upbringing of a harmoniously developed person, the family forms an integral part of society, which is one of the characteristics of our time.

Involvement of women in production is leading to a reduction in the length of time they spend with their children. Therefore, there is a growing need for educational support for kindergartens, extended school day groups, groups of children of different ages in residential areas and out-of-school institutions. This is why mothers need to work harder to raise their children. In addition, women spend more time on household chores than men in the family. Sociological research shows that even on weekends, women spend 9 to 11 hours on housework. Before going to work in the morning, she feeds her children, dresses them, takes them to kindergarten, and sends them to school. When she returns from work in the afternoon, the woman begins to work for the house, i.e. supervising her children's homework, preparing dinner, making room, and so on.

The father's involvement in household chores is mainly manifested in command. If "rigidity" dominates the internal relations of the totalitarian family, then "soft" disciplines have a relationship of democracy and equality. For such disciplined families, methods of intimidation and intimidation of children are alien,

and the main thing is to know the value of the child, to cultivate the qualities of variable self-esteem. It is a consequence of the inadmissibility of contradictions in the organization of the educational influence of parents on their children. The knowledge and experience of parents is very important in the formation of the younger generation.

The following conclusions can be drawn from the observations:

- One of the factors in increasing the effectiveness of family education is a comprehensive study of the child's personality, as well as a creative approach to methods and forms of family education, its improvement.

- Promoting parenting knowledge among parents, especially strengthening public support for parents with difficulties in parenting.

- It is necessary for them to establish "Parents' University" in the mahallas.

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## **PHYSICAL PROPERTIES OF AIR AND THEIR HYGIENIC CHARACTERISTICS**

*Annotation: The article provides information on the physical properties of air and their hygienic characteristics.*

*Keywords: Temperature, Humidity, Absolute humidity, Maximum humidity, Relative humidity, Sanitary practice, Atmospheric pressure, Caisson, Air ionization.*

Factors that constantly affect the human environment include temperature, humidity, movement, atmospheric pressure, and air ionization. It should be noted that these factors are dynamic (variable) in contrast to the stability of the chemical composition of atmospheric air, and many of them have a complex effect on the body. When sunlight passes through the atmosphere, it practically does not heat it. Air heating occurs due to the return of heat from the soil, which absorbs solar radiation and transforms it from one form to another. The suspended air rises, freeing up space for colder air layers. This causes the air masses to mix (convection) and allow a uniform heating of the atmospheric layer on the surface. Atmospheric conditions vary depending on the climatic zone, the season, the time of day, the intensity of solar radiation, and so on. The hygienic value of air temperature is determined by its effect on heat exchange in the body. heat transfer by radiation to colder objects; convection due to direct heating of the air layers approaching the skin. A small amount of heat is transferred during respiration (when exhaled, the air is heated almost to body temperature) and through the excretory organs. At room temperature, the body loses 45% of heat at rest due to radiation, 30% due to convection and 25% due to evaporation of sweat. As the temperature of the air, walls, and surrounding objects rises, heat transfer through convection and radiation decreases, and heat transfer through evaporation increases. The amount of sweat released during strenuous physical activity at high temperatures can reach 6-10 liters per day. When exposed to very low temperatures, heat transfer through radiation and convection increases significantly, and heat loss through evaporation decreases.

If the temperature fluctuates sharply and over a long period of time, it can cause overheating (at high temperatures) or cooling (at low temperatures).

Humidity. Water vapor is released into the atmosphere by the evaporation of water from the sea, oceans, lakes and rivers. In dwellings, the evaporation of moisture from the surface of the lungs and skin during cooking, washing, drying, etc., serves as an additional source of moisture. Humidity is the amount of water vapor present in the air. Humidity, like temperature, varies with climate. The



amount of water vapor in the air is measured in terms of their elasticity (in millimeters of mercury) or in grams of water vapor in 1 m<sup>3</sup> of air. Humidity is defined by the concepts of absolute, maximum and relative humidity.

The product is the elasticity of water vapor in the air measured in millimeters of mercury during the test, or the amount of water vapor in grams per liter of air.

Maximum humidity is the elasticity of water vapor measured in millimeters of mercury at saturation of the air at a certain temperature or required for complete saturation of 1 liter of air with water vapor at a certain temperature. means the amount of water vapor in grams.

Relative humidity is the ratio of absolute humidity to maximum humidity, expressed as a percentage, ie the percentage of saturation of air with water vapor.

Humidity, like its temperature, has a significant effect on the exchange of heat between the body and the environment. Excessive humidity reduces the release of heat due to the reduction of sweat evaporation from the skin surface at high temperatures, which leads to overheating of the body. At low temperatures, high humidity increases heat production (increases the thermal conductivity of clothing and ambient air and the absorption of heat by external objects) and accelerates the cooling of the body. Under normal meteorological conditions, a relative humidity of 40-60% is most favorable.

In sanitary practice, the speed of air movement and the direction of the wind are determined. The speed of air movement is expressed in meters per second (m / s). The movement of air increases the release of heat due to convection, as the heated air layer under the clothes is carried away by the moving air, which is replaced by colder layers. When the temperature is high, the wind releases excess heat, which has a beneficial effect. At low temperatures, wind has a negative effect on the body, as it causes a large release of heat and increases the risk of cooling. Strong winds can worsen a person's mood and lead to a number of chronic illnesses and difficulty breathing.

Air velocity norms are determined by the type of air. The speed is 0.1-0.3 m / s in residential rooms, up to 0.5 m / s in gyms, and 1-1.5 m / s in production and hot shops. The hygienic importance of air movement is that it improves the ventilation of residential areas and buildings and the self-cleaning of the atmosphere from pollution.

Atmospheric pressure. Due to the force of gravity, the atmosphere exerts pressure on objects and the earth's surface. At sea level, each centimeter occupies a vertical surface of 1,033 kg per square meter of surface area or 760 mm of mercury (normal pressure). is rare and imperceptible to a healthy person. However, in sick people, the pain increases before the weather vane, neuralgia develops, and old wounds ache. Atmospheric pressure in cities is lower than in open areas. The drop in pressure is accompanied by a decrease in the partial pressure of oxygen, which leads to a condition called altitude sickness. This condition can cause shortness of breath, palpitations, dizziness, nausea, and nosebleeds. Elevation can occur when climbing mountains and flying. Climbers, pilots, and mountaineers adapt to low oxygen levels by increasing the number of erythrocytes and hemoglobin,

accelerating respiration, and so on (this is called the body's condenser response). At an altitude of 8-10 km, there may be pain in the muscles and joints. To prevent this, flights are carried out in spacesuits or aircraft with airtight cabins.

Caisson and the miners and divers are exposed to high atmospheric pressure. When submerged, the pressure increases by about 1 atm every 10.3 m depth.

It is known that at normal atmospheric pressure, about 1.8 cm<sup>3</sup> of nitrogen dissolves in 100 cm<sup>3</sup> of blood. As atmospheric pressure increases, the amount of dissolved nitrogen in the blood increases, which in turn increases the saturation of tissues with nitrogen. During the transition from high pressure to normal pressure, nitrogen enters the bloodstream from the tissues due to the difference in partial pressure and is excreted through the lungs. In rapid decompression (when the pressure drops), due to the large difference between the partial pressure of nitrogen in the environment and the partial pressure of dissolved nitrogen in body tissues, nitrogen in the tissues rapidly forms bubbles and is released into the blood. gas embolism (caesarean section) can occur in various organs. The essence of disease prevention is to normalize the duration of working hours and maintain a decompression regime.

The transition from high pressure to normal pressure should be gradual. The duration of decompression is determined by the amount of pressure.

Air ionization. There is a constant exchange of ions in the atmosphere, which are formed under the influence of radioactive elements, electric charges, ultraviolet and cosmic rays.

Fresh air contains a large number of light negative ions, while polluted air contains a large number of positive light and heavy ions. The polluted air of the city is less ionized than the air of rural areas and resort areas. The ionization of indoor air depends on its physical properties. The more dust and carbon dioxide in the air, the higher the temperature and humidity, the more heavy ions there are. Therefore, the level of ionization of air in residential and public buildings is an indicator of air quality.

At present, it is known that negative ionizing air, dominated by light ions, has a healing effect on the body and increases physical and mental performance. Highly ionized air is used in the treatment of some diseases (hypertension, bronchial asthma, etc.). According to some researchers, positive light ions can worsen the functional state of the body, reduce the ability to work and cause high blood pressure.

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## **USING MODERN PEDAGOGICAL TECHNOLOGIES IN TEACHING PROFESSIONAL TERMINOLOGY**

*Annotation: In this article you can easily find out the basic problems in methodological sphere. The opportunities for the formation of systematic representations, system skills and other relevant thinking ways. The role of institutions and academic centers is significant. The findings in Linguistics, Pedagogy, Psychology and other branches of science.*

*Key words: System-forming factors, potential qualities, professional socialization, comprehensive development, professional community, polysemantic, knowledge acquisition, ESP learners*

The problem of creating modern system methods that serve the formation of the student's professional competencies seems to be very relevant. Issues of a professional competence systematic representation, its system structure and organization, as well as a systematic approach to its formation remain insufficiently. At the same time, the opportunities for the formation of systematic representations, system skills and other relevant thinking ways in subjects are significantly increased. This is also aimed at various activities' types and activities used in the study, the mastering of which is an indispensable condition for the successful tasks set solving for vocational training, professional socialization and the all-round personality development of the future specialist. According to A.I.Subetto, competence is a competences set, updated in certain activities types. At the same time, competence is considered by the last as a potential properties set or as a sub-quality in the university graduate potential qualities system. System-forming factors for the professional competence formation are the goals and final results of vocational training, professional socialization and the professionally significant personal qualities comprehensive development (realized by students). In this case, the professional individual socialization provides for the individual's entry into the social environment process, his integration into the professional community and, through this, to society as a whole. Hundreds of thousands of words belong to special scientific, professional or trade terminological systems and are not used or even understood by people outside the particular speciality. Every field of modern activity has its specialized vocabulary, and similarly special terminologies for psychology, music, management, finance, economics, jurisprudence, linguistics and many others.

Term, as traditionally understood, is a word or a word-group which is specifically employed by a particular branch of science, technology, trade or the arts to convey a concept peculiar to his particular activity. So, *share, bank, balance sheet* are finance terms; *court, lawyer, civil law* are legal terms; and *top manager*,

*creative team, motivation* are used in management. There are several controversial problems in the field of terminology.

Indeed, the use of terminology is not limited to specialists and the terminology knowledge is not only needed by terminologists, translators and linguists. However, the type of knowledge we need depends on our professional activities and the motivations for learning. In this process, the role of institutions and academic centers is significant. Their competency in offering diverse materials aiming at distinct groups of learners with different backgrounds is one of the most important characteristics that we should take into account.

Researchers in methods of teaching ESP relate their studies to the findings in Linguistics, Pedagogy, Psychology and other branches of science to understand the nature of foreign words, learn psychological prerequisites of teaching/ learning process and thus apply the most progressive results of such studies in practice. Being preoccupied with the task of finding an effective method of teaching students sport terms, an idea and interactive teaching can be a proper mechanism for students' vocabulary development has been put forward. Using modern multimedia also helps to provide interactive cooperation, constant communication of students and allows the teachers to lead students' work aimed at mastering a foreign language.

Besides, interacting with foreign speaking partners through multimedia, students acquire the experience in cross-cultural competence, which is essential in the modern globalized economy. Nobody can object that vocabulary is of major importance for ESP learners, because knowledge of it and the ability to process certain vocabulary storage allow them to retrieve and properly comprehend information from professional texts after reading and/or listening, to express their thoughts both in oral and written forms when interacting and communicating with specialists.

Pedagogical implications for teaching students sportive terminology through utilizing interactive forms of work have been presented. The findings suggest that interactive performance in class will enhance the process of presenting, understanding meaning, memorizing and proper using sportive terms in oral in written communication.

Consequently, the research contributes to the study of forming linguistic competence with the students of sport specialties and elicits further research of scholars in the field of teaching terminology. Teaching English as a second language (ESL) in a broad context and teaching students professional terminology in the course of English for Specific Purposes (ESP) in particular has always been a subject of interest for researchers.

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## **PROBLEMS OF DEVELOPING THE VIRTUE OF RELATIONSHIP IN TEENAGERS' THINKING**

*Annotation: The article discusses the feelings of adolescents in the minds and thinking about the fate of the Motherland and the impact of reforms, as well as the peculiarities of their psychology.*

*Keywords: Adolescence, consciousness, thinking, involvement, virtue, mood, psyche, indifference, selfishness.*

One of the urgent problems of our time is the expansion of the mind and way of thinking of adolescents and the timely prevention of negative vices that occur in their psychology. Despite the fact that a number of scientific studies are being conducted in our country and around the world, there are still many unresolved issues in the field. One such problem is fostering a sense of belonging in the minds of adolescents. In this regard, the spiritual and educational work carried out in secondary special and vocational education institutions is of great importance. According to the latest observations made by us, the measures taken will avoid formalities and high-flying cases; involving members of the general public; reaching the hearts and minds of adolescents, lifting their spirits; inspiring to new heights; in a popular and influential spirit; gives good results when special attention is paid to the transfer of new creative forces, attracting talented young people. This period of adolescence is very much in line with psychology and causes them to awaken in their minds a sense of belonging for the fate of the Motherland and the fruit of reforms.

It should be noted that in conducting spiritual and educational activities to develop a sense of involvement in adolescents, we must clearly define the goals and objectives of the event, include the goal of forming a sense of involvement in students and identify all opportunities to achieve this goal. In addition to traditional methods of developing a sense of involvement in the learning process, adolescent psychology, the use of express surveys, test questions, software training, training, presentations, roundtables, problem-based learning, the use of technical means, excursions, training, film lectures and other methods gives high efficiency. This has a special place in ensuring that students' involvement is reflected not only in thought, word, but also in practical action.

Today, a number of problems in the development of a sense of belonging in adolescent psychology remain unresolved, due to the lack of involvement and spiritual maturity in people for various reasons, as well as the inability of socio-pedagogy and psychology to address the issue of involvement. Indifference

and indifference, egocentrism, and growing nihilism also weaken the sense of belonging. We need to protect our children from the formation of such defects. While commenting on this, we found it necessary to make a number of recommendations. In particular, it is important to make this area of education a priority in secondary special and vocational education institutions, so that the quality of involvement is firmly nurtured in the present and future generations and gives its reliable results. At the same time, the scientific principle plays a special role in the formation of the quality of involvement in students. The principle of scientific and technological approach, firstly, the scientific achievements, ie the acquisition of knowledge acquired by the social sciences and humanities today, and secondly, the development of the quality of involvement in all spheres of social and ideological life. It should not be forgotten that social cooperation of educational institutions, families, neighborhoods, residences, out-of-school institutions is one of the conditions for the effectiveness of participatory education. Criteria and levels of upbringing, taking into account the age, national, local, mental, sexual, personal characteristics of adolescents and their implementation in practice, also determine the level of effectiveness of the quality of direct involvement.

In conclusion, the achievement of these goals has to be carried out, especially at a time when the harmony of current material and spiritual values is required, in a situation where material wealth is becoming a priority over spiritual wealth in most countries. In this regard, in order to further strengthen the civil society being built in our country, it is necessary to develop examples of technology for the development of a harmoniously developed personality, the development of involvement, which is a leading quality of members of civil society. At the same time, we can achieve the desired result if we emphasize the deep understanding of civic duties, patriotism, teaching students to consider themselves involved in the present and future of their homeland, people, neighborhood.

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## **THE HYPERTROPHIC CARDIOMYOPATHY**

*Summary: The article is devoted to the most pressing and important problems of clinical diagnosis and covers the genetic role in the development of hypertrophic cardiomyopathy with the position of evidence-based cardiology. The article includes tactics for diagnosing hypertrophic cardiomyopathy. The diagnosis of the disease is based on the data of echocardiography, revealing structural changes in the heart muscle according to the type of hypertrophy, while the genesis of these changes remains unclear*

*Key words: Cardiomyopathy, diagnosis, genetics, heart.*

Cardiomyopathy remains one of the least studied cardiologic diseases, being the object of an actively developing field of modern cardiology. Increased interest in the problem of studying myocardial diseases is due to the need for further study of the etiology and pathogenesis, the diversity and nonspecificity of their clinical manifestations, significant diagnostic and therapeutic difficulties. The constant increase in the frequency of occurrence of various forms of cardiomyopathies is apparently connected both with a true increase in the number of such patients and with the progress of modern diagnostic technologies. In addition, over the past decade, a fundamentally new concept is being formed on the definition of the concept of "cardiomyopathy" and their place in the structure of heart diseases, which is associated with the achievements of medical genetics, morphology, immunology and molecular endocrinology. Reflection of the modern evolution of knowledge is the constant revision, updating and refinement of the corresponding concept and classification.

Cardiomyopathy is defined as a heterogeneous group of myocardial diseases associated with mechanical and / or electrical dysfunction, usually accompanied by myocardial hypertrophy or dilated cardiac chambers and developing due to various causes, but more often of a genetic nature. The pathological process can be limited to heart damage - primary cardiomyopathies (genetic, mixed and acquired) - or part of a generalized, systemic disease (secondary cardiomyopathies), often lead to the development of heart failure, its complications and deaths. Hypertrophic cardiomyopathy (HCMC) is one of the main and most common forms of primary cardiomyopathies. The half-century history of studying the problem of HCMC reflects a significant evolution of knowledge in the issues of etiology, pathogenesis, prognosis, clinical course variants and treatment of the disease. In-depth study of various aspects of pathology was closely linked



and ensured the emergence of progressive instrumental, morphological and, finally, molecular genetic methods of diagnosis. The introduction of modern imaging techniques: echocardiography (ECHO-KG), dopplerography, single-photon emission computer (OECT) and positron emission tomography (PET), magnetic resonance imaging (MRI), ECG monitoring, etc., has determined progress in understanding mechanisms pathogenesis, diagnosis of the disease and the rationale Clinical definition of HCM

The American College of Cardiology Foundation (ACCF) and American Heart Association (AHA) Task Force on Practice Guidelines provide a widely cited clinicopathologic definition of HCM. The guidelines define HCM as a cardiac disorder marked by unexplained left ventricular (LV) hypertrophy (thickening) associated with non-dilated ventricular chambers in the absence of other cardiac or systemic disorders in sufficient amounts capable of producing LV hypertrophy.

The definition also recognizes that genotype-positive patients could be phenotypically negative without overt hypertrophy [5]. The European Society of Cardiology (ESC) working group on myocardial and pericardial diseases also provides another widely cited definition of HCM. The ESC defines HCM as “the presence of increased left ventricular (LV) wall thickness that is not solely explained by flow-limiting coronary artery disease (CAD) or abnormal loading conditions” [6]. The definitions by ACCF/AHA and ESC establish the hallmark of HCM is LV hypertrophy (wall thickness) in the interventricular septum. Other characteristic pathological features are myocardial fiber hypertrophy, disorganized myocardial cells, interstitial fibrosis and thickened intra-myocardial coronary vessels [3].

The main method of diagnosis remains echocardiographic study (ECHOKG). Currently, a special place is occupied by modern imaging techniques, in particular magnetic resonance imaging (MRI), which has a higher resolving power and allows obtaining more accurate information about structural disorders in the heart.

HCM is a disease in which, in addition to shortness of breath, a frequent symptom is a variety of pains in the heart that are characterized by cardialgia and /or typical angina. The efforts of many scientists are aimed at the origin of this clinical phenomenon, on the detection of ischemia as a potential cause, as well as on the recognition of the genesis of myocardial blood supply deficiency in patients with HCM.

Among the possible causes of myocardial ischemia in patients with HCMC, the following can be identified: relative coronary insufficiency, caused by a decrease in the density of the capillary bed in hypertrophied myocardium; microvascular disease; disturbance of the left ventricular dysfunction, leading to a decrease in the effective pressure of coronary perfusion in the diastole and pathological changes in the microcirculation of the myocardium; a decrease in the coronary reserve; the presence of "muscle bridges" over the epicardial coronary arteries; compression of the septal branches of the coronary arteries; obstruction of LV LV; spasm of large coronary arteries; primary metabolic disorders of glucose,

oxygen and fatty acids in cardiomyocytes; and also joined atherosclerosis of the coronary arteries, especially in older age groups.

In patients with HCMC, severe ischemia can occur until the development of myocardial infarction. Pathoanatomical studies confirmed the presence in patients with HCMC with intact coronary arteries of focal or diffuse changes of the myocardium from initial small-focal fibrosis to large areas of large-scleral transmural cardiosclerosis, which are the result of a long-term ischemic process.

As the disease progresses, a number of patients are registered with a decrease in the pump function of the LV and / or PJ, associated with the development of myocardial fibrosis. Fibrosis in this case can be the result of transformation of myocardial cells that have lost intercellular contacts, which is often observed in places of chaotic arrangement of muscle fibers, or consequence of ischemia and myocardial infarction against the background of microvascular pathology, and also joined coronary atherosclerosis. Large-focal fibrosis of the myocardium can lead to thinning of ventricular walls, reduction of ventricular obstruction, disruption of systolic function, increase in volume of heart cavities, with dilatation less pronounced than with DCM.

The growth of the collagen network from the compensation factor at the initial stages of the disease is becoming an important factor in pathogenesis and gradually increasing chronic HF. In the process of remodeling, myocardial ischemia leads to damage and death of a part of cardiomyocytes, sclerosis of dead cells occurs, the location of the remaining cardiomyocytes changes, the geometry and sizes of the heart cavities change and, as a consequence, its function is disrupted. These structural and functional changes are the basis for the progression of the disease.

Atherosclerosis of the coronary arteries may be associated with HCM, especially in older age groups. Among patients with HCMC older than 45 years, atherosclerosis of the coronary arteries occurs in about 25% of cases, and in some cases is the cause of the manifestation of a disease that previously occurred latent.

It should be noted that coronary atherosclerosis can be one of the causes of syncope and sudden death of patients with HCM of middle and old age. Given the impossibility of completely eliminating atherosclerotic changes in the coronary arteries when assessing complaints and conducting noninvasive studies, coronarangiography is mandatory in patients with HCM with pain in the chest.

In HCM, the presence of significant LVEF obstruction, severity of myocardial hypertrophy, DD, and myocardial ischemia are the most important and closely related determinants of the severity of clinical manifestations, functional disorders and the "quality of life" of patients.

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## **ЖИЗНЬ И ТВОРЧЕСТВО БЕРДАХА**

*Аннотация: В данной статье рассматривается жизнь известного демократический поэт каракалпакского народа Бердаха и его творчество*

*Ключевые слова: Поэт, творчество, стих, нравственность, манеры, элегантность, красота*

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## **LIFE AND WORK OF BERDACH**

*Annotation: This article examines the life of the famous democratic poet of the Karakalpak people of Berdakh and his work*

*Key words: Poet, creativity, verse, morality, manners, elegance, beauty*

Бердах - известный демократический поэт каракалпакского народа. Он жил и работал в 19 веке. Настоящее имя поэта - Бердымурод Каргабой оглу, его прозвище - Бердак. О мыслителе известно немного. Информацию о его биографии и творчестве можно найти в основном в его произведениях. Он родился в Аккала Мойнакского района к югу от Аральского моря. Когда Бердаку было десять лет, его отец Каргабой Боронбой потерял сына и мать, и его воспитывал дядя Кочкорбой.

С десяти лет Бердак ходил в аульную школу, а после ее окончания учился в медресе Каракум Эшан, которое в то время было крупным научным центром, чтобы углубить свои знания.

Он начал писать стихи в молодом возрасте. Важную роль в развитии художественного творчества мыслителя сыграло знакомство с народными песнями, различными легендами, сказками, пословицами и былинами, былинами, наслаждение стихами известных поэтов. Таким образом, Бердах постепенно стал известным поэтом и известным бахшем. Самое главное, он начал петь собственные стихи.

Бердах объездил многие города. Он посетил крупные города Средней Азии. Он побывал в Ургенче и Бухаре, познакомился с древними памятниками. Бердах изучал произведения Алишера Навои, Физули и Махтумкули, читал их стихи. Он брал интервью у современных поэтов. Многие стихотворения Бердаха посвящены несчастной жизни бедняков, вдов, их тяжелому труду, жестокости, насилию и несправедливости, причиненным им со стороны богатых. В его стихах отражены общечеловеческие и национальные ценности, такие как человечность, равенство, щедрость,

справедливость, патриотизм, сострадание, героизм и отвага, независимость, борьба за национальное освобождение и истину, любовь.

Стихи и былины Бердаха характеризуются объективным и правдивым описанием жизни народа. Насилие над простыми людьми, особенно во времена Хивинского ханства и царской России, ярко описано в ряде стихов поэта. Поэтому он жалуется на несправедливость своего времени, на ханских приспешников, на сборщиков налогов, на произвол и произвол мирабов.

*Chaqqon odim tashlab, mehnat qilmasang,  
Kun ko'rmoqlik qiyin bo'ldi bu zamon.  
Maqsadingga o'ylab-o'ylab yetmasang,  
Qiyin bo'ldi kun ko'rmoqdik bu zamon.*

В стихотворениях «Налог», «Этого не было» и «В этом году» Бердах осудил политику ханов и беев, описав их жестокость по отношению к трудящимся. Бердах превозносит человека, подчеркивая, что народ - великая сила, и призывает правящий класс уважать трудящихся и помогать им. Поэт видит себя неотъемлемой частью нации.

*So'zim o'lmas, doim tirik qolaman,  
Xalqim bor-ku, yovdan o'chim olaman...*

Бердах критикует систему, в которой живет. По словам поэта, нынешняя политическая система не может защитить права и интересы трудящихся. В такой системе преобладают только несправедливость, несправедливость, жадность, произвол и другие бесчеловечные пороки. По принуждению угнетателей поэт говорит:

*Zolimlar tinglamas faqirning zorin,  
Ular o'ylar o'z foydasin, o'z qornin,  
Hech qachon zolimlar qo'ldagi borin,  
Er qo'rmaslar, bor bo'lsada, xalq uchun.*

В своих социально-политических работах Бердах утверждает, что обществом, как и другими мыслителями Востока, должен править справедливый и просвещенный царь. Он считал несправедливого и деспотичного хана своего времени непригодным для управления страной.

Произведения поэта «Омонгельды», «Для народа», «Айдосбий», «Лучше», «Еще нет», «Ерназарбий» отражают героическую борьбу каракалпакского народа против произвола ханов, национально-освободительное движение.

Бердах пишет, что человек свободен в своих действиях, поведении и в достижении своих целей. Например; В «Эпосе о глупом царе» он говорит, что после того, как притеснение некоторых богатых людей и чиновников достигнет своего апогея, нетерпеливые люди добровольно восстанут против них.

Нравственность, манеры, элегантность и красота играют важную роль в творческом наследии Бердаха. Его стихи содержат ценные идеи о национальных и общечеловеческих ценностях, патриотизме, дружбе народов и простой морали. По словам поэта, некоторые муллы и эшоны

представляются народу честными и чистыми. На практике мы видим обратное. Поэт разоблачает их лицемерие.

В своих нравственных воззрениях Бердак продолжал лучшие традиции Востока. В своих стихах «Я искал», «Для народа», «Лучше», «Мне нужно» он превозносит честный труд людей. По его словам, главный долг каждого человека - служить людям и их благополучию. Другой важный аспект моральных взглядов Бердаха - уважать людей, особенно пожилых, слабых и инвалидов, бедных и обездоленных, и как можно больше им помогать. Как и Навои, Бердак делит людей на две группы: хороших и плохих. Хороший человек - это мудрый, умный, знающий, услужливый и добродушный человек, обладающий всеми качествами человеческого существа. Плохой человек, по мнению Бердаха, - это бедствие для народа, он не ценит людей и своего брата. Вообще человечество находится в центре нравственных взглядов поэта.

Во многих своих стихах Бердах стремился привить идеи воспитания детей, уважения к взрослым, патриотизма по отношению к подрастающему поколению, любви к своему народу, дружбы и братства между народами.

Бердах - известный поэт каракалпакцев, настоящий ребенок. В честь поэта названы многие школы, улицы, кинотеатры и библиотеки Каракалпакстана. Учреждена также Государственная премия «Бердах Каракалпак». Эта награда вручается лучшим произведениям в области фантастики, искусства и архитектуры.

Литературные, общественно-политические и философские идеи Бердаха, проникнутые высоким гуманитарным духом, сохраняют свое воспитательное значение в условиях независимости.

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## СИНТАКСИС И ЕГО КЛАССИФИКАЦИЯ

*Аннотация: В данной статье рассматривается раздел лингвистики – синтаксис и его классификация*

*Ключевые слова: Лингвистика, слово, раздел, грамматика, наука, языка, словосочетание, функция*

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## SYNTAX AND ITS CLASSIFICATION

*Annotation: In this state, the section of linguistics is considered - syntax and ego-classification.*

*Key words: Linguistics, word, division, grammar, science, language, word formation, function*

Синтаксис (др.-греч. σύν-τάξις «составление», «координация», «порядок») — раздел лингвистики, в котором изучаются номинативные и коммуникативные языковые единицы: предложение и словосочетание. Синтаксис в буквальном переводе означает не только составление, но и упорядочивание, координирование, соединение слов в связный текст.

В лингвистике синтаксис — это совокупность правил, теоретических систем и языковых процессов, упорядочивающих и изучающих структуру предложений в каком-либо языке. Целью многих синтаксисов является установление синтаксических правил, общих для всех языков, а также изучение способов объединения слов в словосочетания и предложения в различных языках.

Синтаксис – раздел грамматики, изучающий словосочетания и предложения, а также их роль в речи. ... Предложение является основной единицей синтаксиса. Предложение характеризуется смысловой и интонационной законченностью, содержит высказывание (мысль) о чем-то или о ком-то. В предложении есть грамматическая основа.

Синтаксис – это раздел науки о языке, который изучает словосочетания и предложения.

Из слов и словосочетаний образуются предложения.

Предложение – одна из основных единиц языка и основная единица синтаксиса. При помощи предложения мы выражаем свои мысли и чувства, обращаемся друг к другу с вопросами, советами, просьбами, приказами.

Предложением называется слово или несколько слов, в которых заключается сообщение, вопрос или побуждение (приказ, совет, просьба). Предложение характеризуется интонацией и представляет собой отдельное высказывание.

Синтаксис изучает способы объединения слов в словосочетания и предложения. Участвуя в построении предложения, любой носитель языка связывает все языковые единицы в предложение, поэтому синтаксис относят к основам коммуникации. В каждом языке слова и словосочетания складываются в связную речь, письменную или устную, на основе синтаксических связей, использующих модели, характерные для данного языка. Модели построения речи в каждом языке имеют множественные признаки и особенности, характерные для фонетического, грамматического и морфологического строя данного языка.

Предметом изучения в синтаксисе являются «синтаксические единицы», или языковые конструкции, в которых элементы речи объединены синтаксическими связями и отношениями. Синтаксис неразрывен с нормами коммуникации, структурой мышления и обозначаемой действительностью, что делает его наиболее универсальной частью языковой структуры. Вместе с тем в каждом языке действуют свои специфические правила синтаксических отношений и способы их применения. Во многих языках цель синтаксиса — создать свод правил и систем для процессов, происходящих в языковой среде, которые изучают и упорядочивают способы сочетания слов и многообразную структуру текста. Слово «синтаксис» имеет, в основном, два значения:

#### Грамматический строй языка

- слова, являющиеся членами предложения;
- словосочетания;
- предложения простые и сложные;
- тексты

#### Раздел науки о языке, изучающий

- виды синтаксических связей;
- лексическое и грамматическое значение словосочетаний в предложении.

Синтаксические отношения между компонентами в словосочетании имеют в разных языках значительные типологические различия. Синтаксис языка, как письменного, так и устного, отражён в процессе взаимного упорядоченного расположения человеком частей речи, составляющих единое целое в соответствии с обозначением окружающей действительности, поэтому он тесно связан со складом мышления носителей языка и является частью языкознания — сложной и разветвленной системы дисциплин как теоретического, так и прикладного характера.

В узбекском языке синтаксис вместе с морфологией составляет основы грамматики. В середине XIX века логическая школа грамматики, отражённая в трудах Буслаева, проявляла основной интерес к предложению, рассматривая и определяя его как суждение, выраженное словами. Конец XIX, начало XX



века представлены в трудах формалистов (Фортунатов, Пешковский, Петерсон), выделявших словосочетание и определявших его как основной предмет изучения синтаксиса. Шахматов в своих работах предложил тезис о том, что существуют две синтаксические единицы — словосочетание и предложение.

В математике синтаксис определяется сводом правил, применимых в математических системах, таких как формальные языки. Упрощенные варианты исходной математической модели синтаксиса и методика его моделирования на компьютере применима к любому письменному языку.

Типология языков основана на установлении сходства и различий в языковом строе и синтаксисе того или иного языка. К. В. Гумбольдт делил языки на изолирующие, агглютинативные и флективные, что отражало стремление выделить типы языков на основе общих принципов строения грамматических форм. В агглютинирующих языках он выделял языки со специфическим синтаксисом предложения — инкорпорирующие, и ввёл в понятие языка такую единицу, как предложение.

Структура предложений, используемая в пределах того или иного синтаксиса, часто является основой типологической классификации языков:

- номинативный строй (большинство мировых языков);
  - эргативный (например, аварский язык);
  - активный и инактивный строй (многие автохтонные языки Северной и Южной Америки);
  - инкорпоративный (самодийские языки);
  - нейтральный строй (некоторые языки Западной Африки);
- и другой строй в различных языках.

#### Синтаксис коммуникативный

Основная функция языка — общение (коммуникация) между людьми. Объектом изучения коммуникативного синтаксиса является процесс, превращающий слова в предложения, высказывания и связный текст. Это такие вопросы, как актуальное и синтагматическое членение предложения, функционирование словосочетаний в предложении, коммуникативная парадигма предложений, типология высказывания и т. д.

#### Семантический синтаксис

Объектами изучения семантического синтаксиса является текст и структурные схемы, при помощи которых происходит его связное построение: словосочетания, простое и сложное предложения, сложное синтаксическое целое, различного рода высказывания, связанные с ситуацией речи, а также строение текста, выходящее за пределы сложного синтаксического целого. Изучение языковых закономерностей имеет большое значение для лингвостилистического и психолингвистического анализов текста.

#### Статический синтаксис

Статический синтаксис изучает структуры, не связанные с контекстом: предложением, словосочетанием и пр. единицами языка. Это логически

последовательная классификация элементов языка (разговорного, письменного или машинного) имеющегося в сознании носителей языка безотносительно к функционированию этих элементов в предложении. Например, грамматические парадигмы склонения и спряжения.

В современном языкознании и прикладных науках изучается также актуальный синтаксис, структурно-семантический, функциональный, когнитивная и генеративная лингвистика, а также многие другие направления.

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## **ИННОВАЦИЯ В ФАРМАКОЛОГИИ**

*Аннотация: В статье рассматривается необходимость создание инновационных современных высокоэффективных лекарственных препаратов. Внедрение инновационных лекарственных препаратов в медицинскую практику повышает эффективность лечения болезней и приводит к позитивному изменению медицинских технологий.*

*Ключевые слова: инновация, препарат, ткань, синтез, система, организм, минерал.*

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## **INNOVATION IN PHARMACOLOGY**

*Annotation: The article discusses the need to create innovative modern highly effective drugs. The introduction of innovative drugs into medical practice increases the efficiency of treatment of diseases and leads to a positive change in medical technologies.*

*Key words: innovation, drug, tissue, synthesis, system, organism, mineral.*

Фармакология- это наука о лекарственных веществах и их действии на организм. Ее основной задачей является исследования новых видов лекарственных средств, основывающийся на химический синтез, а также природные соединения из растений, минералов, тканей животных, грибов и микроорганизмов. Область фармакологических исследований изучает воздействие веществ на биологические системы организма [6,7].

В настоящее время прогресс научных исследований в области фармакологии привел к разработке новых видов лекарственных средств.

Рассматривая перспективу фармакологии важно оценить ее значение для практической медицины, так как создания современных высокоэффективных лекарственных препаратов дала возможность лечить

многих болезней. Поэтому успехи медицины тесно связаны с разработкой инновационных препаратов.

В свое время такие инновации в фармакологии как, появление средств для наркоза дала возможность развитию хирургии, открытие антибактериальных препаратов, снизил уровень смертности от инфекционных заболеваний и гнойных осложнений, создание препаратов инсулина, спасал жизни больных с сахарным диабетом, препараты для химиотерапии злокачественных новообразований [3,5,8].

По определению Европейского агентства по лекарственным средствам (European Medicines Agency — ЕМЕА), инновационная лекарственная средства - это новая активная субстанция или уже известный фармакологический продукт при новом показании к его применению.

Управление по контролю пищевых продуктов и ЛС США (Food and Drug Administration — FDA) определяет инновационный лекарственный препарат как новое активное вещество, которое ранее не применялось, или раньше было известно, но применялся в другой дозе или поступает в организм другим способом [4].

В современном мире количество заболеваний среди населения день ото дня растет и прогрессируют, приобретая новые формы, поэтому все силы ученых уходит на разработке новых инновационных видов лекарственных средств.

Внедрение инновационных лекарственных препаратов в медицинскую практику повышает эффективность лечения болезней, которые ранее считались неизлечимыми, и приводит к позитивному изменению медицинских технологий, а, следовательно, к отказу от менее эффективных.

Инновация, нововведение — это внедренное или внедряемое новшество, обеспечивающее повышение эффективности процессов и улучшение качества продукции, востребованное рынком.

Термин «инновация» происходит от латинского «*novatio*», что означает «обновление» (или «изменение»), и приставки «*in*», которая переводится с латинского как «в направление», если переводить дословно «*Innovatio*» — «в направлении изменений». Само понятие *innovation* впервые появилось в научных исследованиях XIX в. [1].

Новую жизнь понятие «инновация» получило в начале XX в. в научных работах австрийского экономиста Й. Шумпетера в результате анализа «инновационных комбинаций», изменений в развитии экономических систем.

Инновация — это не всякое новшество или нововведение, а только такое, которое серьезно повышает эффективность действующей системы [9].

В настоящее время в фармакологии и медицине существует нижеследующие виды инновации:

➤ наномедицина — это медицина будущего, который занимает главную роль в перспективе фармакологии;

➤ диэнэй — это парафармацевтика, обеспечивающий поступление в организм фрагментов ДНК, легко усваиваемый всеми клетками и в результате

чего активируются механизмы естественного восстановления, больной может полностью избавиться от хронических заболеваний;

➤ тромбовазим — это препарат, основанный на технологии, когда молекулы активного вещества сшиваются с молекулами инертного носителя с помощью электронного пучка, что в результате дает снижение побочных эффектов и улучшает свойства действующих веществ [2].

На сегодняшний день можно выделить следующие приоритетные направления в создании инновационных лекарственных технологий:

- ✓ получение новых химических продуктов;
- ✓ синтез фармакологически активных метаболитов или их изомеров;
- ✓ создание новых лекарственных форм с улучшенными фармакокинетическими свойствами;
- ✓ новые средства доставки лекарств — ингаляционные, назальные, трансдермальные;
- ✓ биотехнологические и биоинженерные технологии;
- ✓ разработка многокомпонентных препаратов — так называемых мультипилли [3,8].

Таким образом, создание и широкое внедрение инновационных лекарственных средств в медицинскую практику позволяет улучшить и радикально изменить прогноз многих заболеваний, модифицировать их течение, снизить летальность, а также сократить затраты государства на лечение и реабилитацию пациентов, продлить трудоспособный период.

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**ФУНКЦИИ МЕДИАОБРАЗОВАНИЯ И МЕДИАРЕСУРСОВ В  
ПОДГОТОВКЕ СПЕЦИАЛИСТОВ ИССЛЕДОВАНИЕ  
ПОТРЕБНОСТЕЙ И УРОВНЯ ВЛАДЕНИЯ  
МЕДИАГРАМОТНОСТЬЮ ПРЕПОДАВАТЕЛЯМИ И СТУДЕНТАМИ**

*Аннотация: Статья посвящена описанию нужды и потребности в формировании медиаграмотности на занятиях по ИЯ. Проблемы в аспекте обучения медиаграмотности, объекты и способы обучения медиаграмотности на занятиях по ИЯ, потребности студентов и преподавателей, проблемы и возможные пути их решения.*

*Ключевые слова: медиаграмотность, метапредметность, медиатекст, коммуникативной компетенция, принципы обучения*

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**FUNCTIONS OF MEDIA EDUCATION AND MEDIA RESOURCES IN  
THE TRAINING OF SPECIALISTS RESEARCH OF THE NEEDS AND  
LEVEL OF MEDIA LITERACY PROFICIENCY OF TEACHERS AND  
STUDENTS**

*Annotation: The article is devoted to the description of the needs and requirements in the formation of media literacy in the classroom on foreign language. Problems in the aspect of teaching media literacy, objects and methods of teaching media literacy in foreign language classes, the needs of students and teachers, problems and possible solutions.*

*Key words: media literacy, meta-subject matter, media text, communicative competence, teaching principles*

Как видим, в качестве объектов обучения представлены некоторые жанры СМИ, но следовало бы также уделять и другим медиасредствам.

Представим вопросы и интерпретацию результатов исследования потребностей и уровня владения медиаграмотностью преподавателями английского языка.

1. Что вы понимаете по медиаграмотностью?

Вот основные ответы преподавателей в отношении понимания сущности медиаграмотности в процентном соотношении, которые мы классифицировали на:

1) знание типов и видов средств массовой информации (СМИ) и технологий их использования (65%)

- знание всех видов СМИ и технологий как их использовать эффективно (27%);

- знание всех видов медийной информации, представленной в Интернете, телевидении и умение их использования в различных целях (39%);

- использование полученной информации в повседневной жизни (34%);

2) владение навыками и умениями обработки информации и понимания медиатекстов (15%)

- владение навыками критического анализа медиатекстов (27%);

- осознание объективной точки зрения и предвзятости в текстах СМИ посредством сравнения статей (25%);

- навыки понимания и интерпретации медиатекстов (48%);

3) использование медиатекстов как средства обучения и воздействия (52%)

- осознание положительного и отрицательного воздействия СМИ на личность и его общественное поведение, а также на специфичность восприятия окружающей действительности (19%). Благодаря этим средствам мы формируем мировоззрение обучаемых, их эстетическое восприятие.

- использование медиатекстов на занятиях, или ссылка на них в ходе организации дискуссии (46%);

- будучи аутентичным материалом, это эффективное средство обучения аутентичному языку и аутентичной речи (25%);

- использование СМИ для формирования картины мира англоязычного народа и для развития коммуникативной компетенции (10%).

Как видим, ответы преподавателей имеют различные толкования, но в общем смысле они раскрывают понятие медиаграмотности, представленное выше. Тем не менее, лишь небольшое количество преподавателей идентифицировали медиаграмотность с критическим анализом получаемой информации и затронули объективность и предвзятость изложенных фактов. Нет преподавателей, которые бы коснулись вопросов оригинальности текста и авторитетности источника.

2. Часто вы используете медиаресурсы ли на занятиях, и в каких целях?

По результатам опроса нами выявлено, что преподаватели часто используют видео- и аудио материалы, а также небольшое количество статей из газет и журналов. При этом ответы преподавателей классифицируются нами следующим образом:

1) в качестве предметно-содержательной основы (50 %)

Преподаватели ответили, что используют медиатексты печатного и электронного формата для

- развития коммуникативной компетенции в рамках представленной тематики в рабочей программе (13%);

- раскрытия и обсуждения какой-либо проблемы (27%);

- иллюстрации каких-то фактов, событий, ситуаций общения и ознакомления с текущими событиями в Узбекистане и в других странах (51%).

2) в качестве работы над фактами культуры (28%)

Преподаватели ответили, что используют аудио- и видео-материалы, а также материалы энциклопедического характера для

- знакомства с культурными артефактами (8%);

- знакомства с культурным компонентом вербальных и невербальных единиц (13%);

- знакомства с аутентичным языком и речью (14%);

- знакомства со стилем жизни, традициями и обычаями, кухней (65%).

3) в качестве развития коммуникативных умений в различных видах речевой деятельности (36 %)

Используют смартфоны, прослушивают и смотрят аудио- и видео-материалы, образовательные программы для

- написания СМС (18%);

- написания электронного письма (15%);

- развития рецептивных навыков и умений (57%);

- развития продуктивных навыков и умений (10%)

4) в качестве средств промежуточного и итогового контроля используются компьютерные тесты (84%).

Безусловно, материалы СМИ и ИКТ дают реальную возможность повысить качество обучения в аспекте развития коммуникативной компетенции. Тем не менее, в ходе опроса испытуемые не упомянули использование СМИ или ИКТ для

1) формирования/ развития/ усовершенствования языковых навыков (произносительных, ритмико-интонационных, лексических и грамматических),

2) формирования медиаграмотности на занятиях по английскому языку;

3) развития критического мышления столь важного для работы с СМИ;

3) использования этих средств в воспитательных целях (идейно-нравственного воспитания), поскольку СМИ несут также функцию воздействия на сознание личностей, а также они повышают мотивацию учения.

К тому же в ответах доминирует использование этих средств в качестве предметно-содержательной основы (50%) и поиска необходимой информации (65%). Однако эти средства также должны использоваться для развития рефлексивных навыков и умений, стимулом для развития навыков и умений письменной речи не только в виде СМС или е-письма, но и написания эссе, изложения, сочинения и различных форматов писем.

3. Вы используете больше печатные ресурсы или же digital ресурсы.

75 % преподавателей ответили, что предпочитают работать с печатным материалом, поскольку печатные тексты удобнее для восприятия, а подбор digital материалов занимает много времени. Ко всему они не всегда имеют



возможность использовать ИКТ на занятиях в виду того, что многие классы не оборудованы, нет доступа к Интернету. 25 % преподавателей ответили, что лучше использовать digital ресурсы – это удобно и можно продемонстрировать аутентичный язык и создать аутентичную ситуацию общения.

4. Как влияют медиатексты и ИКТ на общее развитие студентов? Нужно ли формировать у преподавателей и студентов медиаграмотность?

80% учителей ответили, что на занятиях 45% студентов быстро находят необходимую информацию, включая Youtube и другие программы, студентам нравится смотреть видеоматериалы, фильмы, а также играть в различные игры. Но часть студентов (25%) менее активная, в виду плохого знания языка и слабого уровня владением ИКТ. По второму вопросу все преподаватели ответили, что использования медиа материалов на уроках дает положительный эффект и что все преподаватели и студенты должны владеть медиаграмотностью для оптимизации учебного процесса.

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### **АВТОМАТИЗАЦИЯ ПРОЦЕССА ПОЛИВА АМАРАНТА В НЕБОЛЬШИХ ХОЗЯЙСТВАХ**

*Аннотация: В статье описан один из альтернативных способов орошения растений амаранта в домашних условиях, позволяющий автоматизировать процесс полива дождеванием. Обеспечение оптимального орошения растений амаранта в домашних условиях является актуальной проблемой. Преимущество этого метода в том, что он не только снижает человеческий фактор, но и обеспечивает доставку минеральных удобрений через воду. В проекте используется микроконтроллер серии 328, установленный на плате. Он использовал ЖК-дисплей в качестве интерфейса между регулятором чувствительности и микроконтроллером.*

*Ключевые слова: Контроллер, датчик влажности, щит управления, затвор.*

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### **AUTOMATION OF THE AMARANTH IRRIGATION PROCESS IN SMALL FARMS**

*Annotation: The article describes one of the alternative methods of irrigating amaranth plants at home, which allows you to automate the process of sprinkling*

*irrigation. Ensuring optimal irrigation of amaranth plants at home is an urgent problem. The advantage of this method is that it not only reduces the human factor, but also ensures the delivery of mineral fertilizers through the water. The project uses a 328 series microcontroller installed on the board. He used the LCD as an interface between the sensitivity regulator and the microcontroller.*

*Key words: Controller, wet sensor, control box, valve.*

Обеспечение кормовой базы животноводства республики новыми питательными гранулами и автоматизация этих систем на основе современных информационных и коммуникационных технологий является актуальной задачей.

В последние годы на мировом рынке появился ценный источник сырья для пищевой промышленности - семена амаранта с высокой пищевой и биологической ценностью, содержащие широкий спектр функциональных ингредиентов и биологически активных веществ, что определяет перспективы их использования в еде

В такой развивающейся стране, как Узбекистан, где экономика в основном аграрная, а климат благоприятный, у нас нет полного доступа к сельскохозяйственным ресурсам. Основная причина - отсутствие систем рационального использования питьевой и оросительной воды. Орошение всегда было древней практикой и за годы прошло много этапов. Один из них - дождевание. Орошение является одним из самых эффективных и широко распространенных методов, используемых сегодня, но есть проблемы со сроками и управлением влажностью в процессе орошения. Если использовать автоматизированную оросительную систему на базе микроконтроллера, эту проблему можно решить путем полива, когда есть острая потребность в воде. Среди его преимуществ наиболее важным является экономия воды, которая позволяет достичь 50% воды по сравнению с поверхностным орошением. Кроме того, урожайность увеличивается примерно на 15-25%. Правильно покрытый, он выдержит множество неблагоприятных условий, от 50 до 95%.

Параметры необходимо учитывать для обеспечения полноценной работы системы. Система опрыскивания, устанавливаемая на участке, зависит не только от ее финансовых возможностей, но и от сорта урожая и других аспектов. Поливая боковую трубу небольшими трубками, система обеспечивает количество воды в зависимости от потребностей культуры. Кроме того, основная цель спринклерной системы - равномерное распределение воды через хорошо продуманный распылитель.

Сегодня на рынке представлено множество систем орошения распылением. Они различаются в основном конструкцией и возможностями полива. Данный проект «Автоматизация процесса полива малых хозяйств» решает множество задач. Для этого нам понадобится насос для подачи воды, датчик влажности, контроллер, фильтр для воды (сетка). Фильтр), клапан и пара оросителей.

Принцип работы

Спринклерный процесс предполагает установку нескольких опрыскивателей вдоль гребня. Рисунок 1

Опрыскиватель в положениях (4-1) и (4-2) используется для опрыскивания сельскохозяйственных культур водой, смешанными с водой минеральными средствами, и смесь минеральных режимов может быть сохранена.

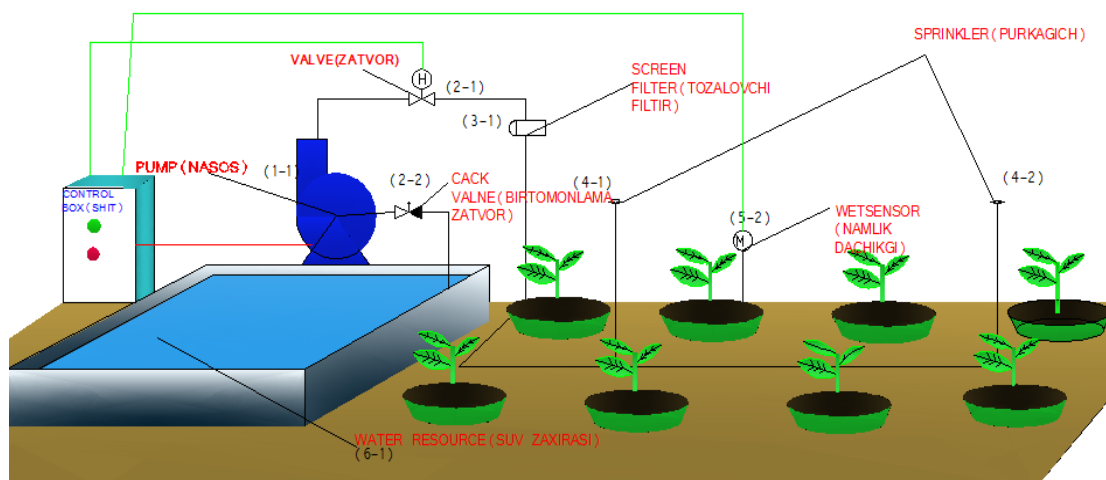


Рисунок 1: Функциональная схема спринклерного процесса

Данные о влажности (5-2) поступают от источника влаги. 2-1) клапан в положении открывается и насос в положении (1-1) запускается одновременно. Когда через определенное время влажность достигает определенного уровня, насос в положении (1-1) отключается от источника, а клапан в положении (2-1) закрывается. Мелкие частицы в воде (3-1) скапливаются, очищены и переданы через фильтр в положение. Принцип нагрева: Вы можете использовать данные в любое время. Вы можете получить информацию о перерабатывающих заводах. Контроллеры управления программируются компьютером. В нашем проекте вы сможете отслеживать данные онлайн. Логический контроллер позволяет выбрать наиболее оптимальные условия на заданный период времени. Еще одним преимуществом нашего проекта является то, что потребление воды находится под контролем.

Этот способ полива имеет множество преимуществ.

- Обеспечивает орошение для всех типов почв и склонов.
- Позволяет орошать практически все виды сельскохозяйственных культур (зерновые, овощи, мелкие фрукты).
- Простота установки и обслуживания.
- Возможность контролировать всю территорию.
- Простое управление содержанием воды.
- Возможность использования отдельных удобрений и пестицидов.
- Снижение вероятности засорения из-за попадания частиц в почву или воду для орошения фильтра.

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## **ХИРУРГИЧЕСКОЕ ЛЕЧЕНИЕ ПОСЛЕОЖОГОВЫХ КОНТРАКТУР В КОНЕЧНОСТЯХ У ДЕТЕЙ**

*Аннотация: Оптимизация сроков и методик лечения послеожоговых рубцовых контрактур конечностей сокращает время стационарного лечения, улучшает функциональные и косметические результаты, уменьшает дискомфорт пациентов и способствует более широкому внедрению реконструктивных операций при тяжелых последствиях ожогов в практическое здравоохранение. Результаты работы будут использоваться, хирургами и травматологами регионов РУз, ближнего и дальнего зарубежья в лечении многочисленной категории пациентов с послеожоговыми контрактурами.*

*Полноценная реабилитация детей определяется восстановлением функции и ликвидацией эстетических дефектов, она должна предоставлять таким пациентам- возможность быть полноценными людьми в обществе и имеет большое социальное и экономическое значение.*

*Ключевые слова: послеожоговая контрактура, хирургическая лечения, конечность, детской возраст.*

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## **SURGICAL TREATMENT OF POST BURN CONTRACTORS IN THE LIMBS IN CHILDREN**

*Abstract: Optimization of the timing and methods of treatment of post-burn scar contractures of the extremities reduces the time of inpatient treatment, improves functional and cosmetic results, reduces patient discomfort and contributes to the wider introduction of reconstructive surgeries with severe consequences of burns into practical healthcare. The results of the work will be used by surgeons and traumatologists in the regions of the Republic of Uzbekistan, near and far abroad in the treatment of a large category of patients with post-burn contractures.*

*Full rehabilitation of children is determined by the restoration of function and the elimination of aesthetic defects, it should provide such patients with the opportunity to be full-fledged people in society and has great social and economic importance.*

*Key words: post-burn contracture, surgical treatment, limb, childhood.*

Актуальность. В настоящее время, как и в предыдущие годы число лиц, страдающих от последствий ожогов продолжает неуклонно расти[6].

Хотя использование современных методов лечения существенно снизило летальность детей с глубокими ожогами, это не решило проблем с растущим числом инвалидов, с развившимися послеожоговыми осложнениями в виде контрактур, дефектов тканей и трофических язв. В связи с этим реабилитация таких больных имеет важное социально-экономическое значение и является неотложной задачей сегодняшнего дня.

Наиболее частыми последствиями обширных глубоких ожогов являются тяжелые контрактуры и деформации конечностей, что приводит к нарушению их функций и порой к полной инвалидизации больного[2]. Восстановление утраченных функций поражённых суставов является одним из основных направлений реконструктивной хирургии ожогов. Согласно данным разных авторов в реконструктивных операциях нуждаются от 40 до 75% больных, перенесших глубокие ожоги[8].

Проблема реабилитации больных с последствиями ожогов продолжает оставаться актуальной и одной из самых сложных проблем реконструктивной и пластической хирургии[4].

По данным статистики в мире среди инвалидов обожженные составляют до 22,8%. Из них 82% — лица наиболее трудоспособного возраста: от 20 до 49 лет. В общем числе послеожоговых больных рубцовые деформации и контрактуры формируются у 23% пострадавших, а при глубоких ожогах с площадью поражения свыше 10% поверхности тела - у 40-55% пациентов[1].

Последствия тяжелых контрактур и деформаций в виде нарушения функции конечностей, а также косметические дефекты способствуют нарушению психоэмоционального состояния, порождают чувство неуверенности, неполноценности, бесперспективности, уменьшают духовные и трудовые возможности личности, способствуя развитию заболеваний психосоматического происхождения — неврозам, стенокардии, гипертонической болезни[7].

Для оптимизации методов коррекции и усовершенствования способов оперативного и консервативного лечения послеожоговых рубцовых контрактур крупных суставов выполнен ряд научных работ и исследований отечественными и зарубежными учёными. Постоянно ведётся поиск новых возможностей для решения данной проблемы. В настоящее время, как и все последние годы, хирурги не оставляют попытки усовершенствовать уже имеющиеся способы коррекции послеожоговых рубцовых деформаций и

пытаются разрабатывать более совершенные методы реконструктивных операций[5].

Несмотря на активную разработку и поиск новых решений данной проблемы, при изучении отечественной и зарубежной литературы мы не встретили четких алгоритмов и методик, определяющих оптимальный вид лечения контрактур в зависимости от локализации и распространённости рубцов, состояния и ресурсов здоровых тканей, основанных на большом клиническом материале; нет единого взгляда на сроки хирургического лечения контрактур суставов в зависимости от времени, прошедшего с момента ожоговой травмы[3]. Все это необходимо специалистам для достижения оптимальных результатов реабилитации больных с последствиями ожогов.

**Цель исследования.** Улучшение результатов хирургического лечения послеожоговых контрактур конечности у детей.

**Материалы и методы исследования.** Материал настоящего исследования включает анализ результатов обследования и хирургического лечения 98 детей в возрасте до 15 лет, которые оперированы в отделении хирургии АОМПДБ. Преобладали дети в возрасте до 5 лет (49 %). Пациенты мужского пола составили 52%, женского -46%. Самому молодому пациенту было 1 год 2 месяца, самому старшему - 15 лет.

Больные поступили со сроками от 6 месяцев до 14 лет после получения ожоговой травмы. Причины ожогов были довольно разнообразными: кипяток, электроплитка, пламя, горячая пища, горячая печь, раскаленное масло, и в одном случае - негашенная известь.

**Результаты исследования.** Степень тяжести послеожоговой рубцовой сгибательной контрактуры пальцев кисти определяется дефицитом покровных тканей по ладонной поверхности пальцев с наличием контрактуры. Отношение расстояния между двумя точками по ладонной поверхности одноименного пальца здоровой кисти к измененному расстоянию между аналогичными точками по ладонной поверхности пораженного пальца объективно показывает степень дефицита покровных тканей. Этот показатель, названный нами как индекс степени тяжести контрактуры (/с), позволяет определить необходимость в удлинении тканей для полного устранения контрактуры.

Определены две большие группы местно-пластических способов устранения рубцовой сгибательной контрактуры пальцев кисти - простые (Z-пластика, множественная Z-пластика) и сложные (модифицированные способы Z-пластики - способы Limberg, Hirshowitz, Smith (butterfly), Mustad'e, Karacaoglan и др.) способы.

Простые способы Z-пластики эффективны при устранении легкой степени сгибательной контрактуры пальца, когда необходимость в удлинении тканей не превышает 124%.



Для устранения рубцовой сгибательной контрактуры пальца средней степени тяжести сложные (модифицированные) способы Z-пластики позволяют устранить до 200% дефицита тканей по длине пальца.

При рубцовых контрактурах пальцев тяжелой степени, необходимость в удлинении тканей превышает 200%, существующие ранее способы местно-пластических операций не позволяют эффективно устранить контрактуру.

Разработка нового способа местно-пластической операции - способ встречно-перемещаемых прямоугольных лоскутов, позволила достичь удлинения тканей по ладонной поверхности пальца до 1030% и избежать сложных, многоэтапных оперативных вмешательств. Этот способ эффективен при рубцовых сгибательных контрактурах пальцев средней и тяжелой степени тяжести.

Результаты хирургического лечения послеожоговых рубцовых сгибательных контрактур пальцев кисти зависят от степени тяжести, давности существования и правильного выбора хирургического способа устранения контрактуры.

Дифференцированный подход к выбору местно-пластических операций в зависимости от степени тяжести контрактуры позволил в 86,2% случаев получить хорошие и отличные функциональные результаты.

Функциональные результаты применения способа встречно-перемещаемых прямоугольных лоскутов были хорошими и отличными в 94,3% случаев.

Вывод. Разработанные критерии оценки позволили объективно оценить тяжесть контрактур конечности и установить необходимость в удлинении по линии стягивающего рубца.

Определены показания к выполнению различных видов местно-пластических операций в зависимости от степени выраженности контрактуры и возможностей способов устранить дефицит тканей. Разработка и внедрение нового способа встречно-перемещаемых прямоугольных лоскутов при тяжелых рубцовых сгибательных контрактурах пальцев кисти, позволила избежать сложных и многоэтапных оперативных вмешательств, что значительно сокращает сроки лечения больных и имеет большое социально-экономическое значение.

Применение оптического увеличения и прецизионной техники дало возможность во всех случаях идентифицировать пальцевые сосудисто-нервные пучки и более безопасно выполнить операцию. Разработка показателя степени устранения контрактуры позволила объективно оценить результаты хирургического лечения рубцовых сгибательных контрактур пальцев кисти.

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## **НЕОБХОДИМОСТЬ ИДЕОЛОГИЧЕСКОГО ОБЪЕДИНЕНИЯ НА НОВОМ ЭТАПЕ РАЗВИТИЯ ОБЩЕСТВА**

*Аннотация: В статье анализируются факторы свободного гражданского общества и построения светского государства в Узбекистане.*

*Ключевые слова: Идея, идеология, гражданское общество, идеологияческое объединение*

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## **THE NEED FOR IDEOLOGICAL UNIFICATION AT A NEW STAGE IN THE DEVELOPMENT OF SOCIETY**

*Annotation: The article analyzes the factors of a free civil society and the construction of a secular state in Uzbekistan.*

*Key words: dea, ideology, civil society, ideological association*

Многочисленные реформы последних десятилетий в различных сферах жизни нашего общества привели к разрушению ранее сложившихся и функционирующих форм идеологии.

Обретение государственной независимости открыло перед Узбекистаном широкие перспективы для экономического и социального прогресса, культурного и духовного обновления. В связи с этим большое значение для продвижения вперед по пути обновления и прогресса приобретают проблемы возрождения духовности и культуры народа, воспитания в каждом человеке бережного отношения к прошлому, национальным и религиозным традициям, а также приобщения к ценностям современной мировой цивилизации.

Государство и государственное устройство призваны обеспечить структурность, планомерность и содержание человеческой жизни и развития конкретной личности. Государство выступает в качестве социального института, в котором человек осваивает нормы поведения и деятельности,

осознает свои права и обязанности в отношении других людей, вносит свой вклад в социальное, экономическое, политическое, нравственное развитие общества.

Осмысление мира, в котором мы живем, требует тотальной мобилизации интеллекта. Нам нужно подтягивать историческую память, рассматривать происходящее не только через призму прошлого, не только всматриваясь в настоящее, но и формируя образ будущего. И даже этого будет недостаточно, если на наш мир мы не научимся смотреть из Вечности. Мужество быть напрямую связано со способностью видеть и различать увиденное, и, конечно, для этого требуются душевные силы, энергия мысли и целостное принятие мира.

Согласно определению в философском словаре, идеология (ideologic; греч. учение об идеях) - это система взглядов и идей: политических, эстетических, религиозных и философских[5].

Идеология (греч. ιδεολογία; от ιδέα «прообраз, идея» + λογος «слово, разум, учение») - система концептуально оформленных идей, которая выражает интересы, мировоззрение и идеалы различных субъектов политики - классов, наций, общества, политических партий, общественных движений - и выступает формой санкционирования существующего в обществе господства и власти (консервативные идеологии) или радикального их преобразования (идеологии «левых» и «правых» движений); идеология и форма общественного сознания — составная часть культуры, духовного производства[4].

Термин «идеология» был введен во Франции в конце XVIII века А. Дестютом де Траси, который вместе с Этьеном де Кондильяком пытался создать науку об общих принципах формирования идей и основах человеческого знания.

Согласно ст. 12 Конституции, в Республике Узбекистан общественная жизнь развивается на основе многообразия политических институтов, идеологий и мнений. Никакая идеология не может устанавливаться в качестве государственной.

– Биз яратаётган янги Ўзбекистоннинг мафкураси эзгулик, одамийлик, гуманизм ғояси бўлади. Биз мафкура деганда, аввало, фикр тарбиясини, миллий ва умуминсоний қадриятлар тарбиясини тушунамиз. Улар халқимизнинг неча минг йиллик ҳаётини тушунча ва қадриятларига асосланган, – деди давлатимиз раҳбари.

Идеология нового Узбекистана, которую мы создаем, будет идеей добра, человечности и гуманизма. Когда мы говорим идеология, мы имеем в виду, прежде всего, воспитание мысли, воспитание национальных и общечеловеческих ценностей. В их основе лежат тысячелетние жизненные концепции и ценности нашего народа, - сказал Президент Узбекистана Ш.М.Мирзиёев[2].

На новом этапе реформ, инициированных Президентом Шавкатом Мирзиёевым, внимание уделяется поддержке развития институтов

гражданского общества как одной из приоритетных задач. Это было сделано Указом Президента.

Это видно на примере утвержденной Стратегии действий по пяти приоритетным направлениям развития Республики Узбекистан на 2017-2021 годов[1].

В заключении можно сказать, на основе этой идеологии лежит патриотизм, являющийся проявлением воли народа Узбекистана; важный фактор, объединяющий разные нации и народы, общественно-политические силы и группы; популярная идеология, превосходящая любую партийную идеологию; критерии, определяющие развитие нашего государства; целостность социально-политических идей построения правового, демократического, справедливого гражданского общества.

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## **ФАКТОРЫ РИСКА ХОРИОАМНИОНИТА В РОДАХ**

*Аннотация: Хориоамнионит — это инфекционное воспаление плодных оболочек и амниотической жидкости, вызванное полимикробными ассоциациями. Проявляется гипертермией, болью в области матки, гнойными или сукровичными выделениями из влагалища. Возможно субклиническое течение заболевания с минимальной симптоматикой. Диагностируется с помощью гинекологического осмотра, КТГ плода, лабораторных исследований, УЗИ малого таза.*

*Тактика ведения беременной предполагает срочное родоразрешение через естественные родовые пути или путем кесарева сечения с одновременным назначением интенсивной антибактериальной, противовоспалительной, инфузионной терапии.*

*Риск возникновения хориоамнионита также возрастает с началом естественных родов особенно если в их ходе многократно проводятся пальцевые влагалищные исследования после вскрытия плодных оболочек или выполняется внутренняя кардиотокография плода для получения объективных данных о его состоянии и характеристиках сократительной активности матки.*

*Ключевые слова: беременность, амниотическая оболочка, дородовой разрыв плодных оболочек, индукция родов, микрофлора влагалища, хориоамнионит.*

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## **RISK FACTORS OF CHORIOAMNIONITIS IN LABOR**

*Abstract: Chorioamnionitis is an infectious inflammation of the membranes and amniotic fluid caused by polymicrobial associations. It is manifested by hyperthermia, pain in the uterus, purulent or bloody discharge from the vagina. Possibly subclinical course of the disease with minimal symptoms. Diagnosed by gynecological examination, CTG of the fetus, laboratory tests, ultrasound of the small pelvis.*

*The tactics of managing a pregnant woman involves urgent delivery through the vaginal birth canal or by caesarean section with the simultaneous appointment of intensive antibacterial, anti-inflammatory, infusion therapy.*

*The risk of chorioamnionitis also increases with the onset of natural childbirth, especially if during their course digital vaginal examinations are performed repeatedly after opening the membranes or internal cardiotocography of the fetus is performed to obtain objective data on its condition and characteristics of the contractile activity of the uterus.*

*Key words: pregnancy, amniotic membrane, prenatal rupture of membranes, induction of labor, vaginal microflora, chorionamnionitis.*

Актуальность. Перинатальная заболеваемость в большинстве случаев обусловлена внутриутробными инфекциями, ПРПО, который отмечается в 24-36% случаев осложненных родов. ПРПО тесно связан с перинатальной инфекцией, повышает в 10 раз риск неонатального сепсиса, высокой перинатальной и младенческой смертности, а также гнойно-септических осложнений у матери[3].

Часто в анамнезе пациенток с ПРПО указывалось: на перенесенную вирусную инфекцию; истмико-цервикальную недостаточность; пороки развития матки; перерастяжение матки вследствие многоводия, многоплодия, макросомии плода; хирургические операции во время беременности, особенно на органах брюшной полости, или травмы[7].

Отмечают также роль в генезе разрыва плодных оболочек во II триместре беременности таких факторов, как расовая или этническая принадлежность, доступность медицинской помощи. Факторы, способствующие ПРПО в различные сроки беременности, остаются не до конца изученными.

Инфицированность чаще всего возникает при преждевременном разрыве плодных оболочек или во время диагностических манипуляций – амниоскопии или амниоцентезе. По мере удлинения безводного промежутка, независимо от причин разрыва оболочек, риск внутриутробной инфекции возрастает[2]. В эксперименте с помощью методики контрастной ультразвуковой гистерографии выявлено, что в результате сократительной деятельности в полости матки создается отрицательное давление. Вследствие этого влагалищный секрет проникает в полость матки[5]. Следовательно, сократительная активность матки во время родов представляет собой фактор, увеличивающий вероятность микробной инвазии амниотической полости.

Среди возбудителей хориоамнионита часто обнаруживают анаэробы (27,3%), энтерококки (18,2%), стрептококки (22%) и стафилококки (11,7%); в остальных случаях при бактериологическом исследовании околоплодных вод, как правило, выявляют сочетание микроорганизмов.

Некоторые бактерии (стрептококки группы В и др.) особенно склонны внедряться в целые оболочки, иногда без какого бы то ни было предрасполагающего фактора, чаще при наличии хронической инфекции гениталий или мочевыводящих путей[1]. Хориоамнионит, вероятно, ослабляет функциональную целостность плодных оболочек, способствуя, таким образом, их разрыву. Опыт показывает, что лечение очагов хронической инфекции во время беременности уменьшает частоту преждевременных родов и снижает риск развития хориоамнионита во время родов[6].

Инфицированность околоплодных вод и оболочек плода определяется чаще, чем развиваются клинические проявления хориоамнионита, в связи с этим частота синдрома, по данным литературы различна. Нельзя не учитывать, что инфицированность может не проявиться клиническими симптомами у беременной или роженицы, в то время как возникает внутриутробная инфекция у плода[4]. При постановке диагноза принимают во внимание не только клинические проявления у матери, но и состояние плода, особенно тахикардия.

Цель исследования. Разработка рациональной тактики ведения родов для уменьшения акушерских и перинатальных осложнений с хориоамнионитом при дородовом излитии околоплодных вод путём изучения состояния готовности родовых путей по шкале Бишоп.

Материал и методы исследования. Материалом исследования явились истории родов 72 беременных, у которых роды осложнились дородовым излитием околоплодных вод и хориоамнионитом в сроках от 37-39 недель гестации, родоразрешённых в Андижанском областном перинатальном центре за период 2019-2021 г.г.

Результаты и исследования. В данной статье представлены результаты ретроспективного исследования, в котором роды осложнились дородовым излитием околоплодных вод и хориоамнионитом, которые роды закончились путём кесарево сечения.

Результаты показывают значительную роль дородового излития околоплодных вод в развитии хориоамнионита, особенно у женщин с обостренным соматическим, гинекологическим анамнезом и акушерскую тактику ведения родов.

По изучению течения послеродового периода выявлено, что у большинства из этих случаев осложнились септическими проявлениями. Осложнения проявились в виде хориоамнионита, эндометрита, нагноении ран промежности и после кесарево сечения. В 2-х случаях зарегистрирована материнская смертность.



Таким образом, исследования показали, что у большинство рожениц с дородовым разрывом плодных оболочек готовность шейки матки оценивалось до 5 баллов, что означало "неподготовленность" родовых путей к родам. Из этого числа 58,3% рожениц подверглись родовозбуждению после информированного согласия роженицы и её родственников. 22,2% роженицы имели относительные или абсолютные противопоказания к родовозбуждению и родостимуляцию.

Остальные 19,4% роженицы отказались от родовозбуждения, которым как дальнейшая тактика родоразрешения выбрано кесарево сечение. Изучение послеродового периода показало, что у 26,4% женщин наблюдались такие осложнения как лохиометра и гематометра, проявляющимся в виде субинволюции матки, обоснованными клиническими данными и ультразвуковыми исследованиями. У 18,1% женщин наблюдались вторичное заживление ран мягких родовых путей. У 2,8% женщин послеродовый период протекал признаками обострения хронических воспалительных заболеваний генитального тракта.

Длительный безводный период является фактором повышения инфицирования и развития хориоамнионита, который приводит к увеличению акушерской и перинатальной патологии, увеличение заболеваемости новорожденных и родильниц в послеродовом периоде. Роды в этом случае не всегда заканчивается естественные родовые путей и приводит неблагоприятно для плода и матери. Роды и послеродовый период могут иметь: опасность развития гнойно-септических осложнений после кесарево сечение у матери, аномалий родовой деятельности и внутриутробного инфицирования плода. Кроме этого родовозбуждение может оказаться неэффективным, что приводит к росту частоты оперативных вмешательств.

Вывод. Дородовое излитие околоплодных вод, как следствие патологического роста условно патогенной цервика-вагинальной микрофлоры, что явилась причиной хориоамнионита и способствовала значительному увеличению хирургической тактики и удельной частоты акушерских патологий.

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## **СОВЕРШЕНСТВОВАНИЕ СМАЗОЧНОЙ СИСТЕМЫ ДИЗЕЛЕЙ ПЕРЕВЕДЁННЫХ НА СЖАТЫЙ ПРИРОДНЫЙ ГАЗ**

*Аннотация: В данной статье рассматривается совершенствование смазочной системы дизелей переведённых на сжатый природный газ. Природный газ наиболее весомая альтернатива жидким моторным топливам. В мире, в том числе в Узбекистане, парк автомобилей, работающих на природном газе (СПГ, СНГ) составляет их заметную часть. В ближайшей перспективе количество автомобилей и тракторов работающей на природном газе, должен существенно вырасти. Именно на этом виде автотранспортной техники использование газового топлива будет наиболее эффективно.*

*Ключевая слова: температура, природный газ, газового топлива, смазочной системы, турбо наддува, газовый двигатель, турбулентно.*

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## **IMPROVEMENT OF LUBRICATION SYSTEM OF DIESELS TRANSFERRED TO COMPRESSED NATURAL**

*Abstract: This article discusses the improvement of the lubrication system of diesel engines converted to compressed natural gas. Natural gas is the most powerful alternative to liquid motor fuels. In the world, including Uzbekistan, the fleet of vehicles running on natural gas (LNG, LPG) makes up a significant part of them. In the near future, the number of cars and tractors running on natural gas should increase significantly. It is on this type of vehicle that the use of gas fuel will be most efficient.*

*Key words: temperature, natural gas, fuel gas, lubrication system, turbo boost, gas engine, turbulent.*

### **Введение**

Природный газ наиболее весомая альтернатива жидким моторным топливам. Однако непреложным остаётся факт, что АТС с газовыми двигателями имеют худшие показатели по эксплуатационному расходу топлива и условиям работы смазочной системы двигателя, по сравнению с аналогичными по рабочему объёму дизельными двигателями.

Учитывая, что вопросы экономической целесообразности и долговечности работе двигателей, в том числе смазочной системы, при переходе на альтернативные виды топлива имеют первостепенное значение, достижение высокой топливной экономичности и долговечности работы газовых двигателей является непреложным условием успеха в деле расширения применения газовых топлив. Определение оптимальных законов управления рабочим процессом через конструктивные и регулировочные параметры двигателя при конвертации его в газовый с целью достижения наилучшей топливной экономичности и надёжной работе двигателя является одной из основных проблем сегодняшнего двигателестроения.

Но при переводе работы дизеля на газообразное топливо, из-за того, что в дизелях степен сжатия большая чем в бензиновых двигателях, температура деталей камеры сгорания, особенно впускных и выпускных клапанов, заметно повышаются, что отрицательно влияет на условия смазки трущихся поверхностей деталей двигателя – эффективность смазочной системы.

Выше изложенное и предопределяет актуальность выбранной темы исследования - «Совершенствование смазочной системы дизелей переведённых на сжатый природный газ».

Узбекистан является одной из первых стран в мире, положивших начало широкому применению на автотранспорте газовых топлив - сжиженного нефтяного и сжатого природного газов.

В начале 90-х годов ситуация в нашей стране изменилась. Большими темпами стал расти парк легковых автомобилей на фоне снижения добычи и переработки нефти. Интерес к газовым топливам существенно вырос, в первую очередь из-за дефицита жидких моторных топлив и более высоких темпов роста рыночных цен на эти топлива по сравнению с газовыми топливами. Надо отметить, что экономический фактор в то время сыграл решающую роль, и фактически без усилий государства за 5-7 лет парк газобаллонных автомобилей (главным образом на сжиженных углеводородных газах - СУГ) превысил 2 млн. автомобилей.

Для рядовых потребителей топлив мотивация перехода на газовые топлива всегда одна - экономическая эффективность. Ни какими призывами - о снижении экологического воздействия на окружающую среду, сокращении ресурсов нефти, убеждениями в положительном влиянии газового топлива на повышение ресурса двигателя, улучшении ездовых качеств и прочими достоинствами газовых топлив невозможно заставить потребителя покупать топливо, если его использование не даёт экономического эффекта.

За рубежом активные работы по целенаправленному применению альтернативных видов топлив, и в первую очередь КПГ было начаты в конце 80-х, начале 90-х годов прошлого века.

Газовый двигатель, работающий на бедных смесях, как правило, оснащается системой турбо наддува для достижения требуемого уровня мощности. Однако такие двигатели будут ещё в большей степени склонны к детонационному сгоранию. В таких двигателях устанавливаются более

поздние углы опережения зажигания, что, безусловно, приводит к потере топливной экономичности. Газовые двигатели с турбонаддувом, работающие на бедных смесях оснащаются и системой перепуска на турбокомпрессоре.

Для двигателей, работающих на бедных смесях увеличение соотношения Н/С в топливе и, таким образом, снижение детонационной стойкости топлива. Метановое число (МЧ) может снизиться на 5-7 ед. и может вывести работу двигателя на предел детонации. Для стехиометрических двигателей увеличение соотношения Н/С в топливе может изменить и концентрации углеводородов в отработавших газах. Для исключения детонации использовался один способ - снижение угла опережения зажигания, хотя и в ущерб топливной экономичности.

В качестве примера такого двигателя может быть рассмотрен двигатель Jenbacher J620 GS-E [9]. Этот двигатель был разработан в 1998 и работал на бедных т/в смесях с максимальным рабочим давлением 18 МПа с эффективным КПД 43 %. При обнаружении детонации, система управления уменьшает угол опережения зажигания, затем обедняет т/в смесь для снижения температуры сгорания, и, наконец, уменьшает мощность двигателя. Затем система управления автоматически восстанавливает мощность двигателя, до тех пор, пока не появляется детонация. Такой алгоритм управления позволяет двигателю работать на газовом топливе с широким диапазоном его состава. Двигатель был предназначен для работы с газовыми топливами, имеющими МЧ = 95, допускал снижение детонационной стойкости до МЧ=70, а при снижении нагрузки мог работать на газовом топливе с МЧ=30.

В исследовании, проведенном Университетом Западной Вирджинии, были проведены сравнительные испытания грузовых автомобилей с двумя дизельными двигателями и двумя газовыми, построенными на их базе. Отмечено, что у газовых двигателей топливная экономичность оказалась на 30% хуже, чем у дизельных аналогов. Однако выбросы NO<sub>x</sub> снизились на 24 - 45%. Выбросы твёрдых частицы снизились более чем на 90%.

В исследованиях отмечается, что более эффективно, с точки зрения снижения выбросов вредных веществ и снижения влияния состава газа использовать стехиометрические смеси и адаптивное регулирование.

В работе отмечено, что на бензиновом двигателе, оснащённом для работы и на газе, и на бензине, уровни СО на природном газе были ниже, чем на бензине из-за того, что на природном газе достигается более высокий уровень гомогенности топливовоздушной смеси. После катализатора содержание NO<sub>x</sub> было выше для природного газа, чем для бензина, поскольку меньшее содержание СО стало причиной снижения конверсионной эффективности по NO<sub>x</sub>. Уровни содержания СН для бензина и природного газа были одинаковы. Однако, поскольку в составе углеводородов, выбрасываемых с отработавшими газами на природном газе основным компонентом, является главным образом метан, содержание суммарных

углеводородов при работе на природном газе были несколько выше, чем на бензине.

Уменьшенная эффективность снижения  $\text{NO}_x$ , связана с меньшим содержанием CO при работе на природном газе, по сравнению с работой на бензине при одинаковых составах т/в смеси. Это было подтверждено экспериментами, в которых на вход нейтрализатора подавали дополнительное количество CO. Окислительный катализатор был изготовлен на базе платины ( $\text{Pt}$ ) с содержанием приблизительно  $1.41 \text{ г/см}^3$ , в то время как ТКН был изготовлен на базе  $\text{Pt/Rh}$ , с той же самой плотностью загрузки  $1.41 \text{ г/см}^3$ .

Особенности протекания рабочих процессов в газовых двигателях изучаются уже достаточно давно.

Самовоспламенение происходит как в гомогенных т/в смесях, так и в двигателях с отдельным вводом в камеру сгорания воздуха и топлива. По определению, реакция полного окисления топлива воздухом является экзотермической, но некоторые элементарные и/или промежуточные реакции могут быть эндотермическими.

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## **ТИПОЛОГИЯ, СТРУКТУРА И МЕТОДЫ СОВРЕМЕННОЙ ТЕРАПИИ АСТЕНИЧЕСКОГО ТИПА РЕМИССИЙ ПРИ ПРИСТУПООБРАЗНОЙ ШИЗОФРЕНИИ**

*Аннотация: Термин астения появляется в лексиконе психиатров уже с середины 18 века, однако наиболее значимые и подробные описания астенической симптоматики в структуре шизофрении и расстройств шизофренического спектра опубликованы лишь во второй половине XIX и начале XX столетия.*

*По данным ряда авторов частота астенических расстройств среди пациентов психиатрических клиник и амбулаторий варьирует от 1,2% до 18% [13,25,38,79,81]. Что касается обсуждаемой проблемы, то, в доступной на сегодня литературе, систематической информации по эпидемиологической оценке астенической симптоматики при шизофрении и расстройствах шизофренического спектра представлено немного.*

*Ключевые слова: приступообразная шизофрения, астеническая ти ремиссия, типологи и структура.*

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## **TYOLOGY, STRUCTURE AND METHODS OF MODERN THERAPY OF ASTENIC TYPE OF REMISSIONS IN ACCESSIBLE SCHIZOPHRENIA**

*Abstract: The term asthenia has appeared in the lexicon of psychiatrists since the middle of the 18th century, but the most significant and detailed descriptions of asthenic symptoms in the structure of schizophrenia and schizophrenic spectrum disorders were published only in the second half of the 19th and early 20th centuries.*

*According to a number of authors, the frequency of asthenic disorders among patients in psychiatric clinics and outpatient clinics varies from 1.2% to 18% [13,25,38,79,81]. As for the problem under discussion, in the literature available*

*today, there is little systematic information on the epidemiological assessment of asthenic symptoms in schizophrenia and schizophrenic spectrum disorders.*

*Key words: paroxysmal schizophrenia, asthenic thyremission, typology and structure.*

Актуальность. Актуальность исследования диктуется относительно высокой частотой астенических ремиссий при шизофрении при недостаточной разработанности проблемы астении в аспекте клинической характеристики, прогностической значимости и терапии. Большинство исследований по данной проблеме выполнены в середине прошлого столетия и свидетельствуют о значительной распространённости астенических ремиссий при разных формах и на разных этапах течения приступообразной шизофрении[3,8].

В основных публикациях, как отечественных, так и зарубежных астения квалифицируется в ряду дефицитарных проявлений эндогенно-процессуального заболевания. При этом целый ряд авторов выделяет астенический дефект в качестве самостоятельной формы конечных состояний [6,9]. Более того, авторы, придерживающиеся концепции редукции энергетического потенциала как базисного гипотетического расстройства, объясняющего (определяющего) все ключевые проявления шизофрении, рассматривают астенический дефект как непосредственное клиническое выражение основного расстройства [2,7].

Приступообразная шизофрения занимает значительное место по удельному весу среди больных этим заболеванием - от 42,9% до 82,8%.

Многочисленными исследованиями достаточно хорошо изучены психопатологические особенности отдельных проявлений этой формы течения процесса - приступов в статике и динамике. При этом ремиссии изучались мало и преимущественно в рамках отдельных форм шизофрении и ее вариантов[1,5].

Представленное в специальной литературе разнообразие видов шизофренических ремиссий по существу отражает лишь статическое послабление патологического процесса с упущением динамики ремиссий между обострением и приступом, а также в последующем течении заболевания[4,7].

Создавшееся положение в научно-клинической психиатрии приводит к несоответствию между знанием шизофрении по ее этапному синдромокомплексу и формообразованию и недостаточным знанием характера видоизменения одного из существенных свойств патологического процесса - ремиссии, что, естественно, задерживает дальнейшее изучение клиники шизофрении в целом.

Цель исследования. Изучить психопатологические особенности астенических тип ремиссий в стадии ремиссии приступообразной шизофрении.



Материалы и методы исследования. Исследование было проведено на материале 63 больных мужского пола в возрасте от 20 до 55 лет (средний возраст –  $41,9 \pm 9,46$  лет) с диагнозом приступообразно-прогредиентной формы шизофрении в стадии ремиссии. С целью исключения влияния гендерного фактора и повышения однородности изучаемой когорты исследование проводилось только на лицах мужского пола.

Средний возраст манифестации заболевания составил  $22,2 \pm 4,2$  года, средняя длительность заболевания –  $18,9 \pm 9,5$  лет. В обследованной когорте у большинства больных (57,1%; 36 чел.) длительность заболевания была более 15 лет, у 11,1% (7 чел.) – от 10 до 15 лет, у 17,5% (11 чел.) – от 5 до 10 лет, и у 14,3% (9 чел.) – до 5 лет.

Результаты исследования. Тщательный клинико-психопатологический анализ астенических расстройств при приступообразно-прогредиентной шизофрении в стадии ремиссии показал их неоднородность по целому ряду параметров. На этом основании нами было выделено два типа эндогенной астении: аффективно-астенический тип ( $n=23$ ; 36,5%) и негативно-астенический тип ( $n=40$ ; 63,5%). Последний включал в себя два подтипа: 1 подтип – негативно-астенический («классический») ( $n=32$ ; 80,0%), 2 подтип – негативно-астенический с 45 проявлениями сверхценной (небредовой) ипохондрии («ипохондрический») ( $n=8$ ; 20,0%).

I тип, аффективно-астенический ( $n=23$ ; 36,5%). Наблюдаемый у этих пациентов астенический симптомокомплекс развивался преимущественно в рамках депрессии легкой степени тяжести (субдепрессии) с выраженными проявлениями астении. У большинства пациентов объективно наблюдалась физическая истощаемость – 95,7% (22 чел.), тогда как интеллектуальная нагрузка переносилась легче, и умственная/психическая истощаемость объективно была диагностирована лишь у 43,5% (10 чел.). Больные предъявляли жалобы астенического характера, такие как: повышенная утомляемость – 82,6% (19 чел.); чувство пассивности/вялости – 21,7% (5 чел.); недержание аффекта – 95,7% (22 чел.); сенситивность и ранимость – 43,5% (10 чел.); плаксивость – 26,1% (6 чел.); астенический ментизм – 39,1% (9 чел.); оценка малозначительных событий как психотравмирующих – 87,0% (20 чел.); трудность адаптации в нестандартных условиях – 78,3% (18 чел.).

При детальном анализе психопатологических симптомов у всех больных данного типа выявлялись признаки депрессии: нечеткие суточные колебания состояния с улучшением к вечеру и присутствие, хотя и стертого, тимического компонента.

Наблюдались также пессимистическое содержание господствующих представлений при внешней безучастности больных – 82,6% (19 чел.), идеи самообвинения и малоценности – 47,8% (11 чел.), пассивные суицидальные мысли («хорошо бы, все быстрее закончилось»; «жизнь не сложилась»; «вот бы заснуть и не проснуться» и т.д.) – 17,3% (4 чел.); признаки идеаторного торможения – 78,3% (18 чел.); отдельные проявления моторного компонента депрессии (медлительность, неловкость, угловатость, неточность тонких

движений) – 91,3% (21 чел.). Имеющиеся у большинства больных признаки повышенной рефлексии с ощущением своей изменённости, сочетались с возможностью анализа наступивших с ними перемен – 73,9% (17 чел.). Имели место периодически появлявшиеся на фоне преобладающего безразличия, кратковременные эпизоды тоскливого настроения – 65,2% (15 чел.), эпизоды повышенной раздражительности – 43,5% (10 чел.). Апатия (30,4%; 7 чел.) и другие традиционные компоненты депрессии (тревога – 39,1% (9 чел.); адинамия – 69,6% (16 чел.); психическая анестезия – 34,8% (8 чел.) и т.д.) были также представлены в жалобах больных.

Вышеперечисленную симптоматику дополняли вегетативные расстройства: колебания артериального давления – 43,5% (10 чел.); тахикардия/брадикардия – 30,4% (7 чел.); гипергидроз – 26,1% (6 чел.); озноб – 13,0% (3 чел.); диспептические расстройства – 34,8% (8 чел.); полиурия/дизурия – 17,4% (4 чел.). Важно отметить, что основную массу жалоб больные предъявляли в утреннее время; кроме того, в этот же период дня объективно отмечалась наибольшая выраженность вегетативных расстройств, в частности, повышение показателей артериального давления, что фиксировалось при утреннем мониторинговании.

При анализе нарушений сна у данного типа больных было обнаружено, что доминирующее место занимает ранее пробуждение – 87,0% (20 чел.), несмотря на то, что возникали и трудности с засыпанием – 65,2% (15 чел.). Сон был поверхностный, с обилием сновидений – 34,8% (8 чел.), кроме того, 4 пациента (17,4%) просыпались среди ночи и такое же количество больных предъявляли жалобы на отсутствие чувства сна.

Для астенического симптомокомплекса были характерны и когнитивные расстройства, которые затрагивали психические познавательные процессы – внимание и память: снижение концентрации внимания – 39,1% (9 чел.); повышенная истощаемость внимания – 43,5% (10 чел.); нарушение краткосрочной памяти – 13,0% (3 чел.); нарушение скорости обработки информации – 21,7% (5 чел.).

У пациентов данной типологической группы течение астении отличалось особенностями динамики в течение суток: ухудшение состояния в утренние часы с обилием жалоб астенического характера (ощущение утренней усталости и утомленности – 95,7% (22 чел.)) и постепенное улучшение самочувствия к вечеру.

У больных I типа собственно астенические расстройства были достаточно стойкими и лишь незначительно усиливались в периоды гипотимии, в то время как симптомы депрессии (тревога, апатия, психическая анестезия, пессимизм, ранние пробуждения), напротив, имели отчетливую сезонную динамику.

Изложенный ранее факт, а также вышеописанное выявление в данной группе специфических процессуальных расстройств мышления, общая монотонность и эмоциональная нивелированность пациентов, частое отсутствие критики к перенесенным психозам, данные анамнеза о

«характерологическом сдвиге» после психоза, показатели шкалы PANSS, свидетельствуют о том, что описываемая типологическая группа может называться аффективной в достаточной степени условно, и речь, несомненно, идет о сочетании депрессивной симптоматики и негативных расстройств, а астенические нарушения, по-видимому обусловлены сложным взаимодействием этих двух составляющих синдрома. Тем не менее, следует отметить, что выраженность негативной симптоматики в данной группе была меньшей, по сравнению с негативно-астенической, сведения о которой будут изложены ниже.

Частота встречаемости основных клинических проявлений эндогенной астении у пациентов аффективно-астенического типа представлена в таблице 3.1.

II тип, негативно-астенический (n=40; 63,5%). У больных данной типологической разновидности на первый план в клинической картине также выступала астеническая симптоматика, но при детальном психопатологическом обследовании выявлялось преобладание процессуальных негативных расстройств различной степени выраженности в виде эмоциональной нивелировки с рациональной оценкой окружающего – 67,5% (27 чел.), аутизма – 90,0% (36 чел.), психопатоподобных изменений личности по типу «фершробен» – 10,0% (4 чел.), апатии – 47,5% (19 чел.), абулии – 17,5% (7 чел.), причем последние выявлялись в статусе, но не являлись предметом жалоб пациентов. Отличительной особенностью эндогенной астении II типа являлось доминирование умственной/психической истощаемости, которая наблюдалась у 97,5% больных (39 чел.), над физической истощаемостью (40,0%; 16 чел.). Кроме того, снижение активности у большинства больных характеризовалось преобладанием в психическом статусе вязкости аффекта, медлительности, безынициативности – 90,0% (36 чел.), и сочеталось с общей монотонностью внешнего облика – 70,0% (28 чел.), стереотипностью мимики и моторики – 47,5% (19 чел.), ригидностью психических функций – 35,0% (14 чел.), при этом отсутствовали какие бы то ни было признаки гипотимии.

Больные данной типологической разновидности при подробном расспросе предъявляли жалобы в основном на умеренно выраженное чувство пассивности и вялости (92,5%; 37 чел.) и избегали сообщать об этом окружающим (80,0%; 32 чел.).

Вегетативная симптоматика была менее интенсивной по сравнению с аффективно-астенической группой: колебания артериального давления – 20,0% (8 чел.); тахикардия/брадикардия – 12,5% (5 чел.); гипергидроз – 7,5% (3 чел.); озноб – 5,0% (2 чел.); диспептические расстройства – 10,0% (4 чел.); полиурия/дизурия – 5,0% (2 чел.).

Собственно астеническая симптоматика проявлялась недостаточным, поверхностным осмыслением заданий – 77,5% (31 чел.), недостаточной умственной продуктивностью – 70,0% (28 чел.), когнитивными нарушениями в виде снижения концентрации внимания – 65,0% (26 пациента), повышенной

истощаемостью внимания – 70,0% (28 чел.), нарушением краткосрочной памяти – 25,0% (10 чел.) и скорости обработки новой информации – 47,5% (19 чел.).

Выявленная клиническая неоднородность психического состояния у больных с негативно-астеническим типом, позволила выделить два подтипа астенических расстройств: 1 подтип II типа – негативно-астенический («классический») (n=32; 80,0%), в котором негативно - астеническая симптоматика не сочеталась с другими психопатологическими проявлениями. 2 подтип II типа – негативно-астенический с проявлениями сверхценной (небредовой) ипохондрии («ипохондрический») (n=8; 20,0%), при котором в психическом статусе выявлялось сверхценное отношение больных к собственному здоровью. При этом в клинической картине отмечалось отчетливое несоответствие обилия «астенических» жалоб поведению, в котором наблюдалась монотонная стеничность – 87,5% (7 чел.), многоречивость – 75,0% (6 чел.), настойчивость с требованиями повышенного внимания со стороны медперсонала и частых бесед с врачом – 87,5% (7 чел.).

Все пациенты данного подтипа настаивали на дополнительных обследованиях и консультациях специалистов узкого профиля, преимущественно на осмотре их терапевтом и неврологом. При длительном, порой многочасовом, изложении разнообразных жалоб у пациентов не отмечалось признаков утомления. Таким образом, истинной истощаемости при исследовании психического статуса у этих больных не выявлялось. Следует отметить, что отсутствие сопряженности между интенсивностью фоновой астении и выраженностью ипохондрических переживаний является важным дифференциально-диагностическим критерием эндогенной астении [Блейхер В.М. с соавт., 1989].

Важно подчеркнуть, что в этой группе пациентов (n=8) жалобы на физическую утомляемость преобладали над жалобами на психическую и были сфокусированы на телесном недомогании, ощущении тяжести в теле, общем бессилии; кроме того, имел место болевой синдром разной степени выраженности (миалгии, головные боли, кардиалгии, абдоминалгии, дорсалгии).

Обобщая сказанное, можно утверждать, что астенические расстройства, наблюдающиеся в ремиссии приступообразно-прогредиентной шизофрении, клинически неоднородны и могут быть разделены на аффективно-астенический и негативно-астенический типы. Аффективно-астенический тип характеризуется преобладанием физической истощаемости над психической, признаками гипотимии, выраженностью вегетативных расстройств, наличием жалоб на свое состояние и критического отношения к нему при умеренной представленности специфических процессуальных нарушений мышления и эмоционального снижения. Негативно-астенический тип характеризуется преобладанием психической истощаемости над физической, отсутствием признаков гипотимии, слабой выраженностью вегетативных расстройств, отсутствием у большинства больных жалоб на свое состояние и критического

отношения к нему, при значительной представленности специфических процессуальных нарушений мышления и эмоциональной дефицитарности. Часть больных негативно- астенического типа имела в психическом статусе проявления сверхценной (небредовой) ипохондрии с обилием жалоб сомато - неврологического характера.

Таким образом, выделение нескольких типов астенических расстройств в ремиссии эндогенного процесса является значимым в плане синдромальной диагностики и может считаться одним из факторов, позволяющих уточнить степень прогрессивности течения заболевания.

Выводы: 1. Астенические расстройства, наблюдаемые в ремиссии приступообразно-прогрессивной шизофрении, имеют ряд общих клинических особенностей и, в то же время, характеризуются психопатологической неоднородностью.

2. Клинико-психопатологическое исследование позволило выделить два типа эндогенной астении в ремиссии шизофрении: аффективно-астенический и негативно-астенический.

3. Аффективно-астенический тип характеризовался сочетанием аффективной симптоматики и умеренно выраженных негативных процессуальных расстройств, при этом астенический симптомокомплекс развивался преимущественно в рамках депрессии легкой степени выраженности (субдепрессии) и наблюдалось преобладание физической истощаемости над психической (умственной).

4. Негативно-астенический тип отличался преобладанием психической (умственной) истощаемости над физической, наблюдавшийся у пациентов астенический симптомокомплекс входил непосредственно в структуру негативной симптоматики.

5. Выявлены два варианта негативно-астенического типа: «классический», в котором негативная процессуальная симптоматика не сочеталась с расстройствами иных регистров, и «ипохондрический», где негативные расстройства сочетались с сверхценной (небредовой) ипохондрии, при этом наблюдалось несоответствие астенических жалоб поведению больных.

6. По результатам исследования показана вовлеченность воспалительных реакций в патогенез астенических расстройств в ремиссии шизофрении и снижение протеазно-ингибиторного соотношения по сравнению с контролем. Выделенные клинические типы эндогенной астении отличались различными вариантами иммунной дисфункции.

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## **КЛИНИЧЕСКАЯ ТИПОЛОГИЯ АСТЕНИЧЕСКИХ РАССТРОЙСТВ В РЕМИССИИ ПРИСТУПООБРАЗНО-ПРОГРЕДИЕНТНОЙ ШИЗОФРЕНИИ**

*Аннотация:* Клинико-психопатологическая неоднородность астенических расстройств в ремиссии приступообразно-прогредиентной шизофрении обусловлена отличиями в их патогенезе, что в частности, проявляется различием иммунологических показателей, которые имеют прогностическое значение и могут рассматриваться как маркеры психического состояния больных..

*Изучены клинико-иммунологические характеристики астенических нарушений в рамках ремиссии эндогенного процесса, доказана исходная функциональная недостаточность эффекторного звена воспалительной реакции у больных с негативно-астеническим вариантом астенического симптомокомплекса.*

*Ключевые слова:* астения, типология, шизофрения, ремиссия, расстройства.

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## **CLINICAL TYPOLOGY OF ASTENIC DISORDERS IN REMISSION OF PERFORMED-PROGREDIENT SCHIZOPHRENIA**

*Resume:* Clinical and psychopathological heterogeneity of asthenic disorders in remission of paroxysmal progressive schizophrenia is due to differences in their pathogenesis, which, in particular, is manifested by the difference in immunological parameters that have prognostic value and can be considered as markers of the mental state of patients ..

*The clinical and immunological characteristics of asthenic disorders in the framework of remission of the endogenous process were studied, the initial functional insufficiency of the effector link of the inflammatory reaction in patients with a negative asthenic variant of the asthenic symptom complex was proved.*

*Key words:* asthenia, typology, schizophrenia, remission, disorders.

Актуальность. Проблема выявления, диагностики и терапии астенических и астено-подобных состояний остается одной из самых сложных и дискуссионных в современной психиатрии. Это объясняется как чрезвычайной распространенностью этих расстройств, которая составляет от 10% до 45% в психиатрической практике, так и тем, что астенические симптомы являются наименее нозологически специфичными, «базовыми» по отношению ко многим психическим нарушениям и входят в структуру самых разнообразных психопатологических симптом-о-комплексов [4].

Не-специфичность астенического синдрома затрудняет постановку нозологического диагноза, так как данная симптоматика встречается не только при психических заболеваниях, но и при разнообразной соматической патологии [9].

С учетом клинической variability проявлений астении, попытки систематизировать разнообразные астенические симптомы предпринимались неоднократно. Несмотря на это, до настоящего времени, в современных классификациях психических заболеваний, критерии, по которым можно поставить диагноз астении, являются крайне размытыми и, как правило, включают лишь два основных признака: истощаемость и слабость, усиливающиеся при физических и интеллектуальных нагрузках.

К дополнительным признакам относят раздражительную слабость, гиперестезию, головные и мышечные боли, головокружение, нарушения сна, вегетативные расстройства [5]. Несмотря на то, что описанию шизоастении посвящено множество публикаций, до сих пор отсутствуют четкие дефиниции, классификация, критерии синдромальной оценки астенических расстройств при шизофрении и эндогенных депрессивных состояниях, что часто приводит к диагностическим ошибкам.

В частности, астения рассматривается то в рамках позитивной [7]. Следует отметить, что астения при шизофрении, как правило, носит непрерывный характер, астенический симптомокомплекс различной степени выраженности наблюдается как в продромальном периоде [3], в дебюте болезненного процесса [1], на манифестном этапе [8], так и в ремиссии [5], в периоде стабилизации (резидуальные состояния с так называемым астеническим дефектом) [11]. На завершающих этапах эндогенного процесса астения проявляется целым рядом симптомов: расстройствами когнитивной сферы, изменениями общего чувства тела [6], стойким снижением способности к деятельности, что связано с уменьшением объема психической и физической активности [2]. Кроме того, астения, в данном случае, может принимать форму «соматопсихической хрупкости» [4,9] и сочетаться с ипохондрическими идеями и/или с аффективными (субдепрессивными) расстройствами [3]. Астения при шизофрении в значительной степени коррелирует с прогрессивностью заболевания и, в известной мере, служит своеобразным «маркером» негативной симптоматики, в то же время, не являясь ее аналогом [7].



По мнению ряда современных исследователей, значительные трудности вызывает отграничение первичной негативной симптоматики с картиной астении от феноменологически сходных с ней картин, обусловленных аффективной (депрессивной) патологией или сохраняющейся продуктивной психотической симптоматикой, побочными действиями антипсихотиков, явлениями госпитализма [10]. С этими положениями тесно связана проблема психофармакотерапии негативных, в том числе астенических, расстройств при шизофрении, эффективность которой, на данном этапе развития психофармакологии, оценивается как явно недостаточная [6]. По современным представлениям, иммунная система активно вовлечена в патологический процесс при эндогенных психических заболеваниях [8].

Анализ роли биологических, в том числе иммунных, механизмов в патогенезе психических расстройств, развитии и характере течения психических заболеваний и использование этих показателей как для уточнения диагностики, так и для оценки эффективности проводимого лечения, является одним из инновационных подходов на современном этапе развития психиатрии [2]. Кроме того, практически отсутствуют такие клиничко-биологические исследования больных шизофренией, которые позволили бы объективизировать и расширить представление о тяжести и структуре астенической симптоматики. Из вышеперечисленного вытекает целесообразность выявления биомаркеров для дифференциальной диагностики и оценки эффективности терапии астенических расстройств в ремиссиях шизофрении, что до настоящего времени не предпринималось.

Таким образом, нерешенность вопросов систематики, клиничкопсихопатологической и нозологической оценки астенических расстройств, а также отсутствие патогенетически обоснованных алгоритмов терапии данных состояний обуславливают актуальность настоящей работы.

Цель исследования. Являлась клиничко-психопатологическая дифференциация и выявление иммунологических особенностей астенических расстройств у больных шизофренией в стадии ремиссии, а также оптимизация терапии этих состояний на основании полученных данных.

Материалы и методы исследования. Обследовано 63 пациента мужского пола в возрасте от 23 до 58 лет (средний возраст  $41,9 \pm 9,46$  года) с приступообразно-прогредиентной формой шизофрении в стадии ремиссии. Средний возраст дебюта заболевания составил  $22,2 \pm 4,2$  года, средняя длительность заболевания —  $18,9 \pm 9,5$  года.

В исследовании применялись следующие методы: клиничко-психопатологический, психометрический (с использованием шкал PANSS, SANS, CDSS, VAS-A, MFI-20), статистический.

Результаты исследования. На основании клиничко-психопатологического обследования у всех больных были диагностированы состояния, содержащие признаки астении с преобладанием различных проявлений, таких как ослабление или утрата способности к продолжительному умственному напряжению, невозможность

сосредоточиться на чем-либо одном, трудность словесного выражения переживаний («не удастся подобрать нужные слова»), снижение психической активности и затруднения при выполнении элементарных видов умственного труда, субъективное ощущение усталости и разбитости, жалобы на трудности концентрации внимания и усвоения информации, повышенную психическую утомляемость. Наряду с истощаемостью и непродуктивностью интеллектуальной деятельности наблюдалась раздражительная слабость с эмоциональной лабильностью и реакциями недовольства.

У 54 больных (85,7%) в картине астенического симптомокомплекса отмечались выраженные вегетативные расстройства: головная боль, головокружение, ощущение тяжести в голове, колебания артериального давления и пульса, диспепсия, легкость покраснения или побледнения кожных покровов, ощущение жара при нормальной температуре тела или, напротив, повышенная зябкость, также имела место усиленная локальная потливость.

I тип, так называемый аффективно-астенический ( $n = 22$ ; 34,9%), развивался в рамках депрессии с выраженными астеническими проявлениями. У большинства пациентов объективно наблюдалась физическая истощаемость — 63,6% (14 чел.), тогда как интеллектуальная нагрузка переносилась легче, и умственная/психическая истощаемость объективно была диагностирована у 36,4% (8 чел.). Больные предъявляли жалобы астенического характера: на повышенную утомляемость — 86,4% (19 чел.); чувство пассивности/ вялости — 22,7% (5 чел.); недержание аффекта — 81,8% (18 чел.); сенситивность и ранимость — 45,5% (10 чел.); плаксивость — 27,3% (6 чел.). Отмечался астенический ментизм — 40,9% (9 чел.); оценка малозначительных событий как психотравмирующих — 77,3% (17 чел.); трудность адаптации в нестандартных условиях — 63,6% (14 чел.).

II тип эндогенной астении, названный негативно-астеническим, наблюдался в двух третях случаев ( $n = 41$ ; 65,1%). В клинической картине на первый план также выступала астеническая симптоматика, но при детальном психопатологическом обследовании выявлялось преобладание негативных расстройств различной степени выраженности. К ним отнесены проявления эмоциональной нивелировки с рациональной оценкой окружающего (58,5%), нарастающего аутизма (90,2%), психопатоподобных изменений личности по типу фершробен (7,3%), апатии (43,9%), абулии (17,1%), причем последние три вида расстройств выявлялись в статусе, но не были предметом жалоб пациентов.

Отличительной особенностью эндогенной астении II типа являлось доминирование умственной/психической истощаемости, которая наблюдалась у 82,9% больных, над физической истощаемостью, обнаруженной в 41,5% случаев. Кроме того, снижение активности у большинства больных характеризовалось преобладанием в психическом статусе вязкости, замедленности, безынициативности, несамостоятельности в 65,9% наблюдений и в 34,1% случаев сочеталось с общей монотонностью

внешнего облика, со стереотипностью мимики и моторики — 26,8%, с ригидностью психических функций — 34,1%, при этом отсутствовали какие бы то ни было признаки гипотимии.

В то же время при объективном обследовании (проверка толерантности к физическим нагрузкам в тренажерном зале) достоверных признаков преобладания физической астении не выявлялось. Даже после незначительных интеллектуальных нагрузок на первый план в статусе больных выступали выраженные нарушения мышления — соскальзывания, единичные шперрунги, разноплановость и витиеватость мышления, склонность к рассуждательству, критики которых не было. Ощущение постоянной усталости, переутомления не проходило у пациентов даже после длительного периода отдыха. Они были убеждены, что даже минимальное физическое усилие обязательно приведет к усугублению чувства усталости, появлению «колоссальной утомляемости» и усилению других симптомов (например, сопутствующих вегетативных нарушений). Несмотря на то что пациенты выглядели недовольными, хмурыми, депримированными, никто из них не жаловался на пониженное настроение.

**Вывод.** Полученные результаты согласуются с другими исследованиями и подтверждают наличие астенической симптоматики при шизофрении в период ремиссии [6, 7, 9, 16, 17]. В то же время значимым и новым является выявление неоднородности клинической картины и связи астенических расстройств с аффективной, ипохондрической и негативной симптоматикой. Нам не удалось обнаружить детальных исследований в аналогичных направлениях за последние годы в доступной нам литературе. Полученные данные могут быть использованы в дальнейших клинических и клинико-биологических исследованиях.

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## **СООТНОШЕНИЕ НАУЧНЫХ КАТЕГОРИЙ «ГЛОБАЛИЗАЦИЯ» И «ЭКОНОМИЧЕСКАЯ ИНТЕГРАЦИЯ»**

*Аннотация: В предлагаемой читателям статье, авторы анализируют соотношение научных категорий «глобализация» и «экономическая интеграция». Содержание этих научных категорий оказывает значительное влияние на процессы геополитического значения, а соответственно, на будущее населения планеты Земля.*

*Ключевые слова: Всемирная торговая организация, глобализация, глобальное право, интеграция, Конференция ООН по торговле и развитию, международное право, международные экономические организации, мировая экономика, наднациональное право, наднациональное право.*

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## **CORRELATION OF SCIENTIFIC CATEGORIES "GLOBALIZATION" AND " ECONOMIC INTEGRATION»**

*Annotation: In this article, the authors analyze the correlation of the scientific categories "globalization" and "economic integration". The content of these scientific categories has a significant impact on the processes of geopolitical significance, and, accordingly, on the future of the population of the planet Earth.*

*Key words: World Trade Organization, globalization, global law, integration, ООН Conference on Trade and Development, international law, international economic organizations, world economy, supranational law, supranational law.*

В исследованиях по вопросам торгово-экономических отношениях России с различными международными экономическими организациями (далее – МЭО) и в рамках интеграционных объединений часто применяются научные категории «глобализация» и «интеграция». В предлагаемой читателям статье проанализируем эти научные понятия.

В современном сообществе государств и народов происходят мощные долговременные процессы геополитического значения, которые определяют будущее мирового устройства и, соответственно, будущее населения нашей планеты. Эти процессы получили названия: глобализация и интеграция. Наиболее активно они проявляются в международных экономических отношениях, основу которых составляет торговля (Рис.1).

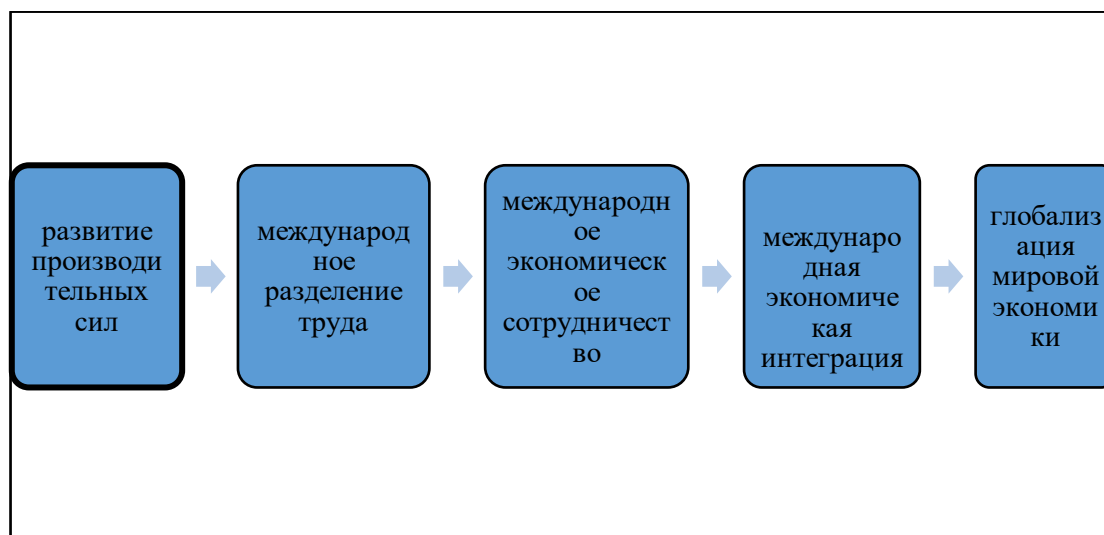


Рис.1 – Процесс развития международных экономических отношений.

Глобализация представляет собой «процесс универсализации, становления единых для всей планеты Земля структур, связей и отношений в различных сферах жизни общества. Феномен глобализации заявляет о себе замкнутостью глобального пространства, единым мировым хозяйством, всеобщей экологической взаимозависимостью, глобальными коммуникациями и др.»<sup>28</sup>.

В экономическом аспекте глобализация выражается в усилении взаимодействия между внутренними экономическими системами, в их объединении в единое целое<sup>29</sup>. Процессы производства, потребления, торговли в каждой точке глобального хозяйства связаны между собой и становятся универсальными. Для управления этими процессами создается институциональная система.

К институциональной составляющей относятся международные межправительственные организации, обладающие правоспособностью в сфере международной торговли. К основным из них следует отнести ВТО (WTO) (*Всемирная торговая организация*) вспомогательные органы Организации Объединенных Наций (ООН – UNO).

<sup>28</sup> Ситарян С. Интеграция стран СНГ: трудности и перспективы взаимодействия // URL: [http://vasilievaa.narod.ru/4\\_5\\_01.htm](http://vasilievaa.narod.ru/4_5_01.htm) Дата обращения: 25.02.2021 г.

<sup>29</sup> Шумилов В.М. Международное экономическое право. Учебник для магистр. - 7-е изд., доп. и перераб. - М.: Юрайт. - С. 290.

В 1964 г. при ООН был создан вспомогательный орган – ЮНКТАД (UNCTAD) - *Конференция ООН по торговле и развитию*. В рамках этого органа был принят такой источник «мягкого права» как «Принципы международных торговых отношений и торговой политики». Принятая в ЮНКТАД Интегрированная программа для сырьевых товаров (1976 г.) дала импульс для заключения *международных товарных соглашений* - многосторонних соглашений, регулирующих торговлю отдельными видами товаров: кофе, сахар, олово, тропическая древесина и др.

При ООН функционирует ЮНИСТРАЛ - *Комиссия ООН по праву международной торговли* занимается подготовкой проектов соответствующих международных договоров. Так, в частности, ЮНИСТРАЛ подготовила текст Конвенции ООН о договорах международной купли-продажи товаров (1980 г.).

В системе ООН созданы и функционируют специализированные организации, которые занимаются вопросами международной торговли: МВФ - *Международный валютный фонд* курирует вопросы равновесия платежных балансов; БМР - *Банк международных расчетов* - курирует вопросы устойчивости банковской системы; МОТ - *Международная организация труда* и МОМ - *Международная организация по миграции* - занимаются вопросами международной миграции трудовых ресурсов и др.

Различными вопросами международной торговли занимаются такие международные организации как ОЭСР - *Организация экономического сотрудничества и развития*; ОПЕК - *Организация стран-экспортеров нефти*.

Среди международных неправительственных организаций значительное влияние на состояние международной торговли оказывают: Международная торговая палата, Международная ассоциация авиаперевозчиков, Международная федерация ассоциаций экспедиторов и др.

Современная глобализация мировой экономики выражается в следующих процессах (Рис. 2).



Рис. 2 – Процессы выражения современной глобализации мировой экономики.

Процесс глобализации охватывает разные сферы мировой экономики (напр., внешнюю и международную торговлю товарами, услугами, технологиями, объектами интеллектуальной собственности и др.)<sup>30</sup>.

Таким образом глобализация мировой экономики характеризуется усилением взаимозависимости и взаимовлияния различных сфер и процессов мировой экономики, выражающееся в постепенном превращении мирового хозяйства в единый рынок товаров, услуг, капитала, рабочей силы и знаний.

Если обратиться к процессу интеграции, то здесь можно увидеть некоторые отличия от процесса глобализации.

Интеграция (от латинского - *integratio*) означает - соединение отдельных частей в общее, целое, единое.

Международная экономическая интеграция в международной экономической системе представляет собой процесс взаимодействия стран, приводящий к сближению хозяйственных механизмов, принимающий форму

<sup>30</sup> Варданян Д.К. Теоретические аспекты международной экономической интеграции в мировой экономике // URL: <https://cyberleninka.ru/article/n/teoreticheskie-aspekty-mezhdunarodnoy-ekonomicheskoy-integratsii-v-mirovoy-ekonomike> (дата обращения: 04.03.2021 г.).



межгосударственных соглашений и регулируемый межгосударственными органами<sup>31</sup>.

Экономическая интеграция выражается в различных формах (напр.: в сотрудничестве между национальными хозяйствами разных стран и полной или частичной их унификации; ликвидации барьеров в движении товаров, услуг, капитала, рабочей силы между этими странами и др.).

Процессы экономической интеграции осуществляются как на двусторонней, так и на многосторонней основе, как на региональном, так и на глобальном уровнях с общими наднациональными межгосударственными органами управления.

При сравнении двух научных категорий проявляются как сходство, так и их отличительные черты.

Сходство между ними состоит в том, что они затрагивают:

- региональную, национальную экономику (макроуровень);
- товарные, финансовые и валютные рынки, рынки труда (мезоуровень);
- отдельные компании (микроуровень).

Отличительные черты рассматриваемых явлений приведены в таблице.

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<sup>31</sup> Владимирова И.Г. Глобализация мировой экономики: проблемы и последствия // журнал «Корпоративный менеджмент» // URL: <https://www.cfin.ru/press/management/2001-3/10.shtml> (дата обращения: 05.03.2021 г.).

Признак	Глобализация	Интернационализация
<i>направление</i>	освоение внешней экономической среды	обособление и поглощение отвоёванного экономического пространства
<i>содержание</i>	универсализация экономики и экономических процессов	регионализация и дифференциация
<i>метод</i>	координации	субординации
<i>последствия</i>	монополизация глобальных рынков и секторов экономики	поддержание конкуренции (с ограниченным количеством участников)
<i>пространство</i>	центры экономической силы	взаимодействие государств одного цивилизованного типа и сопоставимого уровня развития
<i>стимул</i>	США	Евросоюз
<i>темпы развития</i>	Быстрые, происходят быстрее, чем государства и народы могут осознать происходящие процессы	стремительные, народы не могут представить последствий происходящих процессов
<i>регулятор</i>	международное право, транснациональное право	международное право с сильным наднациональным регулированием; национальное право

Таблица 1. Отличительные признаки глобализации и интернационализации экономики. Источник: Шумилов В.М. Международное экономическое право. Учебник для магистрантов - 7-е изд., доп. и перераб. 2019 г. - М.: Юрайт. - с. 291 -292.

Процессы глобализации и интеграции развиваются достаточно быстро, но они, как и все социально-экономические явления имеют свою историю. Современное общество вступает на новую ступень своего развития – в эпоху глобализации, где правоотношения, регулируемые первоначально международным правом, затем – транснациональным, а потом – наднациональным правом (в интеграционных объединениях государств), будут регулироваться нормами глобального права.

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## **ПСИХОСОМАТИЧЕСКОЕ СОСТОЯНИЕ ПОДРОСТКОВ У БОЛЬНЫХ БРОНХИАЛЬНОЙ АСТМОЙ**

*Аннотация: Знания особенностей детской психологии чрезвычайно важны в понимании формирования соматического и психического здоровья ребенка-подростка-взрослого.*

*В формировании заболеваний органов дыхания, имеющих психосоматический компонент, как этап развития болезни (например, бронхиальная астма (БА)) очень важно отчетливо представлять вклад в реализацию болезни вегетативной нервной системы и психологических особенностей ребенка.*

*С периода внутриутробного развития формируются особенности нервной системы ребенка. Неблагополучное течение беременности, неадекватное отношение матери и других близких к здоровью малыша являются значимыми факторами в формировании и ранней манифестации генетически наследуемого заболевания.*

*Ключевая слова: подростковый возраст, психосоматическая состояния, бронхиальная астма.*

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## **PSYCHOSOMATIC STATE OF ADOLESCENTS IN PATIENTS WITH BRONCHIAL ASTHMA**

*Abstract: Knowledge of the characteristics of child psychology is extremely important in understanding the formation of the somatic and mental health of a child-adolescent-adult.*

*In the formation of respiratory diseases with a psychosomatic component, as a stage in the development of the disease (for example, bronchial asthma (BA)), it is very important to clearly represent the contribution to the realization of the disease of the autonomic nervous system and the psychological characteristics of the child.*

*From the period of intrauterine development, the characteristics of the child's nervous system are formed. An unfavorable course of pregnancy, inadequate attitude of the mother and others close to the baby's health are significant factors in the formation and early manifestation of a genetically inherited disease.*

*Key words: adolescence, psychosomatic conditions, bronchial asthma.*

Введение. Развитие бронхиальной астмы у подростков характеризуется фазовыми изменениями параметров вегетативного статуса. Обострение заболевания сопровождается преобладанием тонуса симпатического отдела ВНС, на фоне значительного снижения общих адаптационных возможностей организма и вегетативного обеспечения деятельности, которые являются патогенетической основой реакций дезадаптации в этот период и максимально выражены у больных тяжелой астмой и у пациентов, не получающих базисную терапию[3].

В ремиссию бронхиальной астмы установлено преобладание парасимпатического отдела ВНС, выраженность ваготонии коррелирует с тяжестью заболевания и сочетается с недостаточным вегетативным обеспечением деятельности у больных тяжелой астмой и у пациентов младшего подросткового возраста[1,4].

Психоэмоциональный статус подростков с бронхиальной астмой характеризуется низкими показателями по шкале экстра-интроверсии, высокими - по шкале нейротизма, тревожности и алекситимии, более высокие уровни которых отмечаются у больных, имеющих тяжелое течение заболевания[6]. Сопряженность психоэмоциональных нарушений с синдромом вегетативной дистонии, изменениями церебральной гемодинамики - с одной стороны, и нарушениями легочной вентиляции-перфузии - с другой, подтверждает существенную роль психовегетативного синдрома в патогенезе бронхиальной астмы у подростков[2].

Взаимовлияния параметров, характеризующих вегетативный гомеостаз, мозговую гемо-нейродинамику и показателей функции внешнего дыхания, вентиляции-перфузии легких, подтверждают патогенетическую значимость выявленных нейровегетативных изменений в поддержании адекватной вентиляции и гемодинамики легких[5].

Методы латеральной светоимпульсной терапии, релаксационно-диафрагмального дыхания, суггестивной музыкотерапии являются безопасными, патогенетически обоснованными способами коррекции нейровегетативных нарушений и могут быть включены в лечебный и реабилитационный комплексы больных бронхиальной астмой[7].

Цель исследования. Оценка эмоционально-личностных особенностей, механизмов психологической защиты у детей и подростков, страдающих бронхиальной астмой.

Материалы и методы исследования. Нами исследованы психологические особенности у 50 больных в период ремиссии БА. Группу сравнения составили 20 подростков соответствующего возраста, пола, не

имеющие аллергической отягощенности и признаков заболеваний на момент осмотра.

Для выявления факторов психологического риска, которые начинают воздействовать уже в период онтогенеза и способствуют возникновению и развитию психоэмоционального напряжения, влекущего формирование особенностей личности, мы проанализировали стрессогенные факторы у детей разных возрастных групп

Результаты исследования. У детей, больных БА, структура эмоционально-личностных особенностей представлена устойчивым внутренним конфликтом, за счет акцентуированности противоположных личностных черт у одного и того же ребенка. Для подростка структура личности заключается в акцентуированности истероидных и (или) эпилептоидных черт, в проявление аутодеструктивных тенденций, подтверждающихся склонностью к алкоголизации.

Общим признаком для больных детей и подростков в структуре эмоционально-личностного фона является доминирование показателей по шкалам: агрессивности и тревожности.

У подростков, страдающих БА, доминирующими механизмами психологической защиты являются: отрицание неприемлемых событий или собственных качеств, а также гиперкомпенсация своих недостатков в сфере низкой самооценки.

У детей с БА определяются значительные отклонения в мнестической сфере в виде снижения объема кратковременной образной (35%) и вербальной памяти (62%) по сравнению со здоровыми детьми.

Для большинства больных (75%) характерно полное левополушарное доминирование, что свидетельствует о неэффективности их психофизиологической адаптации в стрессовых ситуациях.

Анализ эмоционально-личностных характеристик детей, больных бронхиальной астмой позволит более полно изучить компоненты патологической психосоматической системы, что дает возможность оптимизировать мероприятия по профилактике и своевременной коррекции факторов, усугубляющих течение данного заболевания.

Прогнозирование типов эмоционально-личностного реагирования, знание механизмов психологической защиты ребенка, больного бронхиальной астмой, делает возможным индивидуальный подход к терапии и запускает адаптационные механизмы развития полноценной личности, предупреждая возможные отклонения в критический период жизни.

Представленные результаты оценки функциональной асимметрии свидетельствуют о необходимости создания системы обучения, воспитания, условий труда и быта с учетом особенностей психической организации детей и подростков, страдающих бронхиальной астмой.

Вывод. Таким образом, очевидна актуальность дальнейшего исследования нейровегетативных и психосоматических расстройств у подростков, страдающих БА. Своевременная диагностика и коррекция

нейровегетативных нарушений являются необходимыми условиями успешной комплексной терапии, направленной на улучшение качества жизни подростков с бронхиальной астмой.

Несмотря на накопленный опыт в области изучения нейровегетативных изменений при бронхиальной астме, вопросы течения и прогноза этого заболевания у подростков с позиции психосоматических взаимоотношений остаются неисследованными.

Мало изученной представляется характеристика изменений нейровегетативного статуса подростков с бронхиальной астмой на фоне медикаментозной и немедикаментозной терапии.

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## **БОТАНИКО-ГЕОГРАФИЧЕСКИЙ АНАЛИЗ ДИКОРАСТУЩИХ СОРОДИЧЕЙ КУЛЬТУРНЫХ РАСТЕНИЙ ИЗ СЕМЕЙСТВА FABACEAE LINDL. РЕСПУБЛИКИ КАРАКАЛПАКСТАНА**

*Аннотация: В статье приведен ботанико-географический анализ дикорастущих сородичей культурных растений из семейства Fabaceae Lindl., флоры Республики Каракалпакстана. Проведен анализ распространения ДСКР по типам ареалов. Анализ видового состава ДСКР показал, что они являются весьма разнообразным типом ареалов, что наибольшее количество видов 5 относится к Туранскому типу ареала, к Палеоарктическому – 3 вида. К Ирано-туранскому и Малоазийско-ирано-туранскому относится 2 вида. Остальным, Понтичско-средиземноморскому, Средиземноморско-ирано-туранскому и Турано-монгольскому типов ареалов относится 1 вид.*

*Ключевые слова: Дикорастущие сородичи культурных растений, флора, семейство Fabaceae Lindl., типы ареалов, ботанико-географический анализ.*

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## **BOTANICAL AND GEOGRAPHICAL ANALYSIS OF WILD RELATIVES OF CULTIVATED PLANTS FROM THE FAMILY FABACEAE LINDL. REPUBLIC OF KARAKALPAKSTAN**

*Abstract: The article provides a botanical and geographical analysis of crop wild relatives of cultivated plants from the Fabaceae Lindl. Family, flora of the Republic of Karakalpakstan. The analysis of the distribution of WRCP by types of areas is carried out. The analysis of the species composition of the WRCP showed*



*that they are a very diverse type of habitat, that the largest number of species, 5, belong to the Turanian type of area, and to the Palearctic - 3 species. The Iranian-Turanian and Asia Minor-Iranian-Turanian include 2 types. The rest, Pontic-Mediterranean, Mediterranean-Iranian-Turanian and Turano-Mongolian types of habitats, include 1 species.*

*Key words: Crop wild relatives of cultivated plants, flora, family Fabaceae Lindl., Types of areas, botanical and geographical analysis.*

Актуальность исследования. В мире охрана биоразнообразия является одной из глобальных проблем, масштаб которых увеличивается в последние годы с повышением антропогенной нагрузки на естественные экосистемы. Определяющую роль при этом в формировании и трансформации флоры данной территории играет склонность объектов растительного мира, расположенных на аридной территории, к воздействию опустынивания [1].

В последние годы усиление урбанизационных процессов, активизация дорожного строительства и расширение геолого-разведывательных работ на территории Кызылкума, характеризующегося своеобразным растительным миром, становятся причиной трансформации флоры данной территории и экологического кризиса. А это требует определения современного состояния растительных видов указанной территории и защиты исчезающих видов. С учетом этого определения экологического состояния представителей растительного мира, их адаптированности к почвенно-климатическим условиям, внедрение в производство перспективных видов на фоне трансформированных являются приоритетными направлениями в изучении проблемы сохранения биоразнообразия естественных экосистем.

В настоящее время в нашей республике уделяется большое внимание охране объектов растительного мира, их рациональному использованию и сохранению устойчивости естественных экосистем. Разработаны пути сохранения видов на локальных территориях, нуждающихся в охране, проведены мероприятия по созданию зелёного покрова на эродированных территориях, выявлены сырьевые запасы перспективных видов.

Изучение типов ареалов ДСКР имеет важное научно-практическое значение.

Дикорастущие сородичи культурных растений – это эволюционно и генетически близкие к культурным растениям виды естественной флоры, входящие в один род с культурными растениями или участвующие в происхождении или эволюции культурных видов других родовых комплексов [3, 4].

Виды ДСКР неравнозначны по степени их востребованности человеком и экономической важности. Большая их часть представлена широко распространенными растениями, популяции которых находятся в стабильно равновесном состоянии. Меньшая часть является редкой и находится под угрозой исчезновения [2].

Объектом настоящего исследования являются дикие сородичи культурных растений (ДСКР) – виды семейства Fabaceae Lindl., эволюционно-генетически близкие к культурным растениям, входящие с ними в один род; введенные в культуру напрямую или участвовавшие в формировании культурных растений путем использования в скрещиваниях, а также – потенциально пригодные для создания или улучшения сортов культурных растений [5].

Наши исследования показали, что в семействе FABACEAE Lindl. ДСКР отмечено 10 родами и 15 видами. Анализ видового состава ДСКР показал, что они являются весьма разнообразным типом ареалов, что наибольшее количество видов 5 относится к Туранскому типу ареала, к Палеоарктическому – 3 вида. К Ирано-туранскому и Малоазийско-ирано-туранскому относится 2 вида. Остальным, Понтичско-средиземноморскому, Средиземноморско-ирано-туранскому и Турано-монгольскому типов ареалов относится 1 вид. (табл.1).

Таблица 1.

**Ботанико-географический анализ ДСКР из семейства *Fabaceae* Lindl. Республики каракалпакстана**

Семейство	Род	Вид	Группа	Географический тип
1	2	3	4	
FABACEAE Lindl.	1 <i>Alhagi</i> Hill	1,1 <i>A.persarum</i> Boiss. et Bushe	5	Турано-монгольский
		2,2 <i>A. pseudoalhagi</i> (Bieb.) Fisch.	5	Малоазийско-ирано-туранский
	2 <i>Ammodendron</i> Fisch.	1,3 <i>A. conollyi</i> Bunge	5	Туранский
		2,4 <i>A. longiracemosum</i> Raik.	5	Туранский
	3 <i>Astragalus</i> L.	1,5 <i>A. transcaspicus</i> Freyn	5	Туранский
		2,6 <i>A. unifolialatus</i> Bunge	5	Туранский
	4 <i>Caragana</i> Fabr.	1,7 <i>C. grandiflora</i> (Beib.) DC.	4	Малоазийско-ирано-туранский
	5 <i>Glicirrhiza</i> L.	1,8 <i>G.aspera</i> L.	5	Туранский
		2,9 <i>G. glabra</i> L.	1	Понтичско-средиземноморский
	6 <i>Medicago</i> L.	1,10 <i>M. lupulina</i> L.	1	Палеоарктический
	7 <i>Melilotus</i> Mill	1,11 <i>M. albus</i> Medik.	1	Палеоарктический
		2,12 <i>M. officinalis</i> (L.) Pall	1	Средиземноморско-ирано-туранский
	8 <i>Onobrychis</i> Hill	1,13 <i>O.micranta</i> Schrenk.	2	Ирано-туранский
	9 <i>Trigonella</i> L.	1,14 <i>T. grandiflora</i> Bunge	5	Ирано-туранский
	10 <i>Trifolium</i> L.	1,15 <i>T. repens</i> L.	1	Палеоарктический

Из таблицы можно сделать выводы, что наибольшее распространение 5 видов *Ammodendron conollyi* Bunge, *Ammodendron longiracemosum* Raik., *Astragalus transcaspicus* Freyn, *Astragalus unifolialatus* Bunge и *Glicirrhiza aspera* L. относятся к Туранскому типу ареала. К Палеоарктическому типу относится 3 вида: *Trifolium repens* L., *Medicago lupulina* L. и *Melilotus albus* Medik.. 2 вида Ирано-туранскому: *Onobrychis micranta* Schrenk. и *Trigonella grandiflora* Bunge; Малоазийско-ирано-туранскому: *Caragana grandiflora* (Beib.) DC. и *Alhagi pseudoalhagi* (Bieb.) Fisch.; Остальным типам ареалов, Понтическо-средиземноморскому: *Glicirrhiza glabra*; Средиземноморско-ирано-туранскому: *Melilotus officinalis* (L.) Pall и Турано-монгольскому: *Alhagi persarum* Boiss. et Bushe.

Следует заметить, что приведенные цифры по составу дикорастущих сородичей культурных растений из семейства *Fabaceae* Lindl. флоры Каракалпакстана, еще не окончательный. Дальнейшее детальное изучение флоры отдельных районов республики, несомненно, должно привести к уточнению числа родов и видов флоры республики.

Дикие сородичи культурных растений являются хранилищем целого набора ценных признаков и могут быть источником исходного материала при селекции. В условиях Республики в процессе эволюции сформировался уникальный генофонд растений, обладающих комплексной устойчивостью. Дикие сородичи культурных растений, обладая широким спектром зимостойких, морозоустойчивых, жароустойчивых, засухоустойчивых, солеустойчивых растений, могли бы с успехом использоваться в селекции полезных растений. Целенаправленный сбор и надежное сохранение компонентов биоразнообразия, особенно в местах происхождения и максимального разнообразия генетических ресурсов растений, — задача первоочередной важности любого государства. Для успешного развития современного сельскохозяйственного производства, для создания новых сортов растений, адаптированных к неблагоприятным условиям внешней среды, болезням и вредителям, необходимо сохранение не только максимально широкого спектра разнообразия возделываемых растений, в первую очередь культурных растений и близких к ним диких видов — диких сородичей культурных растений (ДСКР), но и в целом экосистем, в состав которых входят те или иные виды. [6].

Сокращение ареалов многих видов, в том числе и некоторых дикорастущих сородичей культурных растений очага, наблюдается и в настоящее время.

Подводя итоги, можно констатировать, что в результате как естественных природных процессов, так и некоторых отрицательных воздействий человека, естественный растительный покров до некоторой степени деградирован.

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## **КЛИНИКО-ИММУНОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ОБСТРУКТИВНОГО БРОНХИТА У ДЕТЕЙ С ИНФЕКЦИЯМИ РЕСПИРАТОРНОГО ТРАКТА**

*Аннотация: Бронхо-обструктивный синдром – один из наиболее распространенных синдромов поражения органов дыхания у детей и подростков. Для того, что бы уметь диагностировать, лечить, проводить профилактику этого состояния, необходимы знания многих фундаментальных и клинических дисциплин, приобретаемых студентами в течение всего времени обучения в ВУЗе.*

*Накоплен опыт диагностики и лечения клинических форм, не входивших в отечественную классификацию болезней органов дыхания у детей еще 8 лет назад: хронического бронхита, бронхолегочной дисплазии.*

*Достигнуты значительные успехи в понимании тяжелой обструктивной патологии легких, обусловленной поражением мышечных бронхов. Установлен характер возрастной эволюции обструктивных болезней легких.*

*Сказываются ошибки при диагностике, поздняя госпитализация, бесконтрольное или, напротив, недостаточное использование отдельных групп лекарственных препаратов. Специального внимания заслуживают больные, достигшие подросткового возраста.*

*Известно, что драматические исходы при астме у детей приходятся, главным образом, на пубертатный период.*

*Ключевые слова: клиничко-иммунологический аспект, бронхо-обструктивный синдром, детской возраст, респираторный тракт, инфекция.*

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## **CLINICAL AND IMMUNOLOGICAL ASPECTS OF BRONCHOOSTRUCTIVE SYNDROME IN CHILDREN**

*Abstract: Broncho-obstructive syndrome is one of the most common respiratory disorders in children and adolescents. In order to be able to diagnose, treat, and prevent this condition, knowledge of many fundamental and clinical*

*disciplines is required, acquired by students during the entire period of study at the university.*

*Experience has been accumulated in the diagnosis and treatment of clinical forms that were not included in the domestic classification of respiratory diseases in children 8 years ago: chronic bronchitis, bronchopulmonary dysplasia.*

*Significant advances have been made in understanding severe obstructive pulmonary disease caused by muscle bronchial damage. The character of age-related evolution of obstructive pulmonary diseases has been established.*

*Errors in diagnosis, late hospitalization, uncontrolled or, on the contrary, insufficient use of certain groups of drugs are affecting. Patients who have reached adolescence deserve special attention.*

*It is known that the dramatic outcomes of asthma in children occur mainly during puberty.*

*Key words: clinical and immunological aspect, broncho-obstructive syndrome, childhood, respiratory tract, infection.*

Введение. Болезням легких, протекающим с БОС в научных и клинических исследованиях уделяется большое внимание[2,5]. Подавляющее большинство острых, хронических заболеваний респираторного тракта у детей протекают с нарушением проходимости воздухоносных путей. Острые или упорно повторяющиеся клинические признаки обструкции, обструктивный паттерн объединяют такую многообразную по своей природе группу бронхолегочных заболеваний как астма, бронхолиты, некоторые формы бронхита и т.д. БОС наблюдается у 5-40 % детей, госпитализированных с ОРВИ[4].

Широкая распространенность БОС, особенно у детей раннего возраста, связана не только с морфофункциональными особенностями органов дыхания. Условия экологического неблагополучия, ятрогении привели к учащению атопических реакций, иммунных нарушений уже у детей первых месяцев жизни[1,3]. Отмеченный в последнее десятилетие патоморфоз болезней легких с БОС, проявился уменьшением врожденных пороков развития легких, требующих хирургического лечения, течение хронических воспалительных заболеваний легких у детей приобрело более благоприятный характер.

Многие врачи говорят о преобладании так называемых малых форм заболеваний. Накоплен опыт диагностики и лечения клинических форм, не входивших в отечественную классификацию болезней органов дыхания у детей еще 8 лет назад: хронического бронхита, бронхолегочной дисплазии. Достигнуты значительные успехи в понимании тяжелой обструктивной патологии легких, обусловленной поражением мышечных бронхов[7].

Установлен характер возрастной эволюции обструктивных болезней легких. Связь тяжелой острой, но прежде всего хронической воспалительной патологии легких детей и взрослых констатирована многими клиницистами[6]. Несмотря на достижения педиатрической пульмонологии, число летальных исходов от острых или хронических обструктивных

болезней легких снижается незначительно[3,6]. Сказываются ошибки при диагностике, поздняя госпитализация, бесконтрольное или, напротив, недостаточное использование отдельных групп лекарственных препаратов.

Цель исследования. Разработать дифференциально-диагностические критерии обструктивного бронхита, ассоциированного с различными инфекциями респираторного тракта у детей и определить их прогностическое значение.

Материалы и методы исследования. Установление отношения шансов OR и относительного риска RR, исследованием диагностической значимости уровня ИЛ -4, ИЛ- 8 у больных острым обструктивным бронхитом (n=23) и обструктивным бронхитом, рецидивирующего течения (n=27) у детей раннего и дошкольного возраста.

Обсуждение. Наибольшую этиологическую значимость в развитии обструктивного бронхита у детей имеет аденовирусная инфекция, меньшую - респираторно-синцитиальная инфекция, парагрипп, грипп, вирусно-бактериальные ассоциации.

Обструктивные бронхиты у детей первого года жизни чаще вызываются; респираторно-синцитиальной инфекцией, в раннем возрасте — парагриппом и вирусно-хламидийной инфекцией, у дошкольников? - аденовирусной инфекцией, гриппом и вирусно-микоплазменной инфекцией.

Факторами риска обструктивных бронхитов при аденовирусной инфекции являются; пассивное курение и частая предшествующая заболеваемость, при РС-инфекции - неблагоприятный; антенатальный анамнез, при гриппе - патология органов дыхания в семье, при вирусно-хламидийных ассоциациях - повышенная респираторная; заболеваемость детей и их матерей. Для обструктивных бронхитов вирусно-микоплазменной этиологии характерна многофакторность причин.

Наибольшую этиологическую значимость в формировании тяжелых форм обструктивного бронхита имеет респираторно-синцитиальная инфекция, в развитии затяжная-течения — вирусно-хламидийные ассоциации и респираторно-синцитиальная инфекция.

Рецидивирующее течение обструктивного бронхита характерно для аденовирусной инфекции (33,3%), вирусно-хламидийной (60%) и вирусно-микоплазменной (100%) ассоциаций.

Неблагоприятные исходы обструктивного бронхита в виде непрерывно-рецидивирующего течения (13,3%) и трансформации, в бронхиальную астму (20%) развиваются при вирусно-микоплазменной инфекции.

Особенностью обструктивного бронхита на первом году жизни является преимущественное развитие тяжелых форм при респираторно-; синцитиальной инфекции, затяжного течения - при респираторно-синцитиальной и вирусно-хламидийной инфекциях.

Более глубокие нарушения системы иммунитета отмечаются у детей с обструктивным бронхитом, ассоциированным со смешанными вирусно-хламидийной и вирусно-микоплазменной инфекциями, в виде уменьшения

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Вывод. Результаты работы позволяют использовать комплекс дифференциально-диагностических отличий обструктивного бронхита у детей с различными инфекциями респираторного тракта для прогнозирования тяжести и длительности, заболевания, проведения адекватной терапии.

Данные, характеризующие особенности иммунного статуса детей с обструктивными бронхитами при вирусно-бактериальных инфекциях, отражают необходимость использования иммунокорректирующей терапии и диспансерного наблюдения детей.

На основании установленных клинико-anamnestических и иммунологических особенностей обструктивного бронхита у детей с острыми респираторными инфекциями разработан алгоритм дифференциально-диагностического наблюдения с целью профилактики рецидивов заболевания.

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## **СОСТОЯНИЕ ЗДОРОВЬЯ МЛАДШИХ ШКОЛЬНИКОВ ИЗ СЕМЬИ С МЕДИКО – ДЕМОГРАФИЧЕСКИМ И СОЦИАЛЬНЫМ РИСКОМ**

*Аннотация: Целью исследования является изучение влияния медико – биологических и социальных факторов риска семьи на состояние здоровья младших школьников.*

*Материал и методы: Объектом исследования являлись учащийся первой ступени школьного обучения (n=300), из семьи с медико – биологическими и социальными факторами риска. Группу сравнения составили дети (n=50), в семьях которых факторы риска не зарегистрирован. В работе были использованы санитарно-гигиенические, функциональные, психолого-педагогические, клинические, лабораторные и инструментальные методы исследований.*

*Результаты и обсуждение: прослеживалась связь между структурой заболеваний, частотой их развития, полом ребенка и типом семьи. Количество детей, перенёсших инфекционные заболевания, достоверно больше в неполных семьях. Дети из полных семей имеют более высокую резистентность, реже болеют вирусными заболеваниями, лучше адаптируются к сложившимся ситуациям, реже формируются хронические заболевания.*

*Вывод. Дети из полных семей имеют более высокую резистентность, реже болеют вирусными заболеваниями, лучше адаптируются к сложившимся ситуациям, реже формируются хронические заболевания.*

*Ключевые слова: состояния здоровья, семья, медико – демографические и социальные факторы риска.*

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## **THE CONDITION OF HEALTH BY PRIMARY SCHOOL CHILDREN FROM THE FAMILY WITH MEDICAL-DEMOGRAPHIC AND SOCIAL RISK**

*Abstract: The aim research: is to study the influence of medical-biological social risk factors of the family on the health of primary school pupils.*

*Material and methods: The research object were the pupils of primary school (n=300) from the family with medical-biological and social risk factors. The comparison group were the children (n=50), in whose families risk weren't registered . Sanitary-hygienic, functional, psychological-pedagogical, clinic, lab and instrumental research methods were used in the work .*

*The results and discussion: the relationship between the structure of disease, frequency of their development, sex of child and type of the family was noticed. The amount of children, who had infectious diseases, is significantly higher in half families. The children from full families have higher immunity, rarely have virus diseases, better adapt to the situation, rarely have chronic diseases.*

*Conclusion. Children from complete families have a higher resistance, are less likely to suffer from viral diseases, better adapt to existing situations, less often chronic diseases are formed.*

*Key words: health conditions, family, medical - demographic and social risk factors.*

Актуальность. Процесс формирования здоровья охватывает довольно длительный период жизни человека. Основные параметры здоровья закладываются в детстве. Организм ребёнка высокочувствителен к воздействию факторов биологической и социальной среды. Имеются убедительные данные о значительном влиянии социально-экономического статуса родителей на здоровье ребенка [8, 10].

В семье ребенок получает первый опыт социального взаимодействия, обеспечивается тем или иным уровнем социальной защиты и материальных благ [8, 9, 10]. В семье укрепляют здоровье ребенка, развивают его задатки и способности, дети приобщаются к труду. Семья заботится об образовании, интеллектуальном развитии, закладывает гуманные черты характера, формирует отношение к окружающему миру, учит оценивать свои поступки и отвечать за них. Факторы социального риска, в первую очередь, отрицательно сказываются на репродуктивных функциях семьи, то есть способности воспитать здоровых в физическом и психосоциальном плане детей. На педиатрическом участке каждый третий ребенок живет в семье, имеющей тот или иной фактор социального риска, а каждый десятый - в семье с двумя и более факторами [10]. В сложных современных экономических условиях наиболее уязвимыми оказались неполные семьи. Неполные семьи часто относятся к малообеспеченным, так как семью, как правило, содержит одна мать. В неполных семьях дети по разным причинам (неполноценное питание, некачественное медицинское обслуживание и др.) имеют большую вероятность развития различного рода патологии в процессе школьного обучения [1]. К сожалению, в современной медицинской литературе недостаточно убедительных данных о влиянии социально-гигиенических и медико- биологических факторов риска на состояние здоровья детей первой ступени обучения, родившихся и воспитывающихся в неполных семьях.

Требуется уточнение критических периодов в развитии хронической патологии и структуры заболевания детей из неполных семей.

Целью исследования является изучение влияния медико – биологических и социальных факторов риска семьи на состояние здоровья младших школьников.

Материал и методы исследования. Объектом исследования являлись учащийся первой ступени школьного обучения города Андижана. Дальнейшее наблюдение за детьми осуществлялся в 6 типовых средних общеобразовательных школь (№24, №37, №15, №11, №1, №2), проживающие, приблизительно в одинаковых экологических условиях.

В соответствии с целью работы для поиска высокоинформативных признаков, позволяющих судить о текущем состоянии здоровья ребенка в процессе школьного обучения с учетом типа семьи, использован методологический прием, позволивший выделить группу детей из семьи с риском (n=300), в основную группу наблюдения. Группу сравнения составили дети (n=50), в семьях которых медико биологические и социальные факторы риска не зарегистрирован.

Для получения объективной информации и проведения анализа нами использован санитарно-гигиенические, функциональные, психолого-педагогические, клинические, лабораторные и инструментальные методы исследований. Применялся сплошной, документальный, проспективный, ретроспективный и лонгитудинальный методы статистической обработки.

Результаты исследования. При динамическом наблюдении за состоянием здоровья первоклассников отмечалось, что период школьной адаптации протекал неудовлетворительно у учащихся из основной группы чаще, чем у сверстников из группы сравнения (53,1% против 40,4%,  $p < 0,05$ ). У детей из полных семей реже выявлялись нарушения психоэмоциональной сферы (39,6% против 16,6%,  $p < 0,05$ ), сохранялась высокая мотивация к обучению (66,1% против 46,2%,  $p < 0,05$ ), познавательной деятельности (25,0% против 16,9%,  $p < 0,05$ ). Большинство первоклассников были социально адаптированы (97,1% против 91,5%,  $p < 0,05$ ), имели хорошую личностную (87,9% против 80,8%,  $p < 0,05$ ) и академическую (91,8% против 73,5%,  $p < 0,001$ ) адаптацию. В неполных семьях количество детей с низкой академической (26,5% против 8,2%,  $p < 0,001$ ) и социальной (8,5% против 2,9%),  $p < 0,001$ ) адаптацией встречалось чаще, чем в полных.

Дезадаптация в 2,1 раза чаще возникала у школьников из основной группы (15,4% против 7,1%,  $p < 0,05$ ), чем у детей из группы сравнения. Тяжелая степень дезадаптации выявлялась у 4,6% первоклассников из основной группы. Срыв адаптационных механизмов был обусловлен, с одной стороны, недостаточными функциональными резервами организма ребёнка, с другой - чрезмерной силой воздействия новых факторов школьной среды. У школьников из внебрачных семей чаще отмечались нарушения эмоционально-волевой сферы (57,7% против 45,0%,  $p = 0,004$ ) по сравнению с детьми из полных семей. Это проявлялось повышенной раздражительностью

(38,5%) против 21,4%,  $p < 0,001$ ), плаксивостью (5,8%) против 3,2%,  $p < 0,001$ ), нарушениями сна (32,3% против 17,5%,  $p < 0,001$ ) и аппетита (33,3% против 18,2%,  $p < 0,001$ ), а также повышенной утомляемостью при физических (37,7% против 20,0%),  $p < 0,001$ ) и психических (39,2% против 25,0%,  $p < 0,001$ ) нагрузках, развитием астенического синдрома (16,5% против 8,6%),  $p < 0,001$ ), усилением тревожности (48,5% против 26,1%,  $P < 0,001$ ). Такая тенденция сохранялась до конца учебного года у 48,5% школьников из основной группы и у 35,7% учащихся из группы сравнения, с частичной нормализацией состояния в летний период у 10,8% детей из неполных семей и у 28,1% - из полных.

Следует отметить, что к окончанию 1-го учебного года у 4,1% первоклассников из обеих групп наблюдения отмечался высокий и у 25,2% выше среднего уровня умственного развития (УУР). Доля учеников из неполных семей с высоким (3,8%), выше среднего (22,3%) и средним (60,8%) УУР была приблизительно равнозначна доле их сверстников из полных семей (4,3%, 27,9% и 63,6% соответственно). В неполных семьях мальчики (16,0%) и девочки (11,9%) чаще имели УУР ниже среднего, чем их сверстники из полных семей (4,2% и 4,3% соответственно,  $p < 0,05$ ).

Оказалось, что доля школьников с хронической патологией увеличилась в неполных (на 3,5%) и полных (1,5%) семьях и достоверно чаще встречалась у учащихся из основной группы (32,7% против 20,4%,  $p < 0,001$ ), . Функциональные нарушения среди детей исходно и к концу года составили у мальчиков: 43,4% - 45,3%, у девочек: 42,9% - 46,2%). Функциональные нарушения выявлялись чаще у детей из неполных семей (56,5%) против 35,7%,  $p < 0,05$ ).

На момент поступления в школу среди девочек хронические заболевания имели тенденцию к преобладанию по сравнению с мальчиками (27,1%) против 20,6%),  $p = 0,07$ ). К окончанию 1-го класса значения хронической патологии у девочек остались прежними, а у мальчиков увеличились на 5,2% и составили 25,8%.

Имеющие место гендерные различия наиболее показательны в группе сравнения. Хронические заболевания сформировались у 7-и мальчиков из полных семей, тогда как у 5-и девочек из их группы признаки хронического заболевания не были выявлены при повторном осмотре. В основной группе число детей с хронической патологией увеличилось на 5 случаев среди мальчиков и на 2 - среди девочек. К окончанию 1-го года обучения I гр. здоровья встречалась по-прежнему реже (3,8% против 8,9%),  $p < 0,05$ ), а III гр. здоровья - чаще (29,6% против 19,6%),  $p < 0,05$ ) у первоклассников из основной группы. Количество детей со II гр. здоровья на 7,2% больше в полных семьях. Доля школьников с IV гр. здоровья увеличилась на 2 случая в неполных семьях и на 2 - в полных. У детей из группы сравнения хронические заболевания в стадии субкомпенсации были выявлены впервые.

В группе сравнения наблюдался прирост патологии ЖКТ (15,7% - 21,3%), ССС (17,5% - 18,6%), костно-мышечной системы (КМС) (15,0% -

16,4%), мочеполовой (7,1% - 7,9%) системы, а также ЛОР - органов (7,9% - 8,9%) и органов зрения (4,6%) - 8,2%). Уменьшилась доля детей с патологией ЦНС (16,1% - 11,1%), крови и кроветворных органов (17,1% - 10,0%). У детей из неполных семей продолжился рост числа заболеваний ЛОР - органов (14,2% - 15,4%). Количество детей с заболеваниями ССС и ЖКТ выросло незначительно. Произошло снижение заболеваний ЦНС (25,4% - 20,8%), а также болезней крови и кроветворных органов (34,6% - 19,2%). У мальчиков из основной группы достоверно чаще встречалась патология костно-мышечной системы (36,0% против 18,4%,  $p < 0,05$ ), а частота заболеваний ЖКТ (30,4% против 21,1%) и органов дыхания (22,4% против 17,6%) достоверных различий не имела по сравнению с заболеваниями у сверстников из полных семей. У девочек из неполных семей чаще встречалась патология крови и кроветворных органов (23,7% против 7,2%,  $p < 0,001$ ), ССС (40,7% против 11,7%,  $p < 0,001$ ), ЦНС (19,3%) против 8,0%,  $p < 0,001$ ). Следует отметить, что у школьниц из группы сравнения ведущие заболевания встречались реже, чем у сверстниц из основной группы, а также у мальчиков из обеих групп наблюдения.

Обсуждение: таким образом, прослеживалась связь между структурой заболеваний, частотой их развития, полом ребенка и типом семьи. Количество детей, перенёсших инфекционные заболевания, достоверно больше в неполных семьях (42,7% против 29,6%),  $p < 0,001$ ). Учащиеся из группы сравнения не болели ОРВИ в 27,9% случаев, а дети из основной группы - в 8,8% случаев. Хорошая резистентность организма у школьников из полных семей наблюдалась в 2,7 раза чаще (83,9% против 30,0%),  $p < 0,001$ , а очень низкая - в 3,3 раза реже (7,1% против 23,8%,  $p < 0,001$ ), чем у детей из неполных семей. Количество часто болеющих детей за 1-й год увеличилось в основной группе на 15,4%, а в группе сравнения на 6,8%. Это, вероятно, обусловлено продолжением влияния факторов антенатального периода, которые привели к изменению резистентности и реактивности организма ребёнка в последующих периодах онтогенеза, а также возросшим влиянием социально-гигиенических факторов, особенно внутришкольных. Увеличилась доля школьников с нарушениями психологического (67,4% - 69,4%), соматического (67,0% - 70,4%), физического (29,1% - 31,1%) и психического (19,3% - 24,1%) компонентов здоровья. Соматическое (85,0% против 56,8%,  $p < 0,001$ ) и психологическое здоровье (73,8% против 65,4%,  $p < 0,05$ ) по-прежнему достоверно чаще нарушено у школьников из неполных семей. Увеличилась доля учащихся с отклонениями физического и психического здоровья в обеих группах наблюдения. За год обучения темп ухудшения соматического здоровья был приблизительно одинаков у детей обоего пола. Темп потери психологического здоровья у девочек был более выражен, в то время как у мальчиков изменения психологического здоровья не произошли.

У детей из неполных семей нарушение 5-и компонентов здоровья отмечалось с большей достоверностью (89,2% против 78,6%,  $p < 0,001$ ), чем у их сверстников из стабильно полных семей. Установлено, что при нарушении

2-х компонентов здоровья у 31,1% школьников возникало нарушение физического компонента, при нарушении 3-х компонентов у 21,4% детей - психического компонента. а при нарушении 4-х компонентов здоровья у 5,6% учеников выявлялось отклонение социального компонента здоровья. К окончанию 1-го класса доля детей с нереализованным риском формирования хронической патологии была выше у детей из полных семей (31,8% против 8,1%,  $p < 0,001$ ), что свидетельствовало о более стабильном состоянии здоровья у данного контингента школьников.

Вывод. При несвоевременной коррекции соматических нарушений в состоянии здоровья школьников возникнет каскад отклонений - в патологический процесс вовлекаются психологический, физический, психический и социальный компоненты здоровья. Дети из полных семей имеют более высокую резистентность, реже болеют вирусными заболеваниями, лучше адаптируются к сложившимся ситуациям, реже формируются хронические заболевания.

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## ПОКАЗАТЕЛИ МИКРОЭЛЕМЕНТНОГО СОСТАВА КРОВИ БЕРЕМЕННОЙ ЖЕНЩИНЫ ПРИ НОРМАЛЬНОЙ И ОСЛОЖНЕННОЙ ПИЕЛОНЕФРИТОМ БЕРЕМЕННОСТИ

*Аннотация:* В статье приводятся данные результаты изучения клинико-патогенетического значения ряда микроэлементов при физиологически протекающей и осложненной пиелонефритом беременности. Результаты исследования свидетельствуют что, беременные матери, с ПН, существенно чаще имели дисбаланс микроэлементов – дефицит цинка, накопление Cu и Mg, которые способствуют снижению интенсивности окислительно-восстановительных процессов, усиливают влияние гипоксии на ткани головного мозга плода, хронические экстрагенитальные заболевания (78%) и патологическое течение беременности и родов (84%), а у новорожденных – осложненное течение неонатального периода (86%).

*Ключевые слова:* беременность, пиелонефрит, микроэлементы, новорожденные.

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## INDICATORS OF MICROELEMENTAL COMPOSITION OF BLOOD OF A PREGNANT WOMAN IN NORMAL AND COMPLICATED PYELONEPHRITIS OF PREGNANCY

*Abstract:* The article presents the results of the study of the clinical and pathogenetic significance of a number of trace elements in physiologically proceeding and complicated by pyelonephritis pregnancy. The results of the study indicate that pregnant mothers with PN, significantly more often had an imbalance of trace elements - zinc deficiency, accumulation of Cu and Mg, which contribute to a decrease in the intensity of redox processes, increase the effect of hypoxia on fetal brain tissue, chronic extragenital diseases (78%) and pathological course of pregnancy and childbirth (84%), and in newborns - a complicated course of the neonatal period (86%).

*Key words:* pregnancy, pyelonephritis, trace elements, newborns.

Актуальность. В последние годы в связи с ухудшением экологической и экономической ситуации особую актуальность приобрела проблема



дефицитных состояний, обусловленных недостатком эссенциальных микроэлементов (МЭ) (1, 5, 7).

Исследования последних лет свидетельствуют о том, что обусловленность женщин репродуктивного возраста микронутриентами ниже физиологических потребностей (1, 2, 6, 11).

По данным научно-исследовательского института акушерства и гинекологии МЗ Республики Узбекистан, у значительной части беременных и кормящих женщин дефицит сочетается с недостаточным поступлением в организм ряда макро и микроэлементов и снижением их содержания в биологических жидкостях (3, 4, 10).

Актуальность настоящего исследования обусловлена отсутствием единых методологических подходов, а также скудностью исследований гомеостаза МЭ у беременных с ПН и практически полным отсутствием сведений о состоянии гомеостаза МЭ у здоровых беременных, рожениц, что затрудняет интерпретацию полученных данных. Проведение дальнейших исследований в этом направлении, несомненно, имеет большое теоретическое и практическое значение.

Цель исследования. Целью настоящего исследования являлась - определить клиничко-патогенетическое значение ряда микроэлементов при физиологически протекающей и осложненной пиелонефритом беременности.

Материал и методы исследования. Работа выполнена на базе Андижанского государственного медицинского института в период с 2019 по 2021 гг. Исследования проводились в перинатальном центре г. Андижана, родильном доме №2 и в женской консультации при семейной поликлинике г. Андижана. Проведено комплексное обследование 80 женщин с доношенной беременностью, проживающих в г. Андижан и Андижанской области. По возрастным группам они распределены следующим образом: первая от 18 до 29 лет; вторая от 30 до 35 лет, четвертая от 36 и старше.

С учетом клинических особенностей течения беременности все обследуемые разделены на две группы: первую (контрольную), включающую 50 женщин с физиологическим течением беременности, и вторую, куда были включены 30 беременных с пиелонефритом. Для решения поставленных задач были использованы следующие методы исследования: анамнестические, клинические, включавшие комплексную оценку состояния рожениц; лабораторные, инструментальные, в том числе количественное и качественное определение содержания МЭ в крови беременных.

Для определения содержания микроэлементов в сыворотке крови использован фотометрически-колориметрический метод, с использованием наборов итальянской компании «Sentinal Diagnostics» и контрольные материалы фирмы «Randox Laboratorics LTD». У обследованных женщин, в зависимости от срока гестации и паритета беременности определены сывороточная концентрация Zn, Fe, Cu и Mg в плазме крови. Статистическая обработка полученных данных проведена методом вариационной статистики с применением современных пакетов компьютерных программ Statistica 6,0 с

использованием параметрических и непараметрических методов статистики, корреляционного анализа, критерии достоверности t- Стюдента и  $\chi^2$ .

Результаты исследования. Среди беременных матерей с ПН отмечена высокая распространенность хронических экстрагенитальных заболеваний по сравнению с матерями контрольной группы- 9 (17,6%) в 1-й, 2-й и 3-й группах соответственно у 12(80%) ( $p<0,001$ ), 31(77,6%) ( $p<0,001$ ) и 21(85,7%) женщин ( $p<0,001$ ). Выявлен риск развития хронической патологии пищеварительной системы у беременных с ПН: АР = 18;  $p<0,05$ ; ОР = 4,1; ДИ 95%. Хронические гастриты, хронические гастродуодениты отмечались достоверно чаще у беременных матерей детей 1-й группы – 5(30%) ( $p<0,05$ ) и 3-й группы – 9(35,7%) ( $p<0,01$ ), чем у матерей детей контрольной группы- 3(5,9%). Выявлено, что высокую частоту ОГА имели беременные 1-й, 2-й и 3-й основных групп соответственно- 12 (75%) ( $p<0,001$ ), 30 (75,5%) ( $p<0,001$ ) и 14 (57,1%) ( $p<0,01$ ), чем беременные контрольной группы 7 (14,7%). Наибольшая частота ОАА, по сравнению с контрольной группой женщин-10 (20,6%) констатировалась у беременных 2-й и 3-й группы с ПН (соответственно 8(50%) и 19(47%)  $p<0,05$ ).

Установлена высокая частота патологического течения беременности у женщин 2-й и 3-й группы. Обнаружено, что гестозы первой половины значительно реже отмечались у женщин детей контрольной группы 3 (5,9%), по сравнению с матерями 1-й – 4 (25%) ( $p<0,05$ ) и 3-й групп – 9 (35,7%) ( $p<0,01$ ); кроме того у матерей во 2-й группе – 5 (12,2%), по сравнению с 3-й – 9 (35,7%) ( $p<0,05$ ). Сравнение частоты гестозов второй половины беременности показало их превалирование в 1-й и 2-й основных группах соответственно у 6 (35%) и 14 (35%) ( $p<0,05$ ) в отличие от контрольной группы- 6 (11,8%). Отмечено, что угроза прерывания беременности чаще встречалась у рожениц в 1-й, 2-й и 3-й основных группах соответственно - 9 (55%) ( $p<0,01$ ), 27 (69,4%) ( $p<0,001$ ) и 16 (64,3) ( $p<0,01$ ) по сравнению с контрольной группой матерей 10 (20,6%). Недостоверно меньшее значение частоты ОРВИ обнаружено у женщин в контрольной группе- 6 (11,8%), чем в 1-й, 2-й, 3-й группах соответственно 3 (20%), 8 (20,4%), 5 (21,4%) ( $p>0,1$ ).

Хроническая ФПН диагностировалась преимущественно у женщин 2-й и 3-й групп соответственно в 36 (90%) и 20 (78,6%) случаях, по сравнению с матерями контрольной – 3 (5,9%) ( $p<0,001$ ).

Выявлены различные виды патологии родового акта у женщин 2-й и 3-й группы. Преждевременная отслойка нормально расположенной плаценты констатировалась несколько меньше у матерей 2-й основной группы – 5(28,6%) случаях, чем у матерей в 3-й – 7 (12,2%) ( $p>0,1$ ).

ПРОМ, по сравнению с контрольной группой- 4 (8,8%) встречался с большей частотой у рожениц во 2-й и 3-й группах соответственно 14 (34,7%) ( $p<0,01$ ) и 11 (42,9%) ( $p<0,01$ ). Быстрые и стремительные роды констатировали чаще во 2-й группе – 10 (24,5%) ( $p<0,01$ ), чем в контрольной группе матерей-1 (2,9%). Достоверные различия частоты родов путем

кесарево сечения были только между матерями 1-й группы – 6 (40%) ( $p < 0,05$ ) и женщинами контрольной группы – 7 (14,7%).

Среднее содержание сывороточного цинка у матерей 1-й, 2-й, 3-й основных групп соответствует значениям  $12,02 \pm 1,47$  мкмоль/л,  $9,91 \pm 0,08$  мкмоль/л и  $8,56 \pm 1,26$  мкмоль/л и достоверно ниже ( $p < 0,05$ ) были показатели 2-й и 3-й группы, чем у матерей контрольной группы –  $16,6 \pm 1,14$  мкмоль/л.

Среднее содержание железа было недостоверно высоким, чем в контрольной группе. Содержание сывороточного магния у матерей 1-й, 2-й, 3-й основных групп ( $0,56 \pm 0,08$  мкмоль/л;  $0,60 \pm 0,09$  мкмоль/л;  $0,58 \pm 0,07$  мкмоль/л соответственно 1-й, 2-й и 3-й групп) были достоверно высокими от показателей сывороточного цинка матерей контрольной группы –  $0,39 \pm 0,08$  мкмоль/л ( $p < 0,001$ ). Содержание меди в сыворотке крови у женщин трех основных групп также было достоверно высоким ( $22,4 \pm 2,2$  мкмоль/л;  $22,6 \pm 2,03$  мкмоль/л;  $23,1 \pm 1,7$  мкмоль/л против  $17,4 \pm 0,6$  мкмоль/л,  $p < 0,05$ ). Установлена недостаточная обеспеченность цинком у 92% матерей 2-й и 3-й группы и у 9% женщин контрольной группы ( $p < 0,001$ ). Из них каждая вторая женщина имела ОГА (АР=24%;  $P < 0,05$ ) и ОАА (АР=33%;  $P < 0,001$ ). Обнаружен риск развития хронических заболеваний пищеварительной системы (хронические гастриты, дуодениты) у женщин при цинкодефицитном статусе (АР=18%;  $p < 0,05$ ).

Выявлено, что на фоне низкого показателя сывороточного цинка достоверно высокие показатели железа, магния и меди у женщин 1-й, 2-й и 3-й групп ( $p < 0,05$  –  $0,001$ ). У женщин с дисмикроэлементозным состоянием выявлен высокий риск развития осложнений настоящей беременности и родов, нарушений состояния плода: гестозов первой и второй половины беременности (АР=24%;  $p < 0,01$ ), угрозы прерывания (АР=22%;  $p < 0,05$ ), хронической ФПН (АР=23%;  $AP < 0,05$ ), слабости родовой деятельности (АР=12%;  $p < 0,05$ ), быстрых и стремительных родов (АР=20%;  $p < 0,01$ ), преждевременных родов (АР=63%;  $p < 0,001$ ), ЗВУР плода (АР=37%;  $p < 0,001$ ).

У 86% обследованных новорожденных установлено сочетанное воздействие неблагоприятных анте- и интранатальных факторов.

Полученные данные свидетельствуют о том, что на состояние здоровья новорожденных влияет комплекс факторов. Значение атрибутивного риска (АР) рассчитывалось для факторов, оказывающих существенное влияние на развитие нарушений адаптации в раннем неонатальном периоде: асфиксия: АР=40%,  $p < 0,001$ ; дыхательных расстройств: АР=55%,  $p < 0,001$ ; ВЖК: АР=21%,  $p < 0,01$ ; РДСН: АР=36%,  $p < 0,001$ ; пневмонии: АР=20%,  $p < 0,01$ ; отекающего синдрома: АР=31%,  $p < 0,001$ ; конъюгационной неонатальной желтухи АР=21%,  $p < 0,05$ .

Вывод. Таким образом, беременные матери, с ПН, существенно чаще имели дисбаланс микроэлементов – дефицит цинка, накопление Cu и Mg, которые способствуют снижению интенсивности окислительно-восстановительных процессов, усиливают влияние гипоксии на ткани головного мозга плода, хронические экстрагенитальные заболевания (78%) и

патологическое течение беременности и родов (84%), а у новорожденных – осложненное течение неонатального периода (86%).

В заключение хотелось бы процитировать мнение профессора А.В. Скального (2004) о том, что достаточное содержание микроэлементов вдет к оптимизации жизнедеятельности индивидуума и популяции в целом, повышению качества жизни человека и обеспечивает его дальнейшее нормальное развитие.

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## **ОЦЕНКА СУИЦИДАЛЬНОГО РИСКА И ПРОФИЛАКТИКА СУИЦИДАЛЬНОГО ПОВЕДЕНИЯ И ИХ ПСИХОКОРРЕКЦИЯ**

*Аннотация: Решение проблемы профилактики суицидального поведения несовершеннолетних носит комплексный, системный и междисциплинарный характер, требует непрерывного повышения уровня компетентности педагогических работников по вопросам раннего выявления признаков суицидального поведения и оказания психолого-педагогической помощи детям в кризисных ситуациях, оперативного реагирования.*

*Суицидальное поведение – это проявление суицидальной активности – мысли, намерения, высказывания, угрозы, попытки, покушения. Суицидальное поведение встречается как в норме (без психопатологии), так и при психопатиях и при акцентуациях характера – в последнем случае оно является одной из форм девиантного поведения при острых аффективных или пато-характерологических реакциях.*

*Ключевые слова: суицид, профилактика, суицидент, поведения, психотерапия и психокоррекция.*

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## **ASSESSMENT OF SUICIDAL RISK AND PREVENTION OF SUICIDAL BEHAVIOR AND THEIR PSYCHO CORRECTION**

*Abstract: The solution to the problem of preventing suicidal behavior of minors is complex, systemic and interdisciplinary in nature, requires a continuous increase in the level of competence of teachers in the early detection of signs of suicidal behavior and the provision of psychological and pedagogical assistance to children in crisis situations, prompt response.*

*Suicidal behavior is a manifestation of suicidal activity - thoughts, intentions, statements, threats, attempts, attempts. Suicidal behavior occurs both normally (without psychopathology) and with psychopathies and with character*

*accentuations - in the latter case, it is one of the forms of deviant behavior in acute affective or pathocharacterological reactions.*

*Key words: suicide, prevention, suicide, behavior, psychotherapy and psychocorrection.*

Актуальность. Суицидальное поведение, в силу тяжести медицинских, социально-психологических и экономических последствий причисляют к категории не только общемедицинских, но и глобальных проблем человечества. По данным ВОЗ уровень самоубийств в мире за последние 45 лет вырос на 60 %, при этом общий коэффициент смертности составил 14,5 на 100 тысяч населения в мировом масштабе и 19,1 на 100 тысяч населения в Европейском регионе[4].

Среди причин смерти суициды занимают 13 место в мире, а в Европейском регионе - 7 место. Наиболее высоким суицидальным риском характеризуется население Восточной Европы (ВОЗ, 2002, 2003). Уровень самоубийств в Европе варьируется от 3,8 на 100 000 населения в Греции до 40 на 100 000 населения в Венгрии. Если учесть число неудавшихся самоубийств, которые происходят в 20 раз чаще, то масштабность проблемы возрастает еще более[5].

В России число самоубийств и динамика их роста превышают аналогичные показатели большинства европейских стран, среди которых она по этому показателю занимает второе место[1]. В Российской Федерации с начала 90-х годов, отмечен рост суицидов с 26,4 случаев на 100 тысяч населения в 1990-1991гг. до 38,6 - в 2004 году во всех возрастных группах. В 2005 году частота самоубийств находилась на уровне 36-38 случаев на 100 тысяч населения[3].

Значимость изучения проблемы суицидального поведения обусловлена несколькими причинами: регистрируемым ростом количества самоубийств и суицидальных попыток, прогнозируемым увеличением числа депрессивных состояний, имеющих непосредственную связь с патогенезом суицидального поведения, которое неминуемо вслед за собой повлечет рост суицидальных проявлений, динамикой современной социально-экономической ситуации[6].

Суицидальное поведение - не только общемедицинская, но и социально-экономическая проблема, которая приводит к длительной временной, а иногда и постоянной утрате трудоспособности. Детальное исследование индивидуальных, семейных и социальных факторов, может обеспечить всесторонний подход к пониманию условий, влияющих на оформление суицидального поведения[3].

Большинство специалистов, работающих с суицидентами, не получили суицидологической подготовки, не разработаны национальное руководство по суицидологии и стандарты оказания помощи лицам, находящимся в суицидо-опасных состояниях[2].

Несмотря на то, что помощь пациентам, обнаруживающим высокий суицидальный риск, оказывается в условиях психиатрического стационара,

этому вопросу до настоящего времени уделяется недостаточно внимания. При этом врач-психиатр стационара испытывает не меньшие, чем в амбулаторном звене сложности по курации суицидентов. Широкий диапазон психических расстройств, выявляемый у суицидентов, а также большой удельный вес пациентов с высоким суицидальным риском именно в психиатрическом стационаре, требует от специалистов не только высокой квалификации, но и специальной суицидологической подготовки.

Суицидальное поведение вызывает трудности диагностики и лечения не только у врачей общей практики, но и у врачей-психиатров, психиатров-наркологов, психотерапевтов[2,5].

Цель исследования. Целью настоящего исследования является изучение закономерностей формирования и динамики развития суицидального поведения, обусловленного психическими расстройствами, анализ особенностей оказания суицидологической помощи и разработка эффективных лечебно-профилактических и психотерапевтических мероприятий для предупреждения самоубийств.

Материалы и методы исследования. Для решения поставленных задач будут обследованы лица, находившиеся после суицидальной попытки в токсикологическом, нейро-реанимационном и ожоговом отделениях Андижанского филиала РЦЭМ, а также по данным архивные данные судебно-медицинских освидетельствований.

Результаты исследования. Суицидальное поведение - сложный биосоциальный феномен, который определяется соотношением средовых, личностных и патологических причин, обуславливающих его развитие, динамику и степень суицидального риска.

Личностные особенности суицидентов характеризовались нарушением коммуникативных способностей, неадекватной саморегуляцией, высокой степенью личностной и ситуационной тревожности, преобладанием непродуктивных способов психологической защиты и структурой агрессивности, низкой или пороговой сопротивляемостью стрессу (78,2% суицидентов), что предопределяет высокую вероятность возникновения дезадаптационных расстройств, являющихся источником суицидального поведения

В отличие от группы ГСП, в группе ГНС преобладали: нежелание жить (40,6% против 10,5%>), непринятие мер к сохранению жизни (47,8% и 15,8%), выраженное желание совершить СП (92,1% и 59,6%), неотступное желание смерти (36,3% и 19,3%»), охваченность суицидальными идеями (53,6% и 19,3%), желание положить конец своим страданиям (53,6% и 15,8%).

В группе ГСП чаще не прогнозировался исход суицидальных действий (11,2%, против 47,8%) в группе ГНС), сохранялся контроль над суицидальными мыслями (40,4% и 72,5%), преобладали избегание и манипуляция (78,9% и 46,4%), отмечалось восприятие сдерживающих от СП обстоятельств (15,9%, и 84,1%).

Изучение характеристик суицидальных попыток позволяет оценить серьезность суицидального акта, степень суицидального риска, прогнозировать динамику течения суицидального поведения.

Среди способов СП преобладали саморанения (39,1%), характерные для мужчин и самоотравления (33,4%), типичные для женщин. Реже встречались самоповешения (19,9%), падения с высоты (5,1%), самоутопления (1,9%).

Самоотравления чаще встречались в 26-30 лет (23,6%), самоповешения - в 31-35 лет (23,8%), саморанения в 16-20 лет (17,7%) и 21-25 лет

25,7%), падения с высоты - в 56-60 (38,9%) и 16-20 лет (27,8%), самоутопления в равных долях представлены в 16-20 и 56-60 лет.

3.3. У больных с органическим поражением головного мозга и расстройствах личности преобладали само-ранения (81,8 и 47,3%), при аффективных и невротических расстройствах - самоотравления (44,4 и 43,1%, соответственно). При шизофрении обнаруживался весь спектр изучаемых способов СП, с преобладанием само-ранений (25,0%) и самоотравлений (21,7%).

В группе ГСП преобладали само-ранения (47,3%). Вдвое реже встречались самоотравления (24,6%) и само-повешения (21,1%). В группе ГНС преобладали самоотравления (43,3%) и само-ранения (30,0%), нередко проникающего и огнестрельного характера (9,7%). При само-повешениях (18,7%), у большей части пациентов, требовалось проведение реанимационных мероприятий.

38,8% суицидентов задолго до реализации суицидального акта сообщали о своих намерениях. В 40,1% случаев суицидальные действия производились в присутствии других лиц, из них 96,9% из группы ГСП. Максимально скрывали свои намерения 36,2% из группы ГНС и 12,3% из ГСП. Большая часть суицидентов каждой из групп, при обнаружении суицидальных замыслов ближайшим окружением, отступали в осуществлении своих намерений - 61,4% из ГСП и 56,5% из ГНС.

Изучение суицидентов, госпитализированных в психиатрический стационар, показало целесообразность выделения двух клинических групп различных по нозологическому составу, корреляциям со степенью суицидального риска, процессуальным характером, тяжестью и прогрессивностью психического расстройства.

В группе «Суицидальные попытки» преобладали женщины, средний возраст пациентов составил  $29,8 \pm 1,4$  года. СП имели демонстративную направленность. Само-ранения и самоотравления не носили угрожающего для жизни характера (порезы предплечий, отравления препаратами домашней аптечки). Как правило, это были пациенты, первично госпитализируемые в психиатрический стационар с невротическими и личностными расстройствами, органическим поражением головного мозга. Минимальное число больных было представлено эндогенными заболеваниями.

Большую часть пациентов группы «Незавершенные суициды» составили мужчины, старшего возраста (средний возраст  $38,3 \pm 2,0$  года).



Способы СП характеризовались применением более опасных форм самоотравлений и само-ранений, необычностью, малодоступностью, дополнительной подготовкой, последствия, которых, требовали проведения реанимационных мероприятий. Суицидальные намерения носили истинный характер, со склонностью к фиксации суицидальности, преобладали повторно совершаемые СП. Среди пациентов преобладали лица с органическим поражением головного мозга, шизофренией, аффективными заболеваниями, болезнями зависимости.

Как при первичных, так и повторных СП преобладали мотивы призыва и протеста, особенно в возрасте 16-25 лет, представляя основную часть группы ГСП. При повторных СП частота мотивов отказа от существования выше в 4 раза, преимущественно в возрасте 41-45 лет, за счет больных с органическим поражением головного мозга и шизофренией. Общим для всех форм психической патологии, сопровождающихся суицидальным поведением, независимо от уровня расстройств, является наличие различной степени выраженности аффективных расстройств, наибольшие показатели которых приходятся на органическое поражение головного мозга, шизофрению и аффективные психозы.

Подавляющее число СП и незавершенных суицидов реализовывалось на фоне психических расстройств не-психотического уровня (89,9%). Лишь небольшая их часть совершалась в психотическом состоянии, которое преимущественно или полностью обуславливало суицидальные поступки за счет попытки больных на фоне ощущения отчаяния и безысходности избавиться от крайне тяжелого, мучительного душевного страдания. Диагностика и верификация типа пост-суицидального периода, с учетом характеристик суицидального покушения, уровня выраженности аффективных расстройств, психологических особенностей позволяет оценить степень суицидального риска, склонность к повторным суицидальным действиям, на основе чего определять лечебно-профилактические мероприятия.

Максимальный суицидальный риск обнаруживают суициденты при суицидально-фиксированном типе пост-суицидального периода, преимущественно в возрастном интервале от 36 до 55 лет, соответствующем пику смертности от самоубийств, с высокой долей больных шизофренией и органическим поражением головного мозга, использованием опасных для жизни способов самоубийства (тяжелых отравлений, самоповешений).

Наиболее благоприятными в анти-суицидальном плане являются критический и, в меньшей степени, манипулятивный типы пост-суицида. Манипулятивное поведение у изучаемого контингента почти в половине случаев может нести серьезную суицидальную угрозу, так как возникает на фоне выраженной депрессии и склонно к повторению. Аналитический пост-суицидальный период является наиболее сложным для прогноза динамики суицидального поведения, так как сохраняющаяся неразрешенность суицидального конфликта после совершения СП, в случае рецидива может

трансформировать первичную цель суицидального акта, как в сторону его демонстрации, так и в сторону отказа от существования.

Выявлены типичные ошибки курации суицидентов: недоучет изменений в психическом статусе больного, редкие осмотры суицидентов, неверная оценка суицидального риска, неадекватная психофармакотерапия, недооценка нежелательных лекарственных явлений (гиперседации, акатизии), преждевременная отмена строгого надзора за больным при сохранении суицидальных тенденций, нарушение охранительного психологического режима.

Вывод. Полученные данные доказали важность учета комплекса анамнестических сведений, социальных условий, личностных характеристик, что позволяет наряду с клиническими особенностями определять риск развития суицидального поведения у лиц, страдающих психическими расстройствами.

Выявленные закономерности формирования, динамики и структуры пост-суицидального периода легли в основу определения терапевтического и социального прогноза.

Предложенные подходы к организации суицидологической помощи способствуют оптимизации терапии, профилактики и реабилитационных мероприятий.

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## **ПРЕИМУЩЕСТВО ПЕДАГОГИЧЕСКОГО МЕТОДА “ИНСЕРТ” И ЕГО ЗНАЧЕНИЕ В ПОВЫШЕНИИ СТЕПЕНИ УСПЕВАЕМОСТИ СТУДЕНТОВ**

*Аннотация: В данной статье говорится о преимуществе метода “Инсерт”, а также об улучшении степени успеваемости занятиях и отмечаны его особенности. В том числе, раскрыты источники “Инсерта”, его методики применения, способы, критерии процессе проектирования занятий.*

*Ключевые слова: “Инсерт”, успеваемость, педагогика, методика, технология, критерии, умение, специальность, профессия, проектирование, план.*

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## **THE ADVANTAGE OF THE PEDAGOGICAL METHOD "INSERT" AND ITS IMPORTANCE IN INCREASING THE DEGREE OF STUDENT PERFORMANCE**

*Abstract: This article discusses the advantages of the “Insert ” method, as well as the improvement of the degree of academic performance in classes, and notes its features. In particular, the sources of the “Insert”, its methods of application, methods, and criteria for the design of classes are disclosed.*

*Keywords “ ” Insert”, academic performance, pedagogy, methodology, technology, criteria, skill, specialty, profession, design, plan.*

Выращивание, подготовка специалистов высокого качества, обладающими умениями и новыками, отвечающими современным требованиям сегодняшнего дня являются основными целями любого государства мира. В системе образования, государство в развитии с общественно-экономических отраслей особо внимание уделяет инновации, педагогических, технологических, методических источниках производства и это является современным содержанием их научных исследований. И это, в свою очередь, это является разработкой системы высшего образования, производство и технологические особенности промышленности, оптимальные организации практических занятий и здесь имеются ряд методов, проблемных, анализных, открытых, дискуссионных направлениях как современные формы оптимальные способы организации, проведения практических занятий.

В вузах, их системе организация учебных занятий по методу “Инсерт” совершенствует учебный процесс, поднимает на высокий уровень качества теоретических определений, в том числе, разработки методических рекомендаций и это является целью этой статьи.

В ходе применения метода “Инсерт” и анализ учебных занятий, их оценки дают возможность анализировать ситуации, педагогические положения, их анализ.

В процессе применения метода “Инсерт” занятия, их планирования, выбора новых методов проектирования, по этапное формирование профессиональных знаний появляются возможностей для повышения качества знаний и практического применения в жизни. При помощи метода “Инсерт” через него мы имеем возможность сформировать в системе общественно – экономических отношениях информационно - аналитических выводов, обобщений, рекомендаций – это и система методов.

В данном случае метод “Инсерт” выступает как разновидность “Соответствует”, “Противоречить”, “Несоответствует”, “Точно соответствует”, и это как показатели в конце занятия как педагогический, методический анализ сформируют обобщений и выводов.

Например, по теме: “Педагогическая технология – теория и практика для того чтобы определить потребностей и желаний студентов, их соответствие к теме, анализ их критического мышления можно определить при помощи ряда вопросов как система сформированности методических выводов, обобщений, их можно показать в следующем:

1. У вас сформировалось понятие педагогической технологии?
2. Вы знакомы – ли с историей педагогической технологии?
3. Учитель вам даёт достаточное знание о педагогической технологии?
4. Учитель формирует – ли у вас практического применение в жизнь педагогической технологии?
5. Учебные занятия, которые вы свои знания применяете в практику, они превратились в информационную базу?

Методика данного урока, выявленные недостатки, в последующих занятиях учитель обязательно учитёт их, рекомендуемая система, способствует поднять качество занятия. Положительная сторона, эффективность и совершенствование урока является основой проектирования педагогического мастерства, способствуют разработки методических рекомендаций.

Методика применения метода “Инсерт” отражена в следующем виде (Таблица 1)

Соответствует	Противоречить	Не соответствует	Точно соответствует
+	-	?	✓

На основе вышеизложенных вопросов, по данным результатов “+”, “-”, “?”, “✓” делаются критический анализ и выводы. На основе собранных выводов и знаков учитель предмета делает методический анализ и разрабатывает проект занятия. Например, разрабатывает новый метод, широко использует принцип наглядности и активно их использует. При этом учитель каждому элементу урока относится научно.

Метод “Инсерт” разрабатывает систему обобщений, которые способствуют улучшению методики урока, совершенствованию каждого его элемента – как основу улучшения качества знаний, модульного занятия.

В формировании ряд социометрических показателей метода “Инсерт”, ценным являются наблюдение экономических итогов, прогнозирование вариантов производства, учитывающий общие рекомендации как систему и преимущества метода.

Эффективность метода “Инсерт” на учебных занятиях попытаемся осветить в следующих:

- Заранее проектировать учебный процесс на основе учёта возможностей учителей и учеников, путём преодоления “противоречий” и на этой основе обогатить содержание урока;

- В процессе занятия у студента улучшается степень усвоения материала, тем самым формируются педагогические цели;

- В учебном процессе условия знаний совершенствуются поэтапно;

Сущность метода “Инсерт” в системе высшего образования, в общественной, экономической, культурной, технической, областях подготовки специалистов, развитие их умений и навыков, определит на основе опросов, анализа, критерий определения недостатков, их ликвидации и достижения поставленной цели являются итоговым результатом.

Экономическая результативность специалиста по всем профессиям, усвоения знаний точных наук и направлений специальностей требуют времени, срока, уменьшения затрат, планирование, модульной системы, их качества.

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## **ФОРМИРОВАНИЕ МОРАЛЬНО-ВОЛЕВЫХ КАЧЕСТВ КУРСАНТОВ ВОЕННЫХ ВУЗОВ РОССИИ В НОВЫХ ПЕДАГОГИЧЕСКИХ УСЛОВИЯХ**

*Аннотация: В статье осуществляется анализ актуальной проблемы, связанной с формированием морально-волевых качеств у курсантов военных вузов России. Обоснован авторский взгляд на необходимость формирования морально-волевых качеств у курсантов. Представлена разработка структурно-содержательной модели формирования морально-волевых качеств у курсантов.*

*Ключевые слова: морально-волевые качества, военные вузы, моделирование, структурно-содержательная модель, система воспитания.*

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## **FORMATION OF MORAL AND VOLITIONAL QUALITIES OF CADETS OF MILITARY UNIVERSITIES OF RUSSIA IN THE NEW PEDAGOGICAL CONDITIONS**

*Abstract: The article analyzes the current problem associated with the formation of moral and volitional qualities in cadets of military universities in Russia. The author's view on the need for the formation of moral and volitional qualities in cadets is justified. The article presents the development of a structural and content model for the formation of moral and volitional qualities in cadets.*

*Key words: moral and volitional qualities, military universities, modeling, structural and content model, education system.*

В настоящее время педагогическая наука применяет моделирование, помогающее представить понимание системы, свойств, взаимосвязи, проследить отношения, построенные между составляющими исследуемого объекта [9, с. 72]. По утверждению Н.М. Борытко, модель основывается на знаковых, искусственных системах, которые призваны воспроизводить свойства системы-оригинала, вполне могут замещать реальные объекты, а также способны проверить истинность и полноту знаний об изучаемой системе [6, с. 54]. По А.И. Уемову модель представляет систему, исследование которой определяет средство, позволяющее получить информацию о какой-либо другой системе [2, с. 25]. Особый интерес вызвало мнение Е.Н. Землянской, выдвигающей конкретные требования к модели: она должна быть представлена целостным процессом или явлением; должна описывать условия и средства протекания целостного процесса или явления; должна быть применима в структурном виде [8, с. 41].

На основании изучения достижений отечественной педагогики, нами была разработана структурно-содержательная модель формирования морально-волевых качества у курсантов военных вузов, способная эффективно реализовывать морально-волевое воспитание в новых педагогических условиях. Данная модель содержит несколько обязательных блоков: 1) методологический, 2) содержательный, 3) технологический, 4) оценочно-результативный.

Методологический блок позволит раскрыть цель, задачи и принципы формирования морально-волевых качеств. Данный блок позволит определиться с субъектами данного процесса, с формулированием базовых понятий исследуемого явления, рассмотреть теоретико-методологический подход.

Содержательный блок основан на научном обосновании формирования морально-волевых качеств у будущих офицеров в контексте современных требований. Соответственно теорию содержания образования, разработанную российскими учеными (В.В. Краевским, И.Я. Лернером и др.), определяют такие составляющие как [10, с. 38]: опыт познавательной деятельности, определенный ее результатами – знаниями; опыт применения различных способов деятельности, применяемых по аналогии; опыт творческой деятельности, основанный на нестандартной деятельности; опыт проявления эмоционально-ценностных отношений, на основании личностных ориентиров [10, с. 39].

Немного перефразируя слова А.Г. Асмолова, следует сказать, что морально-волевая компетентность курсанта начинается с морально-волевой компетентности преподавателя [5, с. 37]. Насколько правильно и разнообразно удастся преподавателю организовать деятельность будущих офицеров, в большей мере будет зависеть широта и богатство смысловой сферы, сформированной у курсантов в образовательно-воспитательном процессе.

Морально-волевая компетенция представляет собой ресурсное личностное качество, строящееся на моральной осведомленности, на основании волевых и моральных ценностей, на способности применения морально-волевых качеств в различных жизненных ситуациях. Данную компетенцию следует формировать на основании конкретных ситуаций, которые позволят привить морально-волевые качества у курсантов [3, с. 126].

Для эффективного формирования морально-волевых качеств у курсантов, следует создать определенные педагогические условия: 1) мотивировать курсантов к восприятию морально-волевых ценностей и норм; 2) выстраивать процесс обучения на основании применения материалов о героических подвигах солдат и военных традициях; 3) совершенствовать педагогическое мастерство и педагогическую культуру преподавательскому составу; 4) применять педагогические технологии в процессе формирования морально-волевых качеств курсантов [4, с. 22].

Технологический блок структурно-содержательной модели должны определять методы и средства обучения, организационные формы, педагогические и информационные технологии формирования морально-волевых качеств у курсантов [7, с. 242].

Формирование морально-волевых качеств должно также происходить при помощи уяснения сущности основных моральных понятий, путем привития практической реализации моральных категорий, исторических знаний и традиций русской армии, путем привития самостоятельности в определении целей в учебной, служебной и общественной деятельности [1, с. 95].

Формирование морально-волевых качеств у курсантов должно также осуществляться на основании обучения способам разрешения проблемных ситуаций, при помощи применения методики анализа эффективности деятельности, на основании сопоставления результата деятельности с поставленными целями, при помощи овладения приемами коррекции деятельности, также при помощи стимулирования самообразования и самовоспитания [11, с. 54].

Что касается оценочно-результативного блока разработанной модели, то данный этап позволит выявить эффективность формирования у курсантов морально-волевых качеств у курсантов военных вузов.

В результате выше изложенного следует отметить, что разработанная структурно-содержательная модель позволит осуществлять формирование морально-волевых качеств курсантов на основании целостного образовательного процесса. Внедрение структурно-содержательной модели позволит эффективно формировать морально-волевые качества у курсантов, которые на протяжении всего исторического периода были присущи офицерам Русской императорской, Советской, Российской армий и, которые сохраняют свою актуальность в современное время.



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## **ҚАШҚАДАРЁ ВИЛОЯТИ ЛАНДШАФТ ТУЗИЛМАСИНИ ТАВСИФЛАШ ВА ХАРИТАГА ОЛИШ МАСАЛАЛАРИ**

*Аннотация: Мақолада ландшафтшуносликнинг қисқача ривожланиш тарихи, ландшафт таълимотининг шаклланиши ва уни экологик муаммоларни бартараф этишидаги роли ва аҳамияти апрофлича ёритилган. Шунингдек, Қашқадарё вилояти ландшафтларини тавсифлаш ва харитага олиш масалалари ҳақида фикр, мулоҳаза юритилган.*

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## **DESCRIPTION AND MAPPING OF THE LANDSCAPE STRUCTURE OF KASHKADARYA REGION**

*Annotation: The article details the concept of the brief development of landscape science, its role and significance in illuminating landscape education and eliminating environmental problems. The issues of description and mapping of landscapes of Kashkadarya region were also discussed.*

*Keywords: Landscape doctrine, landscape types, geological processes, environmental problems, Kashkadarya region, mapping.*

Географияга оид адабиётлардан маълумки, ландшафт немисча сўз бўлиб, (“ланд” – “ер” ва “шафт” – “манзара” деган маънони билдиради [2]. Гарчи ландшафт таълимотининг пайдо бўлиш тарихи немис олимларига бориб тақалсада, ландшафт концепцияси ҳамда назарияси умуман ландшафтшунослик фанининг шаклланиши ва ривожланишида рус олимларнинг улкан меҳнатларини алоҳида қайд этиш лозим. Ландшафт ҳақидаги ғоя ва таълимотни вужудга келишида В.В.Докучаев ва унинг илмий мактаби намоёндаларининг хизматлари катта бўлган. Ўзбекистонда ҳам бу борада салмоқли ишлар амалга оширилган. Жумладан, ландшафтшунослик борасида улкан тажрибага эга Ш.С.Зокиров ва Х.Р.Тошовларнинг [3] таъкидлашларига кўра, мамлакатимизда ландшафтшуносликка оид дастлабки илмий изланишлар ўтган XX асрнинг 50-йиллари охирида Л.Н.Бабушкин ва Н.А.Когай томонидан Ўзбекистон худудини қишлоқ хўжалиги мақсадларида

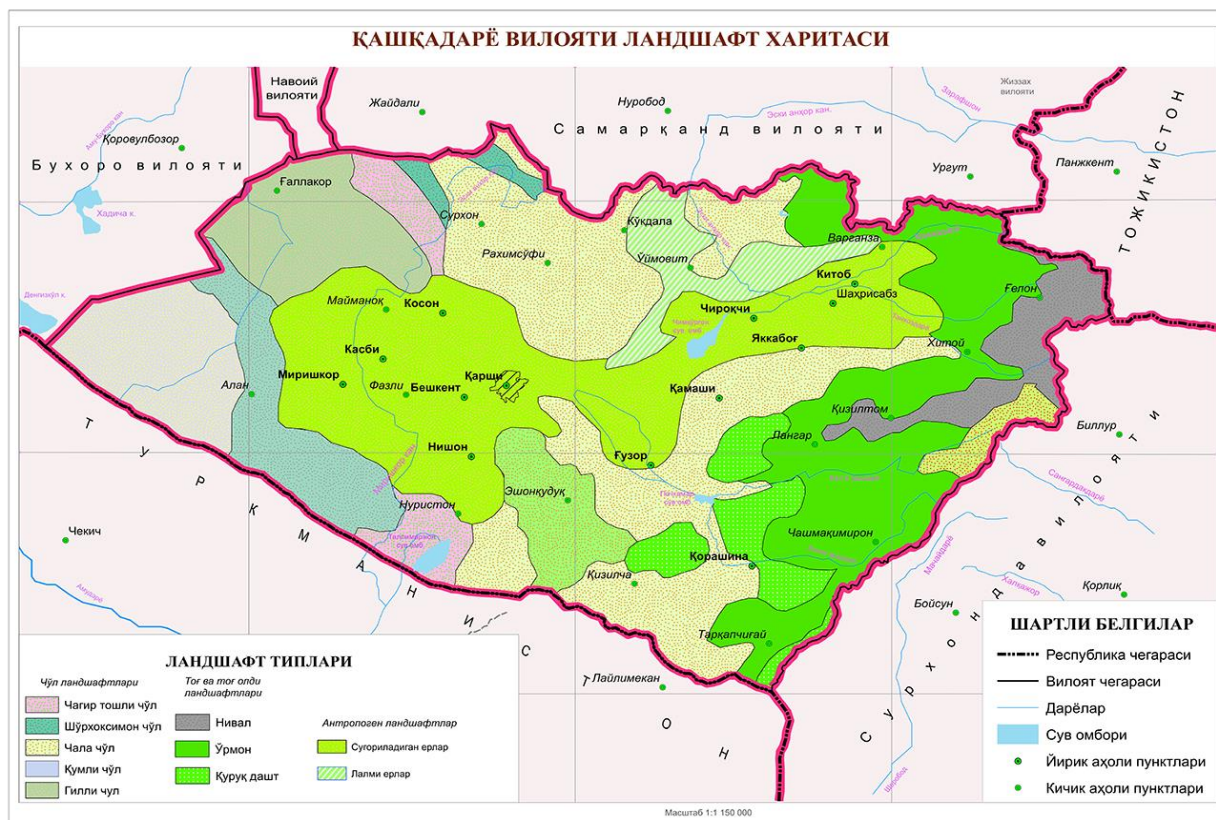
табiiй географик районлаштириш мавзуида амалга оширилган тадқиқотлари билан бошланган. Л.Н.Бабушкин ва Н.А.Когайдан сўнг мамлакатимизда ландшафтшунослик таълимоти асосидаги илмий фаолиятни ривожлантириш билан Л.Алибеков, П.Ғуломов, А.Рафиқов, А.Абулқосимов, М.Умаров, Ш.С.Зокиров, Х.Р.Тошов ва бошқалар шуғулланганлар ва бу борадаги изланишлар ҳозирда ҳам жадал давом эттирилиб келинмоқда.

Ер юзасида кечадиган барча табиий ҳодисаларнинг ўзаро таъсир ва боғлиқлик ғояси турадиган ландшафт ўзининг ҳудудий ўзгаришида яхлит тизим сифатида намоён бўлади. Айниқса, ўтган XX-асрнинг 60-йилларидан эътиборан демографик жараёнларнинг ривожланиши ва дунё аҳолисининг муттасил кўпайиб бориши, табиат ресурсларидан фойдаланишда мавжуд мейёрларни бузилиши ва ландшафт структурасида содир бўлган салбий ўзгаришларни ортиб бориши билан юзага келган экологик муаммоларни бартараф этишга қаратилган чора-тадбирларни белгилаш ва режалашда ландшафт таълимоти орқали ёндашиш катта аҳамият касб эта бошлади.

Марказий Осиё минтақаси геологик жиҳатдан узоқ ўтмишларда мураккаб ривожланиш жараёнларини бошдан кечирганлиги учун ўзига хос турли ландшафтлардан таркиб топган [2]. Хусусан, республикамизнинг жанубий-ғарбида жойлашган Қашқадарё вилояти ландшафтларнинг структурали-динамик ҳолати ва қиёфасининг ўзгачалиги айрим географлар томонидан эътироф этилган. Қашқадарё ландшафтларининг ўзига хослиги ва турли-туманлигининг асосий сабаби геологик даврларда геологик, геоморфологик ҳодисалар ва инсон фаолиятининг таъсири ҳисобланади. Қашқадарё замини текислик, тоғ олди ва тоғли ҳудудларидан иборат бўлиб, уларда республиканинг бошқа ерларида учрамайдиган Кичик Осиё, Эрон, Афғонистон ва бошқа шарқ мамлакатларига хос бўлган айрим ландшафт турлари тарқалган [4]. Вилоятнинг ландшафт структураси мураккаб бўлганлиги сабабли бу ердаги табиий географик шароитлар ҳам шунга монанд хилма-хиллик касб этган. Қашқадарё вилоятининг шимоли-шарқи тоғ ва тоғ олди, шарқ ва шимоли-ғарбий қисмлари текисликлардан (асосан чўллар дан) ташкил топган.

Қашқадарё вилоятининг тоғли минтақаларида нивал, ўтлоқи дашт, ўрмон ландшафтлари кенг тарқалган бўлса, тоғ олди ҳудудларида лёссели ва чала чўлли ландшафтлар учрайди шунингдек, текислик қисмлари асосан чўл (гипсли, гилли, шўрхоксимон ва бошқа.) ландшафтлари билан қопланган. Вилоятда тарқалган ландшафтларни тасвирлаш ва улар ҳақида кенгрок тасаввур ҳосил қилиш мақсадида Ўзбекистон Республикаси Ер ресурслари, геодезия, картография ва давлат кадастри давлат қўмитаси тасарруфидаги “Картография” илмий-ишлаб чиқариш давлат корхонасида [5] 2016-йили нашр этилган Қашқадарё вилояти ўлкашунослик атласидаги айрим маълумотларидан фойдаланган ҳолда, ҳудуднинг аерокосмик суратларини дешифровка қилиш орқали Қашқадарё вилоятининг ландшафт харитаси тузилди. Зеро, В.Г.Исаченко таъкидлаганидек [1] ландшафтлардаги ўзгаришларни ва юзага келган муаммоларни яққол намоён этишда, уларни

таҳлил қилиш ва илмий хулосаларни чиқаришда картографик асарлар (харита, атлас ва бошқ.) устувор ҳисобланади.



**1-расм. Қашқадарё вилояти ландшафт харитаси**

Хулоса. Жаҳон миқёсида кечаётган ҳозирги глобаллашув ва илмий-техник тараққиёт ўзининг юқори чўққисига чиққан ва инсон манфаатлари ўз ифодасини топиб бораётган даврда табиат ва жамият ўртасидаги муносабатлар ҳар қачонгидан ҳам кескинлашган, ҳамда бунинг оқибатида ландшафтларда турли салбий ўзгаришлар юз бериб, улардаги экологик муаммолар тобора жиддий тус олаётгани ҳеч кимга сир эмас. Мазкур экологик муаммолар хусусан, табиат ресурсларнинг қашшоқланиши ва ландшафтларида кечаётган салбий ўзгаришлар республикамиз учун ҳам ҳалокатли оқибатларни келтириб чиқариши ва экологик таназзулга олиб келиши мумкин. Мавжуд салбий жараёнлар тарқалишини инобатга олсак, муаммога ландшафт таълимоти юзасидан ёндашиш ҳамда вазиятни барқарорлаштириш йўлида илмий ечимларни излаш, уларни амалда қўллаш, бугунги куннинг долзарб ва устувор вазифаси ҳисобланади.

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## **МЕТОДИКА РАЗВИТИЯ РЕЧИ НА УРОКАХ РУССКОГО ЯЗЫКА**

*Аннотация: В статье рассматриваются основные направления речевой работы с учащимися, приводятся отдельные примеры и некоторые методические приемы работы над разными сторонами речевого развития учащихся.*

*Ключевые слова: Речевые навыки, речевые способности и умения, культура речевого общения, чтение и письмо, языковые понятия, коммуникативная компетентность.*

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## **METHODS OF SPEECH DEVELOPMENT IN RUSSIAN LANGUAGE LESSONS**

*Abstract: The article examines the main directions of speech work with students, provides individual examples and some methodological techniques for working on various aspects of students' speech development.*

*Keywords: Speech skills, speech abilities and skills, culture of speech communication, reading and writing, language concepts, communicative competence.*

Развитие речи учащихся – одна из главных задач преподавания русского языка. Речь отдельного человека – один из важнейших показателей уровня его общей культуры, общей грамотности в самом широком смысле слова. вооружить их навыками пользования устной и письменной речью в такой степени, в какой это будет им необходимо для активной творческой производственной и общественной деятельности.

Школа должна научить своих учащихся языку правильному и точному, чистому, т.е. свободному от излишних заимствований из других языков, вулгаризмов и диалектизмов ; выразительному, а потому наиболее действенному, доходчивому.

Речевые навыки школьника – это широкий круг навыков, связанных с использованием устным и письменным словом - умение построить односложный и развёрнутый ответ на вопрос , устно и письменно изложить прочитанное или прослушанное (в краткой форме и подробно),написать

сочинение на «свободную» тему, сочинения- миниатюры и т.п.) вести переписку, составлять планы, конспекты, рефераты.

Речь учащихся непрерывно развивается под влиянием различных условий (языковая среда, активность или пассивность учащихся в жизни, чтение книг и т.п.) .Задача состоит в том, чтобы сделать этот процесс организованным, целенаправленным.

Основными компонентами нашей речи является звук, слово, словосочетание, предложение и сочетание предложений (связная речь). Методика русского языка должна охватить все эти стороны языка, имея ввиду их в качестве предмета (содержания) обучения. Со звуком методика развития речи имеет дело прежде всего в его устном варианте. Устная речь, также как и письменная подчиняется определённым нормам, принятым в литературном языке. Совокупность норм правильного литературного произношения составляет отрасль лингвистической науки, известную под названием орфоэпии.

Слово, словосочетание и предложение – разноколичественные и разнокачественные компоненты языка, находящиеся между собой в сложных (и структурно, и семантически), но строгорегламентированных отношениях и служащие основой для связной речи.

Так, слово входит составной частью в словосочетание, словосочетания в их совокупности, вступив в связи между собой, составляют предложения, совокупность которых, в свою очередь, составляет связную речь.

Связная речь, как и отдельное словосочетание, - это не механическое, по формальным признакам осуществлённое соединение, она охватывает все стороны языка. Потому-то она и связная, что в ней существует внутренняя, логическая связь между её частями. При этом имеется ввиду связь между предложениями, не только рядом стоящими, но и значительно удалёнными друг от друга, такими, между которыми логическая связь устанавливается путём многоступенчатых переходов от одного логического шага к следующему. А это целая наука, и её должны практически и теоретически усвоить учащиеся.

Чем богаче активный словарный запас человека, тем содержательнее, доходчивее и красочнее его устная и письменная речь. Школа, обучая учащихся русскому языку и совершенствуя их навыки владения языком, обязана:

а) максимально, с учётом возрастных возможностей учащихся расширять их активный словарь;

б) научить использовать слова в их наиболее точном значении, выбирать наиболее точное значение, выбирать наиболее подходящие для данной ситуации и в соответствии с требованием различных жанров и стилей;

Речь возникает из потребности высказаться, а высказывания человека порождается определёнными побуждениями. Наличие мотивации речи означает, что у школьника не только есть мысли и чувства, которые могут быть выражены им, но что ему хочется поделиться, т.е. у него имеется

внутреннее побуждение к тому, чтобы высказать свои мысли и чувства. Работа по развитию речи требует разнообразных приёмов и средств. В процессе занятий меняется учебная ситуация и мотивы речи. Учащиеся то высказываются свободно, то выполняют “жёсткие задания”, которые дисциплинируют мысль и направляет в строгое русло их речевую деятельность. В работе по развитию речи необходимо сочетать и то, и другое. Чтобы дети говорили хорошо, живо эмоционально, интересно, чтобы стремились улучшить свою речь, надо “ввести учащегося в роль увлекательного рассказчика” умеющего передать замысел простыми словами. Необходимо развивать творческое воображение детей, учить видеть картины и героев, о которых он читает, представлять себе те места, тех людей, о которых говорит или пишет. Важное значение имеет целевая установка каждого самостоятельного высказывания ученика: нужно требовать от ребёнка рассказать так, чтобы слушатели поняли его мысль, представили себе описываемую картину, почувствовали бы его отношение к высказанному.

Каждый связный устный ответ ученика является упражнением в устной речи и, следовательно, он должен отвечать требованиям к содержанию, построению и оформлению речевого высказывания. Внимание детей должно акцентироваться на сторонах рассказа, как логичность и связность изложения, полнота содержания. Правильность синтаксических конструкций, лексическое богатство. Надо всё время поощрять ребёнка к высказываниям, вызывать его на разговор, так как его монологическая речь ещё не развита. Ребёнок “понимает в окружающем больше, чем может передать словами”. Желая что-то рассказать, он торопится, перескакивает с одного сюжета на другой, из-за чего его изложение делается мало понятным. Сам учение обычно не замечает своих ошибок. Он убеждён, что нашёл лучшие средства для выражения своих мыслей и чувств. Это происходит потому, что во внутренней речи все его положения были для него вполне достаточны и понятны.

Речь учащихся должна быть содержательной. Затруднения испытывает говорящий большей частью тогда, когда ему нечего сказать или когда то, о чём он хочет сказать самому ему не совсем ясно, или когда ему «не хватает слов».

«Есть два рода бессмыслицы,- утверждал А.С.Пушкин,- одна происходит от недостатка чувств и мыслей ,заменяемого словами ; другая – от полноты чувств и мыслей и недостатка слов для их выражения».

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## ИСПОЛЬЗОВАНИЕ ГЕНЕТИЧЕСКОГО АЛГОРИТМА ПРИ ВЫПОЛНЕНИИ ДИАГНОСТИКИ

*Аннотация: Для обучения заданной структуре в первую очередь проводится первоначальная подготовка преподаваемых данных: их следует разбить на разделы, которые образуют репрезентативные классы.*

*Ключевые слова: QXT (FIS), Функция genfis2 Fuzzy Logic Toolbox, FIS-Editor, Matlab.*

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## USING THE GENETIC ALGORITHM WHEN PERFORMING DIAGNOSTICS

*Abstract: To teach a given structure, first of all, the initial preparation of the taught data is carried out: they should be divided into sections that form representative classes.*

*Keywords: QXT (FIS), function genfis2 Fuzzy Logic Toolbox, FIS-Editor, Matlab.*

Правила строятся на основе этих классов. Прямое обучение выполняется с использованием алгоритма распределения ошибок и представляется отдельно для каждой сети, которая реализует условия правила и делает вывод для по этапмы:

1- этап:

1.1. Подготовка набора обучающих данных в режиме двойного просмотра, где  $J$  обозначает объем выбора.

$$\{\bar{x}(t), d(t)\} = \{\bar{x}_1(t), \dots, \bar{x}_n(t), d(t)\}, t = 1, 2, \dots, J.$$

1.2. Разобьем пространство входящих переменных на  $N$  и  $R_k$  классов. В результате сгенерирована  $N$  обучающая выборка  $(\bar{x}_j(t), d(t))$ , в ней

$j = 1, 2, \dots, J_k$ ,  $J_k - R_k$   $k$ - количество выборок, представляющих поле, а также  $J_1 + J_2 + \dots + J_N = J$ . Как уже отмечалось, вывод о том, что  $n$ -мерное

пространство разделено на  $N$  сфер ( $N < n$ ), одинаково силен в том смысле, что  $n$  систем используют фиксированное правило.

1.3. Использование генетических алгоритмов в области разделения обучающих данных. В этом случае характерной чертой является определение нескольких многомерных реляционных функций.

Если на вход алгоритма поступает значение  $\bar{x}_i$  то  $d_i = [d_i^{(1)}, \dots, d_i^{(N)}]^T$  опорные сигналы подаются на выходной слой по следующему правилу:

$$d_i^{(k)} = \begin{cases} 1, & \text{если } x_i \in R_k, \\ 0, & \text{если } x_i \notin R_k, \end{cases}$$

Тогда,  $i = 1, 2, \dots, J_k$ ;  $k = 1, \dots, N$ . В качестве альтернативы указывается область, к которой принадлежит точка.

2-этап Использование генетического алгоритма в диагностических оценочных заключениях. Соответствует классу  $R_k \{ \bar{x}_j, d^{(k)}(t) \}$ ,  $j = 1, 2, \dots, J_k$  данные поступают на вход и выход генетического алгоритма.

В этом случае  $R^{(k)}$  делает вывод для правила. Его результат прямо согласуется с  $k$ -правилом  $\bar{y}^{(k)} = f^{(k)}(x_1, \dots, x_n)$  будет бесспорным логическим завершением.

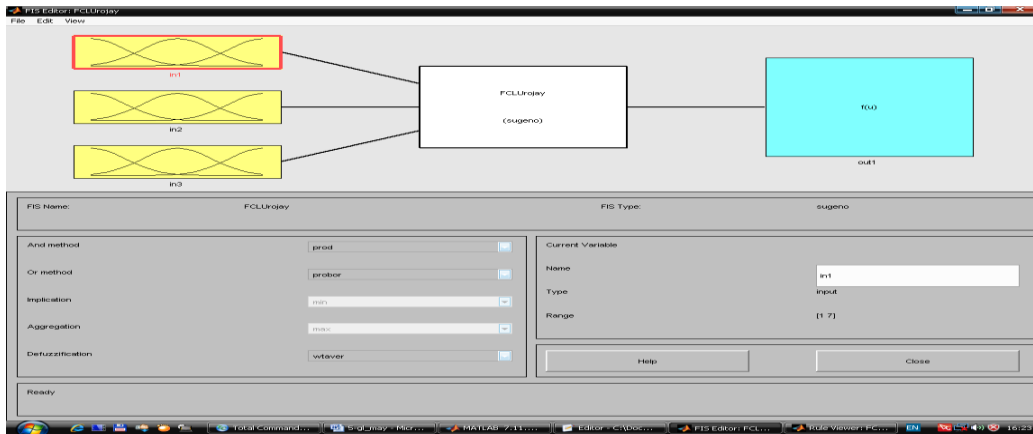
Анализ результатов показывают, что в начальный момент времени точки зоны контакта движутся к оси симметрии, а затем от оси [7].

Выполнение описанных шагов и шагов гарантирует, что условия и выводы установлены для каждого правила. Этот набор правил формирует прочную базу знаний QXT (FIS). Функция `genfis2` Fuzzy Logic Toolbox в системе Matlab используется для выполнения процесса синтеза модели типа Сугено. Синтезируемая фиксированная модель представляет собой логическую функцию, состоящую из трех входов и одного выхода. При вызове этой функции нужно указать «радиус» диагностики.

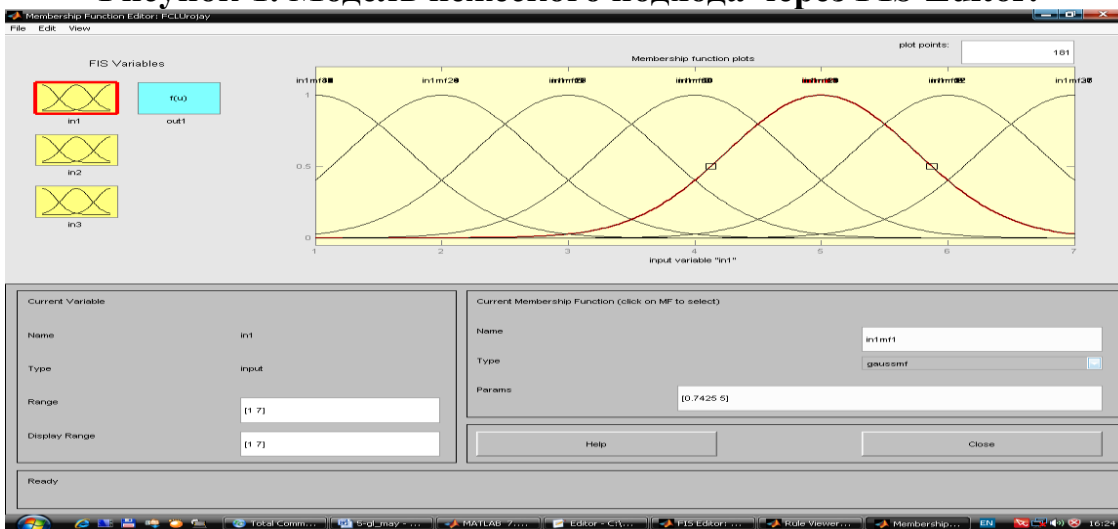
В настоящее время инновации сложно приставит в неподготовленном для этого предварителен бизнесе. Поэтому сегодня мы рассмотрим некоторые трудности внедрения новых технологий в Узбекистане [13].

Сегодня современные компьютерные технологии активно внедряются во все сферы жизнедеятельности человека, в том числе в образовании [8].

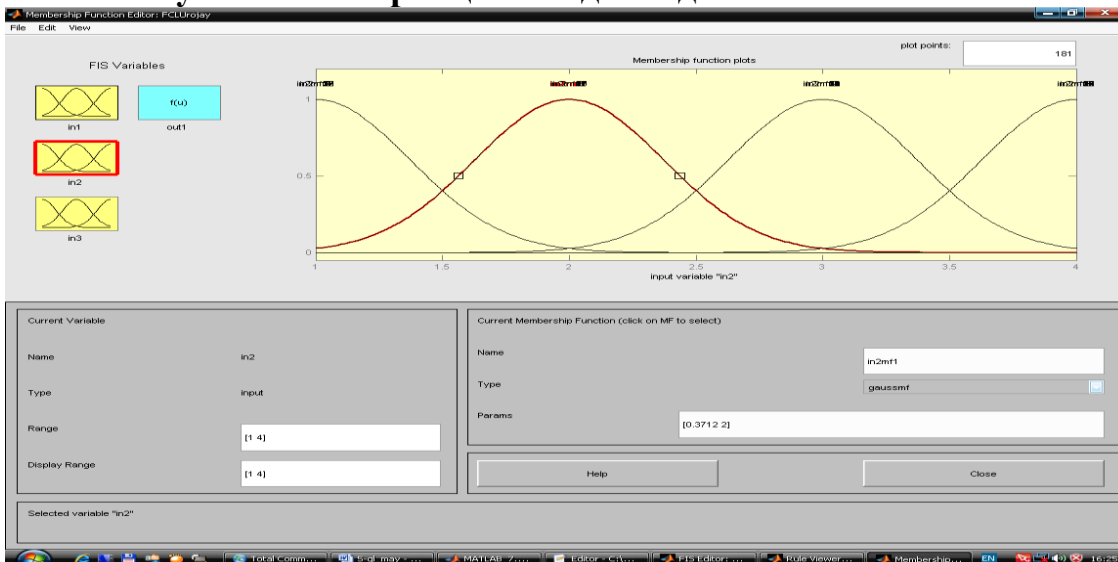
Поскольку исходные данные диагностики находятся в единичном гиперкубе, значения радиуса должны находиться в диапазоне  $[0, 1]$ . Большие значения радиусов приводят к обнаружению всего нескольких кластеров и созданию компактной базы знаний. Однако при моделировании отношений некоторые особенности можно не учитывать. Фактически, синтез хорошей фиксированной базы знаний можно осуществить в диапазоне значений радиуса  $[0, 2, 0, 5]$ . Таким образом, было получено значение радиуса 0,3. горный метод вычитающей кластеризации, используемый функцией `genfis2`, позволяет быстро реализовать строгое правило на основе данных [40]. Реализацию нестабильной модели можно визуально наблюдать в FIS-Editor среды Matlab (рисунок 1).



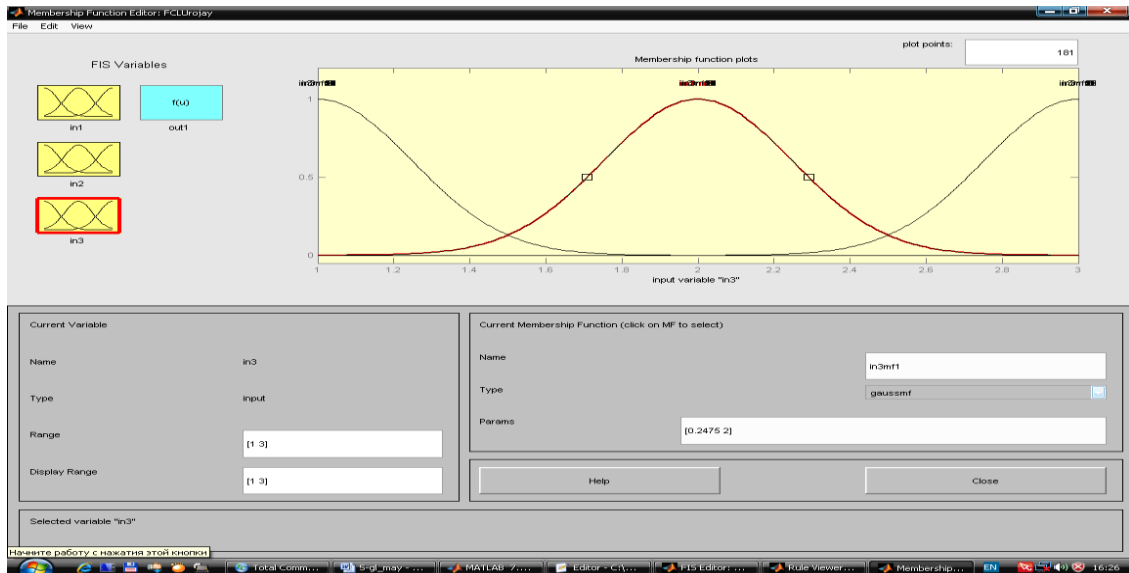
**Рисунок-1. Модель нежеского подхода через FIS-Editor.**



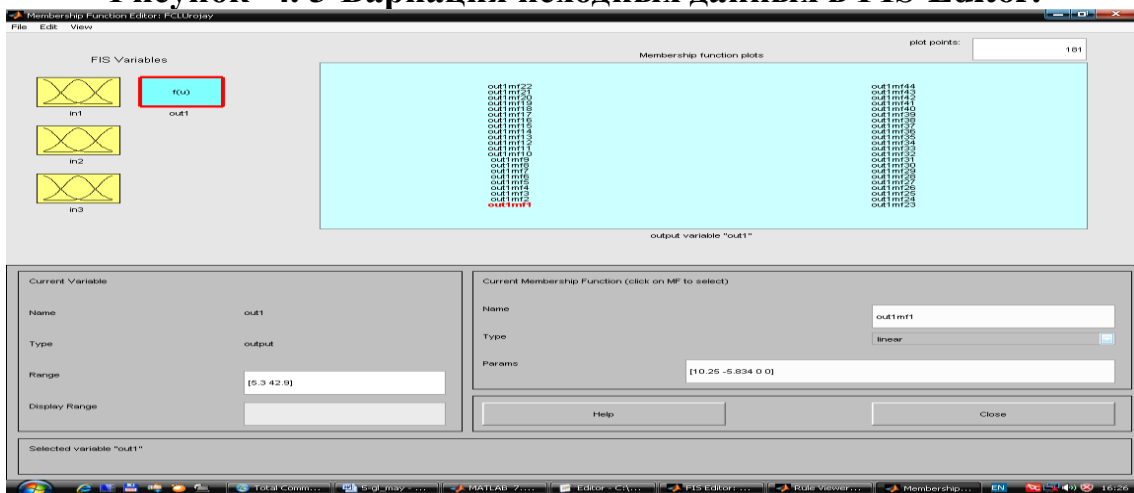
**Рисунок- 2. 1-Вариация входных данных в FIS-Editor**



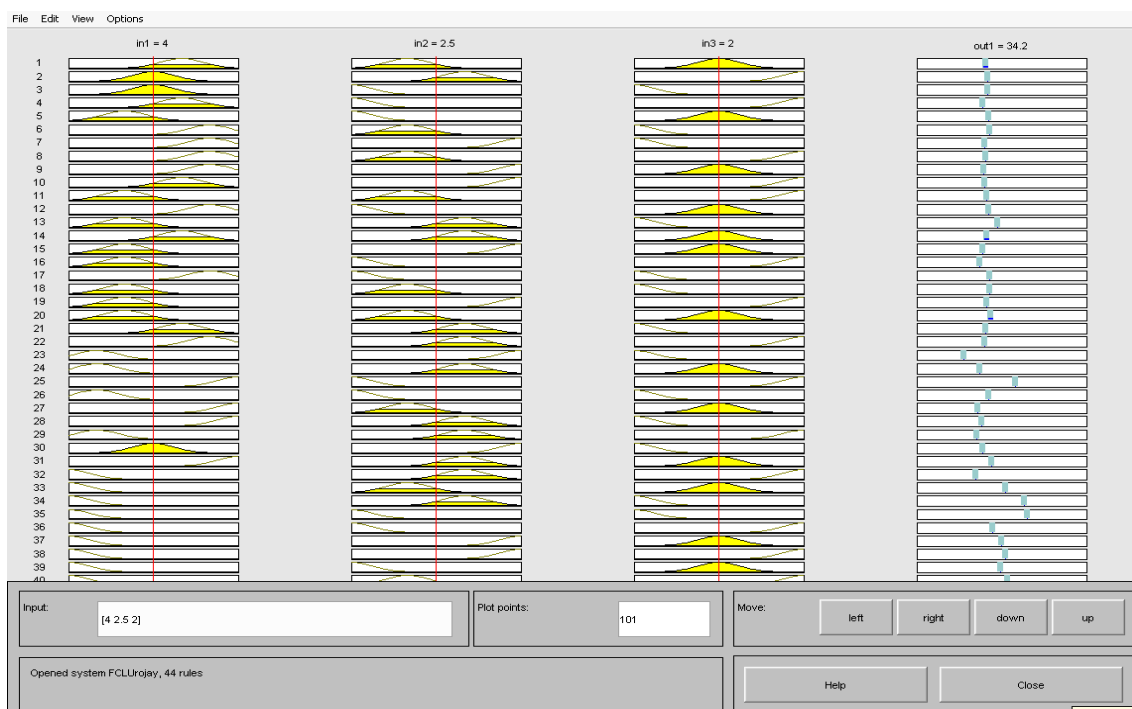
**Рисунок- 3. 2-Вариация исходных данных в FIS-Editor.**



**Рисунок- 4. 3-Вариация исходных данных в FIS-Editor.**



**Рисунок 5. Изменение выходных значений в зависимости от входа.**



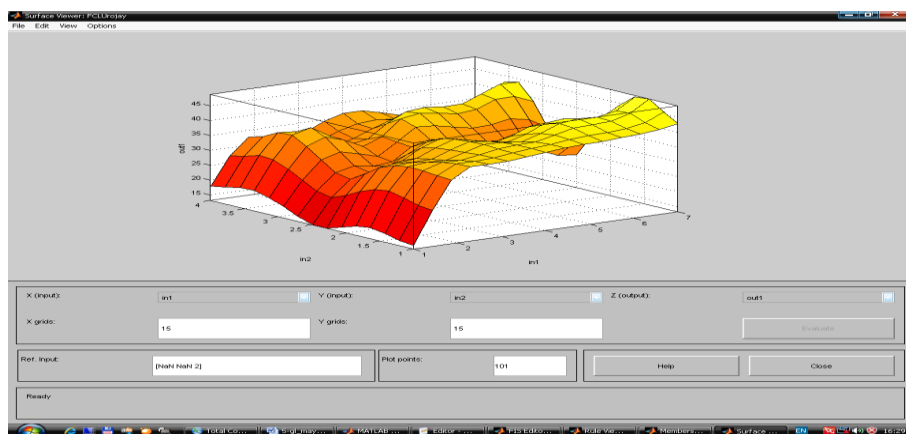
**Рисунок 6. Окно настройки и отображения базы правил.**

Можно будет настроить базу правил визуально и на показываешь результаты. Диагностическая задача, полученная для экспериментального исследования, включает 3 типа входных данных. Это также модель их индукции. Используя FIS-Editor, подробно описаны входные и выходные параметры[12].

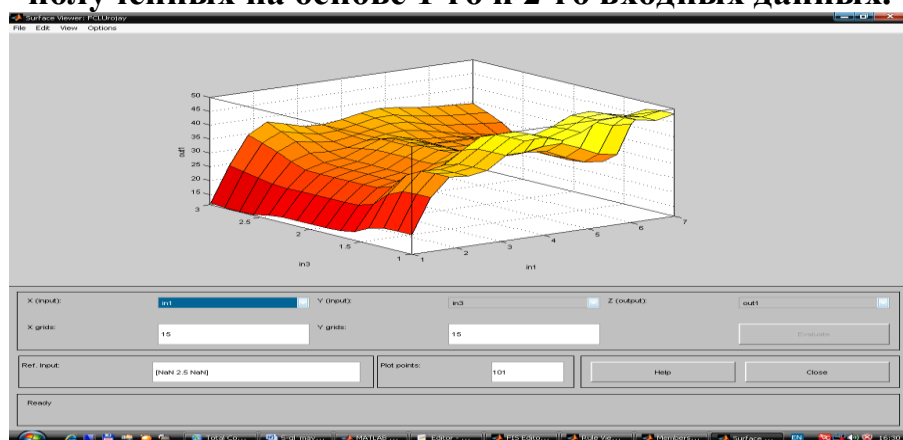
Таким образом, при обработке изображений требуется по некоторым признакам выделять некоторые однородные области изображения. [11].

В работе выведены алгоритмы улучшения изображений, основанные на теории нечетких множеств. В данном разделе состояние вопроса обработки изображений с применением концепции нечетких множеств рассматривается применительно к следующим задачам: повышение качества изображений, сегментация изображений и выделение контуров на изображениях[6].

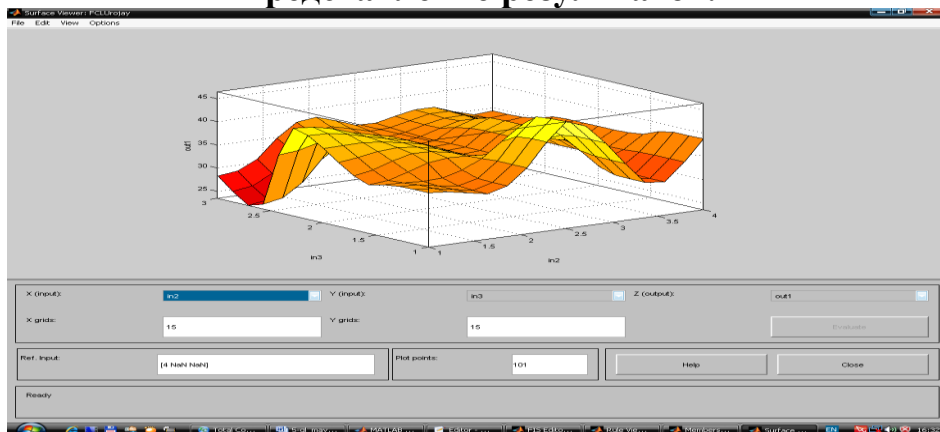
В столбцах 1, 2 и 3 на рисунке-7 показаны правила, генерируемые входящими данными. Изменяя их на определенную единицу, можно получить результаты с другим значением, т. е. Можно изменить значения типа почвы, типа удобрения и типов сортов. Соответственно, индекс производительности также варьируется в зависимости от данной модели.



**Рисунок 7. Трехмерное графическое представление результатов, полученных на основе 1-го и 2-го входных данных.**



**Рисунок 8. 1 и 3 из входных данных трехмерное графическое представление результатов.**



**Рисунок 9. Трехмерное графическое представление результатов, полученных на входах 2 и 3.**

На рисунках 7-9 показаны графики, показывающие результаты, основанные на взаимосвязи входных данных, соответственно.

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## **ОШИБКИ В БУХГАЛТЕРСКОЙ ОТЧЕТНОСТИ: ПОНЯТИЕ, ПРИЧИНЫ, ЭТАПЫ ТЕСТИРОВАНИЯ, ОСОБЕННОСТИ ИСПРАВЛЕНИЯ**

*Аннотация: статья посвящена исследованию ошибок, допускаемых в бухгалтерской отчетности, их выявлению и исправлению. В статье определены причины ошибок, рассмотрены этапы тестирования бухгалтерской отчетности на возможные ошибки, а также периоды совершения, выявления и исправления ошибок в бухгалтерской отчетности.*

*Ключевые слова: бухгалтерская отчетность, ошибка, тестирование бухгалтерской отчетности.*

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## **ERRORS IN ACCOUNTING REPORTING: CONCEPT, REASONS, STAGES OF TESTING, FEATURES OF CORRECTION**

*Annotation: the article is devoted to the study of errors made in financial statements, their identification and correction. The article identifies the causes of errors, examines the stages of testing the financial statements for possible errors, as well as the periods of making, identifying and correcting errors in the financial statements.*

*Keywords: financial statements, error, testing of financial statements.*

Бухгалтерская отчетная информация является важнейшим источником информации, средством оценки динамики ресурсов, инструментом прогнозирования и планирования доходов, расходов, способом определения рисков и инвестиционной привлекательности компании, базой для оперативного руководства компанией др. Бухгалтерскую отчетную информацию внешние пользователи используют для принятия решений, заключения сделок с партнерами, оценки платежеспособности и финансовой состоятельности, возможных рисков. Особое значение в этом смысле

приобретает годовая отчетность, поскольку именно в ней содержатся основные финансовые показатели по итогам года.

Бухгалтерская отчетность - завершающий этап учетной работы. Часто сбор недостающих данных и документов, уточнение сведений инвентаризаций, подписание актов сверок происходит в сжатые сроки. Поэтому ошибки в отчетности являются достаточно частыми. Российское законодательство предусматривает санкции (штрафы) за ошибки в отчетности. В этом аспекте повышается значение и актуальность тестирования бухгалтерской отчетности на наличие возможных ошибок и определение способов их исправления.

Ошибки встречаются во всех сферах человеческой деятельности. В самом общем виде ошибка – это несоответствие двух групп объектов, один из которых является эталоном (грамматическое правило, правильный ответ на задачу, решение, которое ведет к желаемому результату), а второй – имеет место в действительности.

Бухгалтерские ошибки проявляются в виде опечаток при переносе данных, не правильного осуществления необходимых расчетов, неправильно совершенных проводок, неправильного заполнения отчетности. Ошибки, допускаемые в бухгалтерской отчетности, могут происходить по следующим причинам:<sup>32</sup>

- недостаточная информированность бухгалтера об изменениях в законодательстве;
- недостаточная квалификация штатного бухгалтера или привлеченного по договору специалиста;
- несовершенство законодательства или его неоднозначное толкование по связанным с бухучетом вопросам;
- произвольное трактование действующего законодательства контролирующими органами;
- противоречие друг другу нормативных актов разной правовой силы, например, противоречие инструкции законам;
- разнообразие отчетных форм;
- частые изменения, вносимые в нормативно-законодательные акты.

Ошибки в бухгалтерской отчетности также могут возникать по причине переутомления или небрежности работников, неправильного или не четкого распределения обязанностей между сотрудниками бухгалтерской службы, не правильно сформированной учетной политики, применения устаревших отчетных форм.<sup>33</sup> Ошибки возможны по причине неисправности применяемой техники, хакерских атак, вирусов, не достаточной квалификации при работе со специальными бухгалтерскими программами или при необходимости в процессе работы осваивать новую бухгалтерскую программу.

<sup>32</sup> Причины ошибок в бухгалтерском учете <http://www.cool.ru/coolnews/?op=view&id=1984>.

<sup>33</sup> 10 типичных ошибок бухгалтера <https://1c-wiseadvice.ru/company/blog/10-tipichnykh-oshibok-bukhgaltera>.

От ошибок не застрахован ни один бухгалтер. Но находить и исправлять найденную ошибку необходимо.

Важным подспорьем в деле поиска ошибки является тестирование бухгалтерской отчетности. Тестирование бухгалтерской отчетности на наличие возможных ошибок проходит следующие этапы.

На первом этапе происходит определение соответствия данных по статьям отчетности за год данным, подтвержденных результатами инвентаризации.

Второй этап – проверка того, что была ли отчетность подписана уполномоченными лицами и утверждена в надлежащий срок.

Третий этап – проверка сопоставимости данных.

Пятый этап – проверка соответствия баланса отчету об изменениях капитала.

Шестой этап – проверка соответствия баланса отчету о движении денежных средств.

Седьмой этап – проверка соответствия баланса и приложения к балансу.

Восьмой этап - анализ отраженных в Главной книге (оборотной-сальдовой ведомости) оборотов и остатков по счетам.

Девятый этап - проверка переноса данных из Главной книги в бухгалтерскую отчетность.

Десятый этап – арифметическая проверка сумм статей в балансе и в других формах отчетности.

Ошибка в финансовой отчетности является следствием того, что хозяйственная операция была неправильно отражена на счетах бухгалтерского учета.

Большое значение для исправления ошибок в бухгалтерской отчетности имеют три периода: период совершения, период выявления, период исправления ошибки, которые можно представить в таблице 1.

Таблица 1

Периоды совершения, выявления и исправления ошибок в бухгалтерской отчетности

Период совершения ошибки	Период выявления ошибки	Период исправления ошибки
текущий период	отчетный год не завершен	месяц отчетного периода, когда ошибка была выявлена
отчетный год	отчетный год завершен	декабрь года, за который готовится годовая бухгалтерская отчетность
прошлый год	текущий отчетный период	исправления не вносятся после утверждения годовой отчетности

Все ошибки в бухгалтерской отчетности можно подразделить на обнаруженные до окончания отчетного года, после окончания отчетного года, в прошлом отчетном году. В первом случае исправления вносят в том месяце отчетного периода, в котором ошибка выявлена. Если выявлена ошибка в учете прошлых лет, то она рассматривается как прибыль или убыток прошлых лет.

Исправительная запись в бухгалтерской отчетности делается одним из следующих способов. Первый - повторением в той же корреспонденции, но со знаком "минус" и с одновременным совершением правильной записи по соответствующим счетам. Второй - осуществление дополнительной записи на не отраженную на счетах бухгалтерского учета сумму. Третий - выполнение обобщенной бухгалтерской записи.

**Использованные источники:**

1. 10 типичных ошибок бухгалтера <https://1c-wiseadvice.ru/company/blog/10-tipichnykh-oshibok-bukhgaltera>.

2. Причины ошибок в бухгалтерском учете <http://www.cool.ru/coolnews/?op=view&id=1984>.

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## **ПРОБЛЕМЫ МОЛОДЫХ СПЕЦИАЛИСТОВ В ОБРАЗОВАТЕЛЬНОЙ ОРГАНИЗАЦИИ**

*Аннотация: Проблеме адаптации молодых специалистов - особое внимание только несколько лет назад. Данная проблема изучена недостаточно, поэтому в своей работе мы рассмотрим суть адаптации молодых специалистов и предложим несколько рекомендаций по адаптации для работодателей.*

*Ключевые слова: молодой специалист, адаптация молодого специалиста, социально-психологическая адаптация, профессиональная адаптация.*

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## **PROBLEMS OF YOUNG PROFESSIONALS IN AN EDUCATIONAL ORGANIZATION**

*Abstract: The problem of adaptation of young professionals began to receive attention only a few years ago. This problem has not been sufficiently studied, so in our work we will look at the essence of adaptation of young professionals and offer several recommendations for adaptation for employers.*

*Keywords: young specialist, adaptation of a young specialist, social and psychological adaptation, professional adaptation.*

В настоящее время в разных регионах России, в том числе и в Иркутской области существует острая проблема нехватки педагогических кадров. В школах Иркутска не хватает 465 учителей, в Ангарске — 209, Тайшетском районе — 133, Иркутском районе — 128.

Сегодня в регионе не хватает учителей начальных классов, иностранных языков, математики, русского языка и литературы, физики и астрономии, истории и обществознании, физической культуры, а также педагогов-психологов. По прогнозам министерства образования Приангарья, общая потребность в педагогах по области к 2023 году составит более 5800 человек.

Более того, по мнению некоторых ученых, потребность в школьных учителях сохранится, поскольку подавляющее большинство не только молодых педагогов, но и опытных учителей уходят из школы по определенным причинам. Так, приступающие к педагогической деятельности учителя в большинстве случаев остаются без поддержки. Не видя перспектив, они вынуждены оставлять профессию в самом начале карьеры, не достигнув успехов или определенного уровня мастерства.

Если рассматривать средние образовательные школы, то там данная проблема назревает особенно остро. Низкая заработная плата учителей, чрезмерная умственная, а порой и физическая нагрузка, директивное управление руководителей школ – одни из многих причин кадровой проблемы в школах.

Также к одним из причин нехватки учителей в школах можно отнести то, что студенты, отучившись в высших учебных заведениях на педагогические специальности, после получения диплома идут работать на более высокооплачиваемую работу. Десятки из потока студентов идут работать по специальности. И лишь единицы из них не уходят из школ спустя пару лет [1].

В одном из образовательном учреждении г. Иркутска было проведено исследования на тему адаптации молодых специалистов среди своих сотрудников. Для выявления роли социальной и методической поддержки молодых специалистов в процессе их адаптации. В мониторинге адаптации молодых специалистов приняли участие 5 респондентов (женщины-100%), которые являются сотрудниками данного образовательного учреждение.

Среди молодых специалистов, принявших участие в опросе, большинство респондентов 70% имеют стаж работы в образовательной организации до 1-3 лет 30% респондентов – со стажем работы от 6 до 12 месяцев.

По данным мониторинга наибольшая доля молодых специалистов имеет высшее профессиональное образование 69,3%. Соответственно 30,7% молодых специалистов, работающих в Общеобразовательной школе г. Иркутска, имеют среднее профессиональное образование

Из всего сказанного можно сделать вывод, что в образовательной организации большинство молодых специалистов имеет стаж работы от 1 года до 3 лет и высшее профессиональное образование.

Выявлена сложность в адаптации молодых специалистов, так как нехватка кадров в организации и из-за этого нет системы наставничества на первое время.

В образовательной организации реализуются различные формы контроля за профессиональным ростом молодых специалистов. Наиболее распространенными формами контроля за профессиональным ростом молодых специалистов являются:

- интервьюирование молодых специалистов;
- самодиагностика молодых специалистов;

- характеристика профессионально-педагогической компетенции молодых специалистов;
- рейтинг педагогической деятельности молодых специалистов [2].

Методической поддержке молодых специалистов уделяется достаточно серьезное внимание. Проводится большое количество разнообразных мероприятий методического характера на региональном, муниципальном и межмуниципальном уровнях. В образовательной организации администрацией уделяется достаточное внимание контролю за корректностью заполнения документации, но не достаточное внимание посещению урочных и внеурочных мероприятий, проводимых молодыми специалистами.

Следует отметить, что большинство ответов молодых специалистов, указывает на то, что наиболее популярными мотивами при выборе своей профессии послужило желание работать с детьми (33,4%) и соответствие профессии способностям/личным качествам (32,3%). Мотивы выбора своей профессии «Дает большие возможности проявить творчество» составляют 16,3% ответов, а «Близка к любимому школьному предмету» - 9,5%. Иные мотивы выбора профессии (единственно возможная профессия в сложившихся обстоятельствах, выбрана по совету родителей, выбрана за компанию с друзьями) оказались менее предпочтительны.

Полученные результаты свидетельствуют о том, что переход от обучения к исполнению трудовых обязанностей в учебном учреждении в современных образовательных условиях должен быть достаточно гибким не только в связи с риском ухода из профессии начинающего педагога, но и для того, чтобы он не потерял свою индивидуальность. Необходимо добиваться интеграции профессиональных и личностных качеств в процессе вхождения в профессиональную деятельность педагога. Кроме того, данные опроса убедительно говорят о том, что первый практический опыт в качестве учителя важен для мотивации дальнейшей педагогической деятельности, поскольку молодой педагог готов учиться, многого ожидает как от собственных усилий, так и от системы в целом. А если он получает достаточную поддержку, скорее всего, его дальнейшая деятельность будет не только успешной, но и продолжительной.

В связи с представленными выше особенностями вхождения в педагогическую профессию, также и учреждения высшего образования должны следить за молодым педагогом в течение адаптивного периода, проверять эффективность и качество базового педагогического образования. Выпускникам высшего учебного учреждения необходимо самостоятельно оценивать, насколько хорошо они подготовлены к реалиям практической работы в школе. На основании собственного анализа высшее учебное учреждение и молодой специалист должны составлять отзывы, помогающие вузам корректировать соответствующие учебные программы. Основная цель совместной работы по оценке адаптации.

На основе проведенного исследования, обобщив данные, мы выделили следующие предложения рекомендательного характера для руководителей по адаптации начинающего педагога в СОШ. Ключевыми участниками являются: директор, (наставник) куратор, молодой педагог[5].

В заключении рассмотрим некоторые пути решения проблемы нехватки квалифицированных педагогических кадров в образовательной организации г. Иркутска:

- Информирование по основным правилам, инструкциям, условиям труда (Правила внутреннего трудового распорядка, Должностная инструкция, Инструкция по ТБ, Устав школы, Охрана труда (общие требования), знакомство с ролью профсоюзной организации, список необходимых телефонов, адрес сайта, каким образом и к кому конкретно обращаться по ключевым вопросам образовательного процесса, памятки по инструктажу учащихся, правила ведения школьной документации (заполнение журналов, дневников, формы отчета и т.д.), правила по оказанию первой помощи и др.);

- Подготовка рабочего кабинета (Определение рабочего кабинета молодого педагога. В случае если кабинет не может быть предоставлен необходимо оповестить его до приема на работу.);

- Информация о режиме и условиях работы (Рассказать об особенностях организации, режиме работы, предоставление и назначение методического дня, проведения внешкольных мероприятий. Разъяснение модели заработной платы, частота и форма выдачи ЗП, компенсации, социальные выплаты для молодого специалиста, надбавки, доплаты, стимулирующие выплаты и др. Составить наиболее удобный график работы для начинающего педагога.);

- Общее представление об учреждении (Рассказ об истории организации, раскрытие миссии учреждения, долгосрочные планы развития. Объяснение специфики школы, традиции организации, имидж. Проведение экскурсии по школе, показать места отдыха, учительскую, туалет, столовую, гардероб, медицинский кабинет, библиотеку эвакуационные выходы и т.д. Представление портфолио достижений школы.);

- Представление молодого педагога коллегам;

- Назначение наставника молодому педагогу;

- Проведение ежедневной рефлексии рабочего дня (Совместная работа с наставником самоанализ начинающим педагогом ситуаций, происходящих на уроках. Выявление причин и предупреждение неудовлетворенности работой молодого педагога. Проведение бесед, консультаций, тренингов по саморегуляции эмоционального состояния молодого педагога.);

- Контроль деятельности молодого педагога (Посещение уроков и диагностика профессиональных затруднений в процессе планирования уроков начинающим педагогом; изучение документации. Проведение опроса



учащихся, родителей на предмет удовлетворенности преподавательской деятельности молодого специалиста.) [4].

Я считаю, что данная проблема одна из тех проблем в современном образовании РФ, которую стоит решать в первую очередь. Ведь учителя — это та «рука», которая переводит ребенка во взрослый мир, а ребенок, не получивший достаточных знаний, умений и навыков для дальнейшего обучения или же трудоустройства, рискует стать неблагополучным членом общества.

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## **СРАВНИТЕЛЬНАЯ ХАРАКТЕРИСТИКА АНТРОПОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ ГИМНАСТОВ И АКРОБАТОВ**

*Аннотация: В статье проводятся исследования по проведению сравнительной характеристики морфологического статуса спортсменов, специализирующихся в спортивной гимнастике и акробатике.*

*Ключевые слова: Гимнастика, акробатика, физическая нагрузка, спортсмен, длина плеча, предплечья, кисти, голени, обхват головы, пропорциональный, анализ, длина тела, характеристика, морфология*

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## **COMPARATIVE CHARACTERISTICS OF ANTHROPOMETRIC INDICATORS OF GYMNASTS AND ACROBATS**

*Abstarct: The article conducts research on the comparative characteristics of the morphological status of athletes specializing in artistic gymnastics and acrobatics.*

*Keywords: Gymnastics, acrobatics, physical activity, athlete, shoulder length, forearms, hands, shins, head circumference, proportional, analysis, body length, characteristic, morphology*

Введение. Гимнастика-ведущая дисциплина в подготовке специалистов по физической культуре продолжает оставаться в центре внимания мирового спорта. Известно, что телосложение, являясь материальной основой физических качеств, оказывает влияние на их проявление, причем на уровне высших достижений может оказаться решающим в борьбе за победу. Телосложение определяется комплексом показателей: тотальными и парциальными размерами тела, пропорциями, силой определенных групп мышц и другими параметрами.

Разработка стандартов, физического развития и других показателей, отражающих их оптимальное состояние, создает базу для дальнейшего совершенствования системы отбора (1,2,6).

В литературе по спортивной морфологии практически отсутствуют сведения о вариативной изменчивости, соотношении и структуре

антропометрических показателей у спортсменов, специализирующихся в близкородственных специализациях.

Задачей исследования было проведение сравнительной характеристики морфологического статуса спортсменов, специализирующихся в спортивной гимнастике и акробатике, и на основе типового набора соматических показателей определения «расстояния» между избранными специализациями.

Материал и методы исследований. Обследовано 60 спортсменов в возрасте 16-17 лет (спортивная гимнастика-36, акробатика-24) с соблюдением условий, обеспечивающих точность и сопоставляемость результатов. У обследуемых спортсменов сняты 25 антропометрических параметров: продольные, поперечные, обхватные размеры тела, толщина кожно-жировых складок. Полученные данные обработаны методами математической статистики и подвергнуты дисперсионному анализу.

Результаты исследования и их обсуждение. У обследуемых спортсменов двух специализаций по результатам проведенных измерений вычислены основные антропометрические параметры, включая среднюю арифметическую дисперсию, среднее квадратичное отклонение и вариативную изменчивость. В таблицах 1 и 2 сопоставлены внутригрупповые и межгрупповые различия в показателях тотальных и парциальных размерах тела у гимнастов и акробатов. Длина тела у всех испытуемых колеблется  $166,67 \pm 1,25$  до  $168 \pm 0,78$ . Более стабильными оказались показатели средних величин по массе тела:  $61,33 \pm 1,43$  у гимнастов и  $61,00 \pm 0,92$  у акробатов.

Анализ данных по массе и длине тела показал, что двигательная активность гимнастов и акробатов оказывает специфическое влияние на массу и длину тела и интерпретируется как оптимальное соотношение для обоих видов специализации. Внутригрупповые средние квадратичные отклонения минимальны и практически одинаковы для таких признаков как, длина плеча, предплечья, кисти, голени, обхват головы, диаметр среднегрудинного сагиттального, тазогребневого и диаметр дистальной части плеча. Показатели толщины кожно-жировых складок, вятых по регионам тела, обладают минимальной изменчивостью. Однако выявлены различия в размерных характеристиках толщины кожно-жировых складок на задней поверхности плеча, (ЗПП), под лопаткой, на боку и на задней поверхности голени (ЗПГ), значения которых оказались больше у гимнастов, чем у акробатов.

**Таблица 1.**

**Тотальные размеры тела спортсменов,  
специализирующихся в гимнастике и акробатике**

Признаки	Параметры	Спортивная гимнастика n=36	Акробатика n=24
Длина тела	М±м (см)	166,67±1,25	168,0±0,78
	Дисперсия	24,89	6,16
	Ср. кв. отклонение	4,99	2,48
	Вариация	0,03	0,01
Масса тела	М±м (см)	61,33±1,43	61±0,92
	Дисперсия	32,89	6,60
	Ср. кв. отклонение	5,73	2,91
	Вариация	0,09	0,05
Обхват грудной клетки	М±м (см)	87,00±1,28	90,20±0,46
	Дисперсия	6,50	2,16
	Ср. кв. отклонение	5,13	1,47
	Вариация	0,03	0,02

Значительную изменчивость проявляют обхватные размеры по сравнению с продольными размерами. Внутригрупповая изменчивость несомненно очевидна для обхвата плеча, бедер, голени, живота, диаметра среднегрудинного поперечного.

Как видно из таблицы 2, на основании оценок средних арифметических величин были рассчитаны внутригрупповые средние квадратичные отклонения, дисперсия. Из большинства обхватных размеров средние квадратичные отклонения и значения дисперсий оказались большими и у гимнастов, и у акробатов. Величины средних квадратичных отклонений достигают от 5,44 до 9,76. Полученные результаты свидетельствуют о том, что обхватные размеры по сравнению с продольными обладают значительной изменчивостью. В литературе имеются данные о том, что длиннотные размеры генетически более жестко детерминированы и в большей степени зависят от наследственности (3,4) и практически не изменяются у мужчин и женщин в возрасте 20-59 лет.

Различия в средних арифметических величинах и средних квадратичных отклонений, наблюдаемые между отдельными возрастными группами, связаны с различиями в условиях жизни, либо периодами роста у людей различного возраста (5). У обхватных размеров соотношения не столь определены, как в случае продольных размеров. В данном случае можно предположить, что обхватные размеры действительно зависят в большей

степени от влияний внешних факторов, в частности, многолетних специфических физических нагрузок, то есть для этих признаков наследственная специфика проявляется в меньшей степени.

Приведенные данные можно интерпретировать как сбалансированное соотношение длиннотных размеров тела и окружностей отдельных частей тела у гимнастов и акробатов. Изменчивость большинства обхватных размеров тела свидетельствует о возможности целенаправленного совершенствования мышц пояса верхней конечности, плеча, предплечья, груди, бедра, голени, а также целесообразности поиска эффективных способов контроля за морфофункциональным состоянием указанных групп мышц.

В связи с необходимостью выделения межгрупповой изменчивости проведен дисперсионный анализ средних арифметических величин и средних квадратичных отклонений тотальных и парциальных размеров тела для обследуемых выборок спортсменов. Вычислена общая, внутригрупповая и межгрупповая вариации и дисперсии.

**Таблица 2.**

**Парциальные размеры тела спортсменов, специализирующихся в гимнастике и акробатике**

Признаки		Обсл. континг. n=50	M±m (см)	Дисперсия	Ср. квадр. отклонен.	Вариация
1. Длина	Плеча	Спорт гимнастика	29,00±0,57	2,00	1,41	0,05
		Акробатика	31,20±0,46	2,16	1,47	0,05
	Предплечья	Спорт гимнастика	26,33±0,19	0,22	0,47	0,02
		Акробатика	28,60±0,55	3,04	1,74	0,07
	Кисти	Спорт гимнастика	20,00±0,49	-1,8	1,20	-0,07
		Акробатика	20,00±0,45	2,00	1,41	0,01
	Бедра	Спорт гимнастика	44,67±2,64	0,22	6,47	0,09
		Акробатика	41,60±1,19	14,24	3,77	0,04
Голени	Спорт гимнастика	39,00±0,57	2,00	1,41	0,08	
	Акробатика	41,50±1,07	11,44	3,38	0,03	
2. Обхват	Головы	Спорт гимнастика	56,67±0,77	3,56	2,89	0,03
		Акробатика	57,00±0,49	2,40	1,55	0,05
	Шеи	Спорт гимнастика	36,67±0,77	3,56	1,89	0,02
		Акробатика	36,60±0,25	0,64	0,80	0,06
	Живота	Спорт гимнастика	74,00±1,76	18,67	18,67	0,05
		Акробатика	75,60±1,29	16,64	16,64	0,03

	Плеча	Спорт гимнастика	34,00±0,41	1,00	1,00	0,10
		Акробатика	31,00±1,00	10,00	3,16	0,06
	Предплечья	Спорт гимнастика	27,00±0,65	2,67	1,63	0,04
		Акробатика	27,00±0,35	1,20	1,10	0,04
	Голени	Спорт гимнастика	34,00±1,20	3,67	2,94	0,09
		Акробатика	36,00±	3,20	1,79	0,05
Бедрa	Спорт гимнастика	48,33±2,22	29,56	5,44	0,11	
	Акробатика	53,00±1,34	18,00	4,24	0,08	
3.Ширина	Плеч	Спорт гимнастика	44,33±0,19	0,22	0,47	0,01
		Акробатика	43,40±1,07	11,64	3,38	0,08
4.Диаметр	Ср .груд попереч.	Спорт гимнастика	27,33±0,69	2,89	1,79	0,06
		Акробатика	28,00±0,53	2,80	1,67	0,06
	Ср. груд сагиттал.	Спорт гимнастика	18,33±0,96	5,56	2,36	0,13
		Акробатика	17,40±0,51	2,64	1,62	0,09
	Тазогребнев	Спорт гимнастика	21,33±1,07	6,89	2,62	0,12
		Акробатика	25,60±0,95	9,04	3,01	0,12
	Дист. части плеча	Спорт гимнастика	8,25±0,53	0,90	1,30	0,01
		Акробатика	7,37±0,60	0,80	1,90	0,12
Дист. части бедра	Спорт гимнастика	12,40±0,59	5,12	1,45	-	
	Акробатика	9,87±0,50	2,54	1,59	0,16	
5.Жировые складки	ЗПП	Спорт гимнастика	8,33±0,69	2,89	1,20	0,20
		Акробатика	6,25±0,47	2,19	1,48	0,24
	Под. лопат.	Спорт гимнастика	8,67±0,51	1,56	1,25	0,14
		Акробатика	6,75±0,41	1,69	1,30	0,19
	На боку	Спорт гимнастика	8,67±1,07	6,89	2,62	0,30
		Акробатика	6,00±0,59	3,50	1,87	0,31
ЗПГ	Спорт гимнастика	9,00±0,88	4,57	2,16	0,24	
	Акробатика	8,50±0,57	1,80	1,80	0,21	

В результате исследований выявлен набор информативных антропометрических признаков, позволяющих классифицировать спортсменов по специализациям. При межгрупповом сопоставлении информативных антропометрических показателей выявлено достоверное отличие между представителями двух специализаций. Величина этого «расстояния» составила 2,4%. Так как величина межгруппового расстояния

между обеими специализациями Оценивается как незначительная, то сходство соматических признаков гимнастов и акробатов позволяет считать возможным вероятность перехода спортсменов из одной специализации в другую. Эта взаимосвязанность объясняется характером спортивной деятельности как в гимнастике, так и в акробатике, где к организму спортсменов предъявляются требования высокого уровня развития качеств гибкости, точности и четкой координации движений.

#### Выводы

1. У гимнастов и акробатов антропометрические показатели массы, длины тела, окружности грудной клетки, длины рук и ног находятся в оптимально сбалансированном соотношении.

2. Выявленная значительная изменчивость обхватных размеров отдельных частей тела гимнастов и акробатов свидетельствует о большей зависимости этих признаков от воздействий факторов внешней среды и возможности в спортивном совершенствовании мышц пояса верхней конечности, плеча, предплечья, груди, бедра, голени.

3. Гимнастика и акробатика являются близкородственными специализациями не только по характеру двигательной деятельности, но и по показателям соматического статуса спортсменов. «Расстояние» по соматическим признакам между сравниваемыми специализациями составило 2,4%.

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## **ФОРМИРОВАНИЕ МОДЕЛИ УПРАВЛЕНИЯ ЗНАНИЯМИ В БИЗНЕС-ОРГАНИЗАЦИИ**

*Аннотация: В статье обоснована актуальность управления знаниями в современных условиях, характеризующихся радикальными изменениями в информационных и коммуникационных технологиях, глобализацией, усиления конкуренции. Предложены основные элементы модели управления знаниями в бизнес-организации и мероприятия, которые необходимы для реализации эффективного процесса управления знаниями.*

*Ключевые слова: информационно-коммуникационные технологии, глобализация, конкурентные преимущества, инновации*

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## **FORMATION OF A KNOWLEDGE MANAGEMENT MODEL IN A BUSINESS ORGANIZATION**

*Abstract: The article substantiates the relevance of knowledge management in modern conditions, characterized by radical changes in information and communication technologies, globalization, increased competition. The main elements of a knowledge management model in a business organization and activities that are necessary to implement an effective knowledge management process are proposed.*

*Keywords: information and communication technologies, globalization, competitive advantages, innovation*

Современная глобальная экономика чрезвычайно динамична и изменчива, с высокой миграцией трудовых ресурсов, глобальной конкуренцией и постоянными изменениями в экономике. Знания играют ключевую роль и становятся важным ресурсом и источником высочайшего качества и конкурентных преимуществ. В результате современная бизнес-организация не может эффективно конкурировать на рынке без наличия высококвалифицированных менеджеров и сотрудников. Для



конкурентоспособности людей и организаций жизненно важно постоянно учиться и развивать навыки для быстрой и гибкой адаптации к изменениям в их среде. Приобретение новых знаний, а также сохранение и эффективное использование существующих становится важным фактором развития организаций. Поэтому управление знаниями считается серьезной проблемой для современных бизнес-организаций [4].

В последние десятилетия мы стали свидетелями радикальных изменений в информационных и коммуникационных технологиях (ИКТ) и появления феномена «повсеместных коммуникаций», когда люди имеют доступ к информации и знаниям через различные «умные» устройства в любом месте и в любое время [6]. Это приводит к изменению образа жизни, работы и учебы. Прежде всего, это усовершенствование средств доступа к информации и знаниям - возможности беспроводного и удаленного подключения периферийных устройств к компьютеру, персональных приемников спутниковых систем глобальной навигации и т.д. Во-вторых, значительно улучшены способы организации информации и знаний [2, 5]:

- интеграция объектно-ориентированных и традиционных баз данных;
- ведение сложных данных / звука, видео, графики /;
- управление сайтом;
- улучшение средств доступа и поиска информации;
- использование современных методов сжатия информации;
- увеличение скорости передачи информации;
- использование высокоскоростных каналов;
- улучшение сетевых протоколов.

В настоящее время высокотехнологичные инструменты проникают во все виды экономической и социальной деятельности. Динамичное развитие ИКТ оказывает серьезное влияние на людей, организации, экономику и общество в целом и является причиной: • новых моделей жизни, работы и общения; • новых форм производства и услуг; • повышение социальной роли личности, знаний и образования. Мир движется к новому этапу своего социального развития, который в литературе называется по-разному - информационное общество, общество знаний, новая экономика, интернет-экономика и другие. Независимо от используемой терминологии, использование ИКТ дает серьезные преимущества для бизнеса:

- сокращение затрат на персонал, хранение материалов, распространение продуктов, обслуживание офисов и коммуникаций;
- повышение скорости обработки данных, доставки материалов, взыскания дебиторской задолженности (денежных потоков), реализация бизнес-процессов;
- повышение качества обслуживания клиентов, обеспечение достоверности данных, выполнение запросов, устранение ошибок и др.

Управление знаниями влияет не только на глобальное развитие мира, но и на развитие каждой отдельной организации и человека. Глобализация рынков и глобальная конкуренция, растущая миграция людей, непостоянство

финансового капитала, передача производства на аутсорсинг в страны с низкими издержками и создание электронных рынков затрагивают даже самые маленькие компании. Можно перечислить следующие важные факторы, которые показывают ключевое значение знаний в компаниях [1, 3]:

- роль ИКТ и Интернета в глобализации бизнеса и конкуренции;
- создание новых рыночных условий и глобальных рынков;
- изменение бизнес-моделей и способов увеличения стоимости.

С развитием информационных и коммуникационных технологий и Интернета транзакционные издержки (а точнее, затраты на поиск и обработку информации и коммуникации) уменьшаются, что приводит к значительному облегчению координации отношений между производителями, торговцами и покупателями. Создаются цепочки поставок, которые обеспечивают постоянный поток информации между различными участниками и, как результат, значительную экономию ресурсов, места для хранения, увеличение денежного потока и в то же время поддерживают высокий уровень удовлетворенности клиентов.

Доступ к информации - одна из основных предпосылок идеальной конкуренции на рынке. Таким образом, с одной стороны, снижаются затраты на производство и доставку, а с другой стороны, благодаря глобальной конкуренции, ожидания клиентов относительно более низкой цены и более высокого качества укрепляются. Таким образом, рынок вынуждает бизнес-организации искать способы снизить свои затраты и цены при сохранении качества на фоне все большего числа конкурентов по всему миру. Единственная возможность для компаний - это создавать новые продукты и услуги, позволяющие реализовать более высокую добавленную стоимость. То есть инновации (и новые знания) являются ключом не только к развитию, но даже к удержанию бизнес-организаций на рынке.

Новые рыночные условия, связанные с глобальными поставщиками сырья, масштабной миграцией людей и высокой волатильностью на финансовых рынках, представляют собой новую серьезную проблему для компаний. Взаимосвязь многих макроэкономических факторов, влияющих на глобальные экономические процессы в мире, чрезвычайно сложно регулировать и прогнозировать. Эти факторы определяют высокий уровень риска и непредсказуемости бизнес-проектов и приводят к более высоким требованиям к доходности. Поэтому только проекты, связанные с инновациями и применением новых знаний, могут приносить необходимую высокую отдачу.

Улучшение общего обмена информацией и знаниями между компаниями и клиентами помогает компаниям лучше понимать свои отношения с клиентами и целенаправленно управлять ими. Основываясь на лучшем анализе и знании предпочтений и вкусов, бизнес-организации могут все больше «слышать», чего хотят клиенты, и как они видят добавленную стоимость и потребность в улучшении продуктов и услуг. В этом смысле компании могут улучшить общий процесс создания стоимости, разрабатывая

совершенно новые бизнес-модели, адаптированные к потребностям клиентов. Благодаря новым технологиям и знаниям, которые компании имеют о своих клиентах, можно комбинировать различные способы получения дохода, чтобы помочь снизить конечные цены, повысить удовлетворенность клиентов и увеличить долю рынка. Таким образом, управление знаниями на микроуровне помогает бизнес-организациям осознать не только свои преимущества и недостатки, но и получить больше конкурентных преимуществ перед другими участниками рынка.

В современной крайне нестабильной и конкурентной деловой среде, чтобы противостоять конкуренции, бизнес-организации стараются разрабатывать новые продукты более высокого качества, выводить их на рынок в более короткие сроки и обеспечивать большее удовлетворение потребностей клиентов. Потенциальные трудности в достижении этих целей лежат не только в управлении персоналом и капиталом, но и в большей степени связаны со способностью эффективно управлять знаниями сотрудников. Современная рабочая среда чрезвычайно сложна, потому что все больше и больше профессий требуют обработки растущих данных, информации и знаний.

Мы можем рассматривать управление знаниями в бизнес-организациях как совокупность взаимодействий и обменов в рамках трех систем или между этими системами, а именно персоналом организации, самой организацией как коллективным образованием и внешней средой, состоящей из других организаций и социального контекста. Эта форма анализа дает нам выделить основные элементы модели управления знаниями целей и мероприятия, которые необходимо учитывать при реализации стратегии управления знаниями в бизнес-организации (табл. 1).

Таблица 1 - Элементы модели управления знаниями в бизнес-организации

Элемент	Мероприятия
Улучшение передачи знаний и навыков, а также сотрудничества между сотрудниками.	Наставничество, командная работа, сообщества практикующих.
Перенос индивидуальных знаний сотрудников в информационные системы организации.	Написание документов, моделей знаний, подготовка к использованию информационных ресурсов
Использование информационных систем организации для обучения и поддержки производительности персонала.	Распространение документов, информационных инструментов, систем поддержки производительности.
Интеграция информационных систем и продуктов в деятельность организации.	Разработка баз знаний, разработка систем поддержки информации и знаний.
Повышение уровня знаний и навыков клиентов, поставщиков и партнеров за счет повышения квалификации сотрудников.	Обмен персоналом, семинары для клиентов, публикации в журналах или конференциях.
Повышение уровня знаний и навыков сотрудников за счет их взаимодействия с клиентами, поставщиками и партнерами.	Интеграция заказчиков и поставщиков в проекты, систематические консультации.
Содействие обмену знаниями между клиентами и поставщиками, а также обогащению внешней среды.	Встречи профессиональных ассоциаций, отраслевые семинары, отраслевые публикации.
Аккумуляция и использование знаний о внешней среде	Отраслевые промышленные обзоры, наблюдение за технологиями, партнерство университетов и бизнеса.
Используйте информационные системы организации и ее продукты, чтобы улучшить знания и навыки клиентов, поставщиков и партнеров.	Обзоры рынка, распространение анализов продуктов, деятельность торгового персонала.
В целом, организация создания добавленной стоимости во всей системе.	Стратегическое планирование, интеграция систем управления знаниями.

Каждый день сотрудники получают новые данные и информацию по электронной почте, голосовой связи и обмену мгновенными сообщениями, находят их в корпоративных базах данных или в Интернете. Помимо всех этих очевидных источников информации и знаний, сотрудники участвуют во встречах, конференциях и других формах общения и обмена знаниями. Эта информационная перегрузка требует серьезных усилий в управлении информацией и знаниями, чтобы работа стала более эффективной и продуктивной.

Подводя итог, можно сделать вывод о том, что управление знаниями является серьезной проблемой для современных бизнес-организаций, поскольку знания в настоящее время играют ключевую роль и становятся важным ресурсом и источником высочайшего качества и конкурентного преимущества. Умение использовать управление знаниями быстро становится критически важным управленческим навыком, потому что будущее принадлежит людям, которые используют голову, а не руки. Одна из важнейших задач связана с формированием в каждой бизнес-организации

модели управления знаниями. В статье предложены элементы такой модели, которая позволяет эффективно управлять контентом, облегчать сотрудничество, обеспечивать помощь сотрудникам в поиске необходимых знаний, а также учиться и развиваться путем принятия решений на основе подробных актуальных, хорошо интерпретируемых данных, информации и знаний.

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## **УПРАВЛЕНИЕ ЗНАНИЯМИ: СОДЕРЖАНИЕ, ФУНКЦИИ, ПРИНЦИПЫ**

*Аннотация: В статье раскрывается содержание процесса управления знаниями, выделены три его аспекта: функциональный, операционный и экономический. Выделены функции и принципы управления знаниями в современных условиях.*

*Ключевые слова: навыки, сотрудники, компетентность, нематериальные активы, информация*

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## **KNOWLEDGE MANAGEMENT: CONTENT, FUNCTIONS, PRINCIPLES**

*Abstract. The article reveals the content of the knowledge management process, identifies three of its aspects: functional, operational and economic. The functions and principles of knowledge management in modern conditions are highlighted.*

*Keywords: skills, employees, competence, intangible assets, information*

В современной экономике инновации являются основным двигателем экономической деятельности, и успех компании больше, чем когда-либо, зависит от информационной компетентности ее сотрудников. Компания должна преуспеть в преобразовании знаний, распределенных в организации, в навыки, приобретаемые различными категориями сотрудников, от которых зависит прогресс организации. Знания и навыки напрямую определяют конкурентоспособность компаний.

Исследования, посвященные данной проблематике, начали появляться уже давно. Например, П. Друкер, подчеркивая, что будущее принадлежит компаниям, которые будут знать, как использовать свои знания стратегически, еще в 1992 году утверждал, что «знания сейчас являются решающим фактором производства» [5]. Сегодня исследователи согласны, что управление знаниями является основной задачей на следующие десятилетия с учетом основных тенденций в мировой экономике:

глобализации, создания новых источников информации, персонализация продуктов и услуг [1, 3]. Отныне особое внимание следует уделять более высоким когнитивным способностям (способности рассуждать, решать проблемы и планировать действия) и социальным навыкам (автономности, способности к общению и сотрудничеству).

В литературе мы находим несколько определений управления знаниями (УЗ) и несколько терминов, более или менее связанных с ним, таких как управление навыками, управление интеллектуальным капиталом, бизнес-аналитика, реинжиниринг бизнес-процессов, поддержка принятия решений. УЗ - это междисциплинарная область, которая включает когнитивные науки, экспертные системы, когнитивную инженерию, семантические сети, базы данных, системы поддержки совместной работы, науки управления. Можно выделить три аспекта процесса управления знаниями:

- Функциональный аспект, связанный с управлением жизненным циклом знаний с момента появления идеи: формализация, проверка, распространение, повторное использование, продвижение.
- Операционный аспект, характеризующийся объединением знаний и ноу-хау в процессах, продуктах, организациях для создания ценности.
- Экономический аспект, выражающийся во влиянии на повышение интеллектуального капитала компании.

Основная цель УЗ - это не управление знаниями в целом, а выделение тех знаний, которые могут стать полезным ресурсом и двигателем для организаций, отдельных лиц и экономики в целом. В прошлом знания считались силой и привилегией закрытого круга посвященных, а в настоящее время знания - это конкурентное преимущество и единственная гарантия устойчивого развития [4].

В современной экономике обучение и знания стали ключевыми факторами успеха и конкурентоспособности, при этом нематериальные ценности имеют жизненно важное значение. Происходит переход основных факторов производства от материальных ресурсов (капитала, сырья, земли, оборудования и т. д.) к нематериальным активам, где такие ресурсы, как знания и способность управлять ими, играют значительную роль в успехе бизнеса. Знания стали основным источником власти, престижа и богатства в современной экономике и обществе. Генерация, приобретение и использование знаний стали жизненно важными для устойчивого экономического, социального и культурного развития. Это касается отдельных лиц, организаций, государственных органов и компаний, а также целых регионов и даже стран.

Управление знаниями выходит за рамки цикла доступа, обработки и использования информации, который всегда присутствовал во всех организациях. Этот основной цикл включает запись информации в базы данных или информационные системы. УЗ добавляет новые процессы, с помощью которых информация преобразуется в знания, которые интегрируются персоналом в виде навыков, позволяющих организации

улучшать качество своих продуктов и услуг, увеличивая свои конкурентные преимущества на рынке. Признано, что производственные задачи включают в себя структурированную информацию, но, что более важно, знания и навыки персонала. Их можно хранить в базе знаний (БЗ), связанной с источниками информации. Для этого информация должна быть преобразована сотрудниками в знания и затем представлена в БЗ. И наоборот, знания и навыки (смоделированные или неявные) извлекаются для создания новой информации, которую можно использовать в производственных процессах [2].

Способность организаций эффективно использовать свои нематериальные активы становится гораздо более важным фактором их успеха, чем их способность управлять своими физическими активами и инвестициями. Успешные компании характеризуются своей способностью постоянно генерировать новые знания, быстро распространять их и внедрять в новые продукты и услуги. В последнее десятилетие управление знаниями приобретает все большее значение, поскольку оно обеспечивает значительные количественные и качественные преимущества тем организациям, которые могут эффективно реализовать свою стратегию управления знаниями. К функциям УЗ принято относить:

- лучшее управление идеями;
- лучшее понимание потребностей клиентов;
- реализации личностного потенциала сотрудников;
- улучшение рабочих процессов со знаниями;
- расширение прав и возможностей работников интеллектуального труда;
- повышение производительности труда работников;
- снижение себестоимости продаж;
- повышение организационной устойчивости;
- повышение удовлетворенности акционеров;
- повышение корпоративной стоимости.

Характерно, что ученые различаются не только своим пониманием природы управления знаниями, но и способами его изучения и поставленных целей. Например, существует четыре основных подхода к управлению знаниями:

• когнитивный (когнитивный) - анализирует процессы создания и усвоения знаний людьми в результате интеллектуальной деятельности и уделяет внимание их социальной и психофизической стороне;

• поведенческий - направлен на оказание помощи сотрудникам в реализации своих возможностей и способностей с целью повышения эффективности человеческих ресурсов в организации;

• систематический - рассматривает знания как целостную систему, включающую в себя различные элементы. Он позволяет охватить не только



знания, но и их связи с другими организационными системами и процессами, потоками знаний и т.д.;

• логистический - исследует поток знаний в организации и их эффективное управление, чтобы люди получали необходимые знания вовремя.

Отсюда разные взгляды на основные принципы управления знаниями:

• научный принцип - построение системы управления знаниями на основе последних научных достижений;

• принцип системного подхода - учет взаимодействий и зависимостей между всеми компонентами системы;

• принцип ситуационного подхода - соблюдение условий среды и принятие решений с учетом комплексных факторов организационной среды;

• принцип психологических факторов - создание условий для наилучшей реализации личностного потенциала сотрудников и оптимального взаимодействия между ними;

• принцип использования количественных методов в управлении знаниями;

• принцип авторизации - каждый сотрудник должен иметь достаточные полномочия для выполнения качественных и эффективных задач;

• принцип демократического централизма - предоставление независимости сотрудникам и подразделениям при сохранении координации со стороны высшего руководства.

В последнее время к принципам УЗ стали добавлять следующие принципы: Эффективное управление знаниями требует гибридных решений, включающих людей и технологии; для управления знаниями требуются менеджеры по знаниям, лидерство особенно важно; управление знаниями означает улучшение рабочих процессов со знаниями; управление знаниями постоянный процесс; практическое управление знаниями зависит от технологии; управление знаниями - это процесс, а не продукт.

Таким образом, показана роль знаний как ключевого ресурса развития, при этом управление знаниями охватывает сложные и динамические процессы, которые влияют на различные аспекты: организационные - структура системы УЗ, ее внутренние и внешние связи, цели и режим работы; финансово-экономические отношения в процессе создания, распространения и использования знаний; социально-психологический - создание мотивирующей и творческой атмосферы и эффективных межличностных отношений; информация и коммуникация - создание и поддержка системы внутренней и внешней коммуникации и обмена знаниями. Рост знаний способствует для увеличения добавленной стоимости в экономике, для повышения производительности труда, для снижения энергоемкости производства, для создания устойчивых моделей и других ключевых факторов конкурентоспособности. Все больше признается, что только знания

могут обеспечить высокое качество жизни и обеспечить стабильную экономику страны в будущем.

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## **ЕНГИЛ САНОАТ КОРХОНАЛАРИДА ХАТОДАН ҲИМОЯЛАНИШНИНГ АЙРИМ УСУЛЛАРИ**

*Аннотация: Ушбу мақола енгил саноат корхоналарида хатолардан ҳимояланиш жараёни (Error Proofing, Mistake Profing, Poka-Yoke) айнанлигини тасдиқлаш, ходимлар хатосини топиш ва олдини олишда маҳсулот ишлаб чиқаришдаги аҳамияти ҳамда хатолар сонини камайитириш усуллари муҳокама қилади.*

*Калит сўзлар: Рангли белгилаш усули, Error Proofing, Mistake Profing, Poka-Yoke, BИQS, хатолардан ҳимояланиш, номувофиқлик, магнитола наклеяси, динамометр, хатони топиш усули.*

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## **SOME METHODS OF PROTECTION AGAINST ERRORS IN LIGHT INDUSTRY ENTERPRISES**

*Abstract: This article discusses the importance of product protection in error detection process (Error Proofing, Mistake Profing, Poka-Yoke) in light industry enterprises, detection and prevention of employee error, and ways to reduce the number of errors.*

*Keywords: Color Marking Method, Error Proofing, Mistake Profing, Poka-Yoke, BИQS, Error Protection, Incompatibility, Tape Sticker, Dynamometer, Error Detection Method.*

Инсон қўп турдаги ишларни бажариши даврида доимо бир қанча хатоларга йўл қўйиши мумкин. Айниқса, бу ҳолат енгил саноат корхоналарида ҳам тез тез учраши кузатилмоқда. Булар хотира эффекти натижасида юзага келади, шундай бўладики уйга машинада кетаётганингизда ярим йўлни унитиб қўясиз. Бундай эффектлар кечки сменада ишлаётганларда тез-тез такрорланиб туради. Енгил саноат корхоналарида ходимларни хато қилишларини олдини олиш маҳсулот хавфсизлик ва сифатни таъминлашда жуда муҳим ҳисобланади. Бир матони тайёрлаш учун кўплаб жараёнлар керак бўлади, унда эса, минглаб ходимлар иштирок этади, бу эса минглаб хатолар бўлиши эҳтимоли борлигини кўрсатади [3].

Енгил саноат корхоналарида номувофиклик(нуқсон)га йўл қўймасликда BИQS (Built-In-Quality Suppliers) етказувчилар учун мужассамланган сифат тизимининг 30 элементларидан бири ҳисобланган “Хатолардан ҳимояланишнинг айнанлигини тасдиқлаш (Error proofing Verification)” олтинчи элементи талабларини қўйган. Унда хатолардан ҳимояланиш ва уни олдини олиш усулларига асосий эътиробни қаратилган [1].

Хатодан ҳимояланишни қандай номламайлик, яъни нглизча Error proofing, Mistake Proofing ёки японча Пока-Йока (Рока-Ҷока), уни асосий мақсади - хатолар бўлишини олдини олиш, хавфи юқори бўлган муаммоли жойларга хатодан ҳимояловчи восита(метод)ларни қўллашдир [2].

Хатодан ҳимояланиш нима? У енгил саноат корхоналарида юза келиши мумкин бўлган номувофик ва уни оқибатида истеъмолчи талабини қаноатлантирмасликка ёки йўқотишларга олиб келиши мумкин бўлган хавфларни олдини олиш восита(метод)ларидан фойдаланишдир.

- Енгил саноатда хатодан ҳимояланиш қачон қўлланади?
- Оқибати истеъмолчи учун юқори хавфли жойларга;
  - Юқори йўқотишларга олиб келувчи жойларга;
  - Аҳамияти, юзага келиш, топилиши юқори номувофикликларга.
  - Амалий фойдаланиш ва даврий текширишлар олиб бориш орқали [5].

Олиб борилган тадқиқотлар шуни кўрсатмоқдаки, енгил саноат корхоналарида лойиҳачи ва технолог муҳандислари мазкур масала бўйича ўз билим ва кўникмаларини доимий такомиллаштириб туришлари шарт.

新郷 重夫  
Shingo Shigeo



Япониялик сифат соҳаси эксперти Шигео Шинго (Shigeo Shingo) томонидан Пока-Йока ғояси ишлаб чиқилган [2].

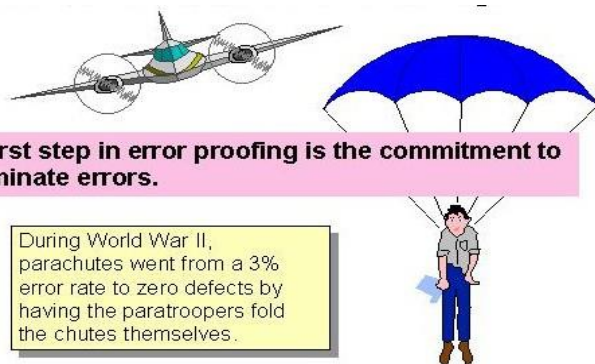
Рока — «хато қилиш мажбур эмас»

Ҷока — «қочиш»

Енгил саноат маҳсулотларини ишлаб чиқаришда хатодан ҳимояланиш айнанлигини тасдиқлаш, амалий фойдаланиш ва даврий текширишлар орқали хатолардан ҳимояланишда ишчиларга ёрдам бериш ва хатолар сони камайтириш ёхуд умуман ногла тушириш имконини беради.

Хатодан ҳимояланиш манфаатдорлик ғояси жуда муҳим:

Иккинчи жаҳон уриши даврида парашютистлар ўз парашютларини ўзлари таҳлашганлиги сабабли парашютларни таҳлашда хато бўлиши олди олинган.



Бунинг натижасида парашютларни тахлашдаги хато қилиш даражаси 3% дан 0% га тушиб кетган, сабаби парашютистлар олдида хаёт мамот масаласи кўндаланг бўлиб турган.

Хатоларни олдини олишда рангли белгилаш

усули.

Ишни тўла бажарган ишчи рангли белгилаш билан талаб тўла бажарилганлигини белгилайди, кейинги жараён эга эса ранг белгисини кўриши билан талабни тўла бажарганлигига ишонч ҳосил қилади [4].

Хато қилмасликни лойиҳалашда ҳисобга олиш усули

Магнитола наклейкасини ўрнатиш (мисол)

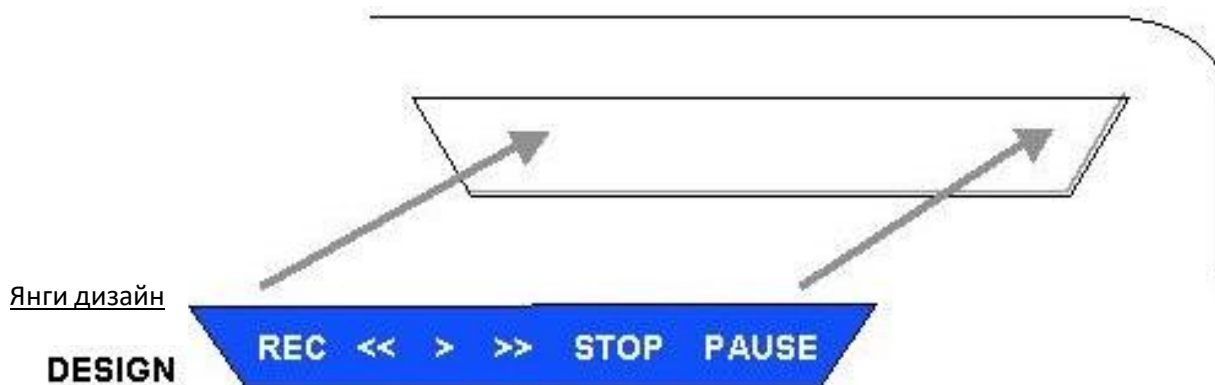
Қуйидаги магнитола наклейкасини кўриниш-шакли ва ўрнатиш жойи симметрик бўлиб, икки ҳил кўринишда ўрнатиш имкони мавжуд, лекин фақат биттаси тўғри:



Юқоридаги ёзув(эмблема)ли наклейкани шундай ёпиштириш усулини аниқлаш лозимки, ўрнатишда нотўғри ёпиштирилишига йўл қўйилмасин.

Хатолардан ҳимояланиш энг яхши методи:

Лойиҳалаш жараёни даврида шундай қисм лойиҳасини ишлаб чиқиш лозимки, уни йиғиш жараёнларида нотўғри ўрнатишга йўл қўйилма



Бундай ҳолатда фақат тўғри ўрнатиш мумкин!

Агарда қисмни ўрнатишда турли ўрнатиш имконияти мавжуд бўлса, уни шундай лойиҳалаштириш лозимки, фақат бир усул билан тўғри ўрнатиш имкони бўлсин [1].

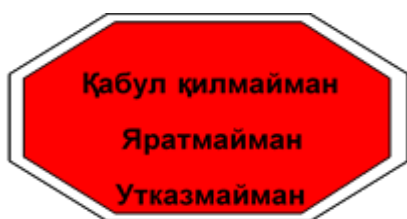
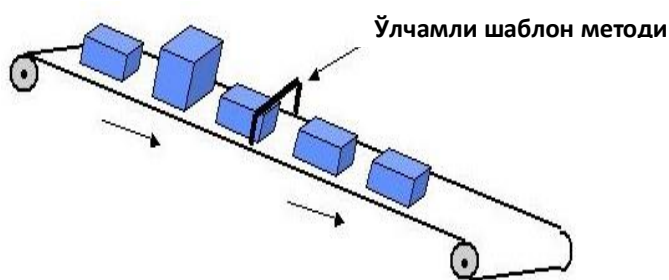
Хатони топиш усули (мисол)

Катта хажмдаги коробкани хато ўтиб кетиши олди олинади.

Мақсадга интилиш усули

Хатолардан ҳимояланиш - ишчилар ўртасида мужассамланган сифат шиори асосида қўллаб кувватлаш.

Ўз харидори талабини қаноатлантириш ғояси;



Нуқсонни Муаммони жамоа бўлиб хал этиш.

«Нуқсонни яратмайман» - хатолардан ҳимояланиш жараёнида нуқсонларни олдини олиш стратегиясидан фойдаланиш. «Нуқсонни қабул қилмайман ва ўтказмайман»- хатолардан ҳимояланиш жараёнида нуқсонларни топиш стратегиясидан фойдаланиш. «Нуқсонни яратмайман», «Нуқсонни қабул қилмайман» ва «Нуқсонни ўтказмайман» булар бир-биридан аниқланишида фарқлансада, асосан бир йўналишга хатога йўл қўймасликка қаратилган.

Енгил саноат корхоналарида “Хатолардан ҳимояланиш (Error proofing Verification) нинг айнанлигини тасдиқлаш” лойиҳалаш ва технология F M E A

(Potential Failure Mode and Effects Analysis) Юзага келиши мумкин бўлган номувофикликлар турлари ва оқибатлари таҳлили, сифат менежменти тизимлари, маҳсулот, жараёнлар ва даражали аудитларни даврий ўтказиш натижалари орқали олиб борилади [5].

Хулоса қилиб айтганда хатолардан ҳимояланишнинг энг яхши методи:

- Технологик ускуналарни шундай лойиҳалаш ва уларни ишлаб чиқиш жараёнларини шундай ташкил этиш лозимки, қайсики ишлаб чиқариш ёки йиғишда тузатишларга йўл қолмасин;

- Хатолардан ҳимояланиш жараёни (Error Proofing, Mistake Proofing, Poka-Yoke) айнанлигини тасдиқлаш топиш ва олдини олиш билан истеъмолчиларга салбий таъсир этувчи ва ортиқча харажатларни олдини олади;

- Хатолардан ҳимояланишни қўллашда ахамияти мезонлирдан фойдаланиш (Олдини олиш, топиш, инсонлар фикри ва бошқалар орқали);

- Хатодан ҳимояланишдан биринчи қадами бу хато қилмасликга ҳаракат қилишдир.

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## **ДЕЯТЕЛЬНОСТЬ МИНИСТЕРСТВА ЗДРАВООХРАНЕНИЯ СВЕРДЛОВСКОЙ ОБЛАСТИ ПО ПОВЫШЕНИЮ КАЧЕСТВА МЕДИЦИНСКИХ УСЛУГ В УСЛОВИЯХ ПАНДЕМИИ**

*Аннотация: в данной статье описываются мероприятия, проводимые во время пандемии Министерством здравоохранения Свердловской области, по повышению качества медицинских услуг. В работе указаны инструменты и механизмы совершенствования системы качества медицинских услуг, описаны результаты проведенных мероприятий в регионе.*

*Ключевые слова: здравоохранение, управление здравоохранением, медицинская услуга, качество медицинских услуг, пандемия*

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## **ACTIVITIES OF THE MINISTRY OF HEALTH OF THE SVERDLOVSK REGION TO IMPROVE THE QUALITY OF MEDICAL SERVICES IN THE CONTEXT OF A PANDEMIC**

*Abstract: This article describes the measures taken during the pandemic by the Ministry of Health of the Sverdlovsk Region to improve the quality of medical services. The paper shows the tools and mechanisms for improving the quality of medical services, describes the results of the activities carried out in the region.*

*Keywords: healthcare, healthcare management, medical service, quality of medical services, pandemic*

Распространение COVID-19 стало очередным вызовом для системы здравоохранения страны. В условиях ограниченных временных, кадровых, материально-технических ресурсов органы власти Российской Федерации и субъектов РФ разрабатывали способы борьбы с новым вирусом, при этом сохраняя качество медицинских услуг в государственных организациях. Согласно данным Всероссийского центра изучения общественного мнения за 2020 год, большинство россиян считают, что органы власти и медицинские работники сделали все возможное для преодоления пандемии (48%), и даже больше, чем могли (22%) [1]. Эксперты отмечают, что для решения проблем, вызванных распространением коронавируса, необходим «системный подход



и оперативность действий» [2, с. 6], а также обеспечение баланса между экономической, общественной и медицинской эффективностью [3, с. 26]. Проанализируем мероприятия, которые проводились Министерством здравоохранения Свердловской области по повышению качества медицинских услуг в условиях пандемии.

В рамках реализации национального проекта «Здравоохранение» были проведены мероприятия по повышению качества и доступности первичной медико-санитарной помощи. Министерством здравоохранения Свердловской области совместно с Региональным центром организации первичной медико-санитарной помощи реализовывались мероприятия по внедрению бережливых поликлиник на территории области. В 2020 году в Свердловской области в реализации мероприятий по созданию и тиражированию «Новой модели медицинской организации, оказывающей первичную медико-санитарную помощь», участвовало 212 структурных подразделений 80 медицинских организаций, из них 116 детских поликлиник, 63 взрослых поликлиник, 25 женских консультаций в т.ч. кабинетов пренатальной диагностики, один ФАП и три стоматологии.

В рамках цифровизации системы здравоохранения Свердловской области органами власти проведена работа по подключению медицинских организаций к Региональному фрагменту Единой государственной информационной системе в сфере здравоохранения. По отчетам за 2020 год доля медицинских организаций региона, внедривших данную информационную систему, составляет 64% при плановом показателе 72% [4]. Несмотря на это, удалось достичь высоких показателей по посещаемости личного кабинета «Мое здоровье» на портале Госуслуги – 381,9 тыс. человек при плановом показателе 256,8 тыс. человек. Более того возросло количество телемедицинских консультаций – по сравнению с 2019 годом количество консультаций возросло в 2 раза (18 393) [5]. При слабых темпах цифровизации здравоохранения области, население пользуется всем возможными способами получения услуг в электронном виде.

Что касается проведения независимой оценки качества условий оказания услуг медицинскими организациями (далее – НОК), то Общественный совет по НОК скорректировал список учреждений, в которых проводилось данное мероприятие. Вместо 67 медицинских организаций НОК проводилась в 10, и для упрощения процедуры сбора информации были использованы онлайн каналы связи – Федеральный портал независимой оценки [www.nok.gosminzdrav.ru](http://www.nok.gosminzdrav.ru) и сайты медицинских организаций.

Особо важную роль в борьбе с пандемией сыграло взаимодействия Министерства здравоохранения Свердловской области с общественными организациями и волонтерскими движениями. По данным Министерства здравоохранения, в 2020 году были проведены 932 мероприятия с участием 7619 волонтеров и охватом более 755 тысяч свердловчан [6]. Волонтерами-медиками осуществлялись мероприятий по профилактике социально-значимых заболеваний, предотвращению распространения коронавируса

(раздача масок, одноразовых перчаток, антисептиков и т.д.). Несмотря на высокую активность общественных организаций, по данным Мониторинга потребности в волонтерской помощи в медицинских организациях Свердловской области потребность в волонтерах составляет 16 355 человек [7]. Органу власти стоит проработать возможность постоянного взаимодействия с некоммерческими организациями и волонтерскими движениями для решения вопросов по охране здоровья населения.

Несмотря на возникшие экономические и социальные препятствия, связанные с пандемией, Министерству здравоохранения Свердловской области удалось планово реализовать мероприятия в рамках национального проекта «Здравоохранение», информатизации и цифровизации, проведению НОК. Данные инструменты позволили повысить качество медицинских услуг, однако существуют направления, работа над которыми еще предстоит органу власти.

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## **ВЛИЯНИЕ ИНФОРМАТИЗАЦИИ НА СОЗНАНИЕ И САМОУТВЕРЖДЕНИЕ ЛИЧНОСТИ: СОЦИАЛЬНО- ФИЛОСОФСКИЙ АНАЛИЗ**

*Аннотация: В статье осуществляется философский анализ актуальной проблемы, связанной с информационным влиянием на сознание и самоутверждение современной личности. В статье авторы выделяют конструктивные и деструктивные аспекты информационного воздействия на сознание личности. Указывают на то, что человеку не свойственно проявление критичности в избирательности при работе с медийной информацией.*

*Ключевые слова: инновация, сознание, самоутверждение, информационное воздействие, общество, мировоззрение, манипулирование.*

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## THE INFLUENCE OF INFORMATIZATION ON THE CONSCIOUSNESS AND SELF-AFFIRMATION OF THE INDIVIDUAL: A SOCIO-PHILOSOPHICAL ANALYSIS

*Abstract: The article provides a philosophical analysis of the current problem related to the information influence on the consciousness and self-affirmation of the modern personality. In the article, the authors highlight the constructive and destructive aspects of the information impact on the consciousness of the individual. They indicate that a person does not tend to be critical in selectivity when working with media information.*

*Key words: innovation, consciousness, self-affirmation, information impact, society, worldview, manipulation.*

Информатизация воздействует на сознание человека, позволяет самоутвердиться в информационном пространстве, что является одним из инновационных компонентов современного человечества. Н. Луман утверждает, что при этом «субъекты информационного воздействия не без основания на то, оказывают большое влияние на формирование мировоззрения личности и ценностной ориентации всего социума» [8, с. 97]. Занимая лидирующие позиции, субъекты информационного воздействия оказывают идеологическое воздействие. З. Бауман пишет, что «именно им принадлежит роль транслятора культурных достижений, именно они влияют на те, или иные культурные достижения, принимаемая их или отвергая» [1, с. 216].

По Е.Д. Павловой «информационное общество представляет новую форму бытия цивилизации, оказывающую влияние на личностное и массовое сознание» [9, с. 237]. Рассмотрение на этом основании воздействия информатизации на сознание и самоутверждение современной личности, позволит распознать и проконтролировать распространяющиеся пропагандистские лозунги, оказывающие скрытое воздействие на сознание современного человека.

К. Хессиг отмечает, что на основании внедрения новых информационных технологий информация стала представлять неисчерпаемый глобальный ресурс, который самоорганизует цивилизацию, способствует развитию всех сфер жизнедеятельности социума [10, с. 78]. В последнее время наблюдается повышенный интерес к возможностям СМИ по оказанию значительного влияния на мнение и поведение людей. С нашей точки зрения, СМИ воздействуют на сознание человека путем последовательных действий, цель которых – изменить сознание на эмоциональном, когнитивном и поведенческом уровнях посредством масс-медиа. Некоторые авторы под объектом воздействия понимают непосредственно само сознание; инструментом называют СМИ, целью воздействия – наполнение сознания конкретным содержанием, которое подчинится прогнозируемому поведению [3, с. 92].

Субъектом информационного влияния следует выделить конструктивные или деструктивные аспекты информационного воздействия СМИ. Конструктивное воздействие представляет гармоничное развитие, оно включает в себя воспитание на основании высоких духовно-нравственных ценностей и ориентаций, направлено на выполнение просветительской и информационной функций в современном обществе. Такое воздействие осуществляют заинтересованные люди. Деструктивное же воздействие, называемое манипулированием, навязывает различные убеждения по принципу – «цель оправдывает средства». Задача такого воздействия – разжечь вражду внутри общества, обострить социальные конфликты и противоречия в обществе. Человеку не свойственно проявлять критичность и избирательности при работе с медийной информацией [6, с. 84]. М. Кастельс утверждает, что «информационные технологии сегодня используются для манипулирования сознанием человека, которому свойственно слепо верить медийной информации и резко менять свое мнение под её воздействием» [7, с. 78]. Все это разобщенно действует на социум, подчиняет людей воле субъекта влияния. По мнению Е.Д. Павловой, «человек в этом случае превращается в «интерактивного» субъекта, превращаясь в простого ретранслятора сообщений, что ведет к утрате личности, утрате собственного "Я"» [9, с. 146].

Такая ситуация создает новый тип личности, лишенный собственного «Я», растворяет его в информационном пространстве и разбивает на части виртуальных объектов, то есть утрачивает личность, делает ее фрагментарной [4, с. 97].

Отсутствующие социальные ограничения, свобода выбора, в известной мере безнаказанность, мгновенное изменение позиций, собеседника, мнения и социальных черт (пол, возраст и пр.), недостаток информации о собеседнике – всем этим порождается развитие таких свойств личности, как размытость собственного Я; безответственность; ограниченное понимание, неспособность к методичному мышлению; пространственная и временная дезориентации [5, с. 96]. Дезориентация основывается на «слабых участках» – боязни, психических комплексах, неудовлетворенных стремлениях и др. С. Г. Кара-Мурза уверяет, что «именно опасные особенности виртуального общения привлекают человека, представляют для него наибольший интерес, так как дают доступ к неизведанному в плане самореализации» [6, с. 187].

Внедрение информационных технологий позволяет сделать современный социум более открытым, плюралистичным. М. Маклюэн писал, «Я понимаю, что сегодня мы живем во всемирной деревне, все мы теперь соседи, и все хотят знать, как дела на соседской кухне. Но даже в таком случае занавески можно оставить задернутыми» [2, с. 87]. Не стоит отвергать мысль о том, что явление, наблюдаемое нами в настоящее время, расширяет возможности информации, но в тот же момент вызывает дисбаланс между производителем информации и потребителем. Сознание современного человека является открытым большому потоку разнообразной информации,

принимая все на веру человек бездумно потребляет «информационный мусор». В такой ситуации сознание рефлексивно осмысливает действительность, но иногда даже не пытается проникнуть в глубину вещей, в их значимость. Нашему «Я» свойственно отражать информацию, пропускать ее через себя, что вызвано так называемым эффектом «пустого зеркала», именно на этом основываются технологии моделирования мировоззрения, формируется ценностная ориентация личности.

В итоге, следует сделать вывод о том, что сегодня необходима продуманная, взвешенная политика на уровне законодательства и специально разработанных программ, которая позволит конструктивно использовать новейшие информационные технологии, что не позволит искусственным образом формировать сознание людей и общества и оказывать деструктивное воздействие на сознание человека. Эти условия представляют важную задачу социально-философского знания, заключающуюся в осмыслении новых парадигм информационного моделирования действительности.

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## **СУЩНОСТЬ НАЛОГОВОЙ ПОЛИТИКИ И ЕЁ КАЧЕСТВЕННЫЕ ХАРАКТЕРИСТИКИ**

*Аннотация: В статье рассматриваются базовые понятия о налоговой политике: цели и задачи, функции а также принципы осуществления. Представлено определение налоговой политики отдельных ученых, а также сформулировано авторское определение данного понятия.*

*Ключевые слова: налоговая политика, налоговое стимулирование, налоговая система*

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## **ESSENCE OF TAX POLICY AND ITS QUALITATIVE CHARACTERISTICS**

*Resume: The article examines the basic concepts of tax policy: goals and objectives, functions and principles of implementation. The definition of tax policy of individual scientists is presented, as well as the author's definition of this concept is formulated.*

*Keywords: tax policy, tax incentives, tax system*

Прежде всего, необходимо отметить, что в экономической литературе исследователи признают, что налоговая политика является важным элементом государственного регулирования, оказывающим существенное влияние на формирование государственных и муниципальных финансов. Именно в налоговой политике определяются основные направления трансформации налоговой системы, стабильность, снижение или повышение налоговой нагрузки, налоговые льготы и преференции.

Так, коллектив авторов учебника под редакцией И.А. Майбунова предлагает следующее определение: налоговая политика – это система правовых действий органов власти и управления, определяющий целенаправленное применение налоговых законов. Это также правовые нормы осуществления налоговой техники при регулировании, планировании

и контроле государственных доходов[2].

По мнению Д.Г. Черника, налоговая политика – это совокупность действий государства, направленных на проведение организационных, правовых или экономических мероприятий, касающихся налоговых сборов.

Государственное воздействие на развитие экономики страны выражается в системе мер по регулированию развития государства в целом, его регионов и отдельно взятых хозяйствующих субъектов – организаций. Государственное регулирование, осуществляемое посредством налоговой политики, проявляется в реализации системы целенаправленных мероприятий, проводимых в области налогов и налогообложения.

Можно выделить определенный спектр функций, которые выполняет налоговая политика: фискальная, регулирующая, распределительная, стимулирующая и социальная.

Отдельно нужно отметить, что налоговая политика выполняет важную функцию бюджетного регулирования. Так, расширение самостоятельности и ответственности национально-государственных и административно-территориальных образований РФ в процессе решения социально-экономических проблем полностью сопровождаются укреплением их финансовой базы.

Комплексный характер налогов предопределяет не только разную природу налогов, но и свою систему принципов налоговой политики.

Реализация эффективной налоговой политики предполагает не только выполнение норм НК РФ, но и всестороннюю оценку хозяйственно-экономических отношений, которые складываются под влиянием налогообложения.

Итак, налоговая политика направлена на выполнение задач достижения экономического роста, повышение собираемости налогов, усиление предпринимательской активности и ликвидацию теневой экономики.

В настоящее время НК РФ (далее – НК РФ) является правовой основой налоговой политики, а также Бюджетный Кодекс Российской Федерации, таможенное законодательство. Налоговые отношения регулируются не только НК РФ, но и нормативно-правовыми актами, которые касаются налогообложения. Помимо этого, в каждом субъекте РФ продолжает существовать большое число законов и нормативных актов, регулирующие порядок начисления и уплаты региональных и местных налогов.

Таким образом, налоговая политика представляет собой элемент экономической политики страны и осуществляется органами государственной власти. Современная налоговая политика предусматривает уплату федеральных, региональных, местных налогов, а также специальных налоговых режимов. Основной чертой налогов является односторонний характер их установления. Налоги взимаются для того чтобы покрывать общественные потребности, которые встают отдельно от личных потребностей определенного налогоплательщика. Основными принципами налоговой политики являются принцип справедливости, принцип



соразмерности, принцип экономичности, принцип (максимального) учета интересов налогоплательщика, принцип хозяйственной независимости и принцип эффективности.

При осуществлении налоговой политики государство ставит перед собой следующие цели [1]:

- постоянный устойчивый экономический рост;
- стабильность цен на товары и услуги;
- занятость трудоспособного населения, борьба с безработицей;
- обеспечение определённого минимального уровня доходов населения;
- обеспечение социальной политики, удовлетворение потребностей граждан в первую очередь пенсионеров, инвалидов, многодетных;
- равновесие во внешнеэкономической деятельности.

Задачи налоговой политики сводятся в основном к мобилизации денежных средств в виде налогов и налоговых платежей в бюджеты всех уровней и к повышению уровня экономического развития государства, содействию решения его экономических, политических и социальных проблем за счет сформированной доходной части бюджета.

Для реализации главных задач необходимо создание благоприятных условий для активного бизнеса и стимулирования экономического роста хозяйствующих субъектов. Это влияет на эффективность сочетания интересов государства, общества и хозяйствующего субъекта-налогоплательщика, поскольку позволяет достичь оптимального соотношения между средствами, остающимися в распоряжении налогоплательщика, и средствами, поступающими в бюджет и распределяемыми при помощи бюджетных механизмов.

Итак, при помощи правовых норм, органами государственной власти регулируются развитие налоговой политики; обеспечивается рост экономики и ее стабильность; сглаживаются и устраняются негативные тенденции, возникающие в налоговой сфере; происходит воздействие на структуру и объем налоговых платежей. Основной задачей налоговых реформ в России на протяжении всего периода постсоветской налоговой политики, начиная с 1990-х годов по настоящее время, остается поиск возможных путей снижения налоговой нагрузки на добросовестных налогоплательщиков. В периоды кризиса необходимость привлечения дополнительных финансовых средств для пополнения государственного бюджета становится особенно актуальной.

Таким образом, налоговая политика направлена на выполнение задач достижения экономического роста, повышение собираемости налогов, усиление предпринимательской активности и ликвидацию теневой экономики. Существует три типа налоговой политики: максимальных налогов, разумных налогов и налоговая политика, предусматривающая достаточно высокий уровень налогообложения. Между стратегией налоговой политики и ее тактикой существует определенная связь. В первую очередь, стратегия налоговой политики создает благоприятные возможности для

решения тактических задач, с другой стороны, налоговая тактика представляет собой механизм решения стратегических задач.

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## **ФАКТОРЫ РИСКА РАЗВИТИЯ ЖЕЛЕЗОДЕФИЦИТНЫХ СОСТОЯНИЙ У ЖЕНЩИН ФЕРТИЛЬНОГО ВОЗРАСТА**

*Аннотация: В статье представлен обзор литературы последних лет по актуальной мировой проблеме в акушерской и перинатальной практике – железодефицитной анемии у беременных. Данная патология, несмотря на внедрение современных методов диагностики, профилактики и лечения, остается значимой в настоящее время. Установлено, что среди болезней крови у беременных на долю различных форм анемии приходится 90 %, из которых 75–90 % составляет железодефицитная анемия (ЖДА). Другие формы малокровия встречаются не чаще, чем в популяции небеременных женщин.*

*Ключевые слова: железодефицитная состояния, профилактика, беременная женщина, клинико-эпидемиологическая особенность.*

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## **RISK FACTORS FOR THE DEVELOPMENT OF IRON DEFICIENCY IN FERTILIZED WOMEN**

*Resume: The article presents a review of recent literature on an urgent global problem in obstetric and perinatal practice - iron deficiency anemia in pregnant women. This pathology, despite the introduction of modern methods of diagnosis, prevention and treatment, remains significant at the present time. It was found that among blood diseases in pregnant women, various forms of anemia account for 90%, of which 75–90% is iron deficiency anemia (IDA). Other forms of anemia are no more common than in the population of non-pregnant women.*

*Key words: iron deficiency state, prevention, pregnant woman, clinical and epidemiological peculiarity.*

Актуальность. По данным Всемирной Организации Здравоохранения число беременных, у которых была обнаружена железодефицитная анемия, ежегодно достигает 20 млн. Несмотря на организацию профилактических

программ во многих развитых странах, уровень ЖДА не снижается, а наоборот, отмечают тенденцию к его увеличению в 12 раз [2,5].

Если рассматривать мировую статистику, то частота встречаемости ЖДА у беременных почти в 3 раза ниже в развитых странах по сравнению с развивающимися. Это объясняется проводимыми на государственном уровне программами, предусматривающими обязательное обследование всех беременных женщин с целью дальнейшего ведения [1,7].

В настоящее время в России по данным различных источников уровень анемии у беременных остается на постоянном уровне и колеблется от 35 % до 42 % [4,6].

Большое значение ЖДА обусловлено не только высокой встречаемостью данной патологии в структуре экстрагенитальных заболеваний среди беременных женщин, сколько отрицательным воздействием на функционирование всех систем и органов, а также на беременность, роды, послеродовой периоды и на плод.

Анемия (от греческого «отсутствие крови») представляет собой клинко-гематологический симптомокомплекс, при котором отмечается снижение гемоглобина и (или) эритроцитов в крови.

Для железодефицитной анемии характерен недостаток железа в крови, красном костном мозге (ККМ), а также в депо (печень, селезенка, мышцы), что ведет к нарушению образования гема – основного структурного компонента гемоглобина [3].

Многие авторы выделяют так называемую физиологическую ЖДА беременных, проявляющуюся умеренным, а иногда и скрытым (латентным) дефицитом железа. Причина ее заключается в увеличении объема циркулирующей крови, необходимого для кровообращения плода. Благодаря физиологической ЖДА кровь изменяет свои реологические свойства, уменьшается ее вязкость, так как снижается гематокрит. При этом отмечается улучшение микроциркуляции, что является естественным адаптационным механизмом при беременности – нормальное функционирование плаценты и питание плода [8].

На сегодняшний день по данным Л.Ф. Можейко существуют нижние границы нормы гемоглобина по триместрам беременности: в первом триместре – 110 г/л, во втором – 105 г/л, в третьем – 100 г/л. Все, что ниже этих показателей, уже относится к патологической ЖДА.

Цель исследования. Оптимизация диагностики, профилактики и лечения железодефицитных состояний у беременных и родильниц на основе установленных патогенетических вариантов.

Материалы и методы исследования. Проспективное исследование включало 102 женщин, разделенных в зависимости от задач исследования на 4 независимых группы.

Результаты исследования. Частота манифестного дефицита железа (МДЖ) у беременных и родильниц за последние 5 лет не имеет тенденции к снижению и составляет 25,9% у беременных и 11,2 % у родильниц.

При беременности, осложнённой МДЖ лёгкой степени, по сравнению с беременностью, не осложнённой дефицитом железа, в 4 раза чаще развивается плацентарная недостаточность и преждевременные роды; в 1,5 раза чаще - угроза прерывания беременности; у 1/3 пациенток послеродовой период осложняется МДЖ; достоверно чаще возникают послеродовые кровотечения и инфекционные осложнения; достоверно выше частота рождения недоношенных детей и осложнений у новорожденных в раннем неонатальном периоде. У беременных с МДЖ лёгкой степени не выявлено достоверного влияния дефицита железа на массу тела доношенных детей и величину оценки их состояния по шкале Апгар при рождении.

У беременных и родильниц при развитии железодефицитных состояний отмечается снижение уровня коэффициента адекватности продукции эритропоэтина пропорционально стадии дефицита железа. Частота неадекватной продукции эритропоэтина в среднем выявляется у 47,2% беременных с МДЖ лёгкой степени, а у родильниц - пропорционально степени тяжести МДЖ (у 12% родильниц при лёгкой степени тяжести, у 50% - при средней и у 80% - при тяжёлой степени тяжести МДЖ).

Эффективность лечения препаратами железа беременных с ЖДС зависит от дозы элементарного железа и от уровня эндогенного эритропоэтина. У беременных с адекватным уровнем эритропоэтина, эффективность лечения в 2,5 раза выше по сравнению с таковым у беременных с неадекватным уровнем.

Разработан алгоритм диагностики, профилактики и лечения ЖДС, позволяющий на основании результатов скрининга беременных и родильниц (определение показателей различных фондов метаболизма железа) устанавливать патогенетический вариант ЖДС и индивидуализировать лечение.

Внедрение в широкую акушерскую практику разработанного алгоритма, позволяет выявлять ранние стадии ЖДС, эффективно предотвращать развитие МДЖ (94%) и связанных с ним осложнений у матери, плода и новорожденного, обеспечивать эффективное патогенетическое лечение.

Вывод. Таким образом, из всего вышеописанного можно сделать вывод о том, что ЖДА беременных является серьёзной патологией, влекущей за собой множество осложнений со стороны как матери, так и плода. Поэтому данная проблема требует обязательной и незамедлительной коррекции.

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## **ФЕНОТИПЫ БРОНХИАЛЬНОЙ АСТМЫ**

*Аннотация: В статье рассматриваются фенотипы БА с учетом гендерных различий. Аллергический фенотип БА встречался у 69,4%, причем достоверно чаще среди женщин – 74,1%. Неаллергический фенотип встречался у 30,6%, также как и фенотип БА+ХОБЛ чаще встречался у мужчин. Фенотип БА с ожирением встречался у 34,8%, чаще у женщин – 43,7%, по сравнению с мужчинами – 14,3%. Среди атопической коморбидности аллергический ринит встречался у 55,5%, конъюнктивит у 38,9%, дерматит у 27,8%.*

*Ключевые слова: бронхиальная астма, фенотипы астмы, атопическая коморбидность.*

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## **PHENOTYPES OF BRONCHIAL ASTHMA**

*Annotation: The article examines the phenotypes of bronchial asthma (BA) taking into account gender differences. Allergic phenotype of BA was found in 69.4% and significantly more often among women - 74.1%. The non-allergic phenotype was found in 30.6%, as well as the BA + COPD phenotype was more*

*common in men. The BA phenotype with obesity was observed in 34.8%, significantly more often in women - 43.7%, compared with men - 14.3%. Among atopic comorbidity, allergic rhinitis was found in 55.5%, conjunctivitis in 38.9%, and dermatitis in 27.8%.*

*Key words: bronchial asthma, asthma phenotypes, atopic comorbidity.*

Последние 20-30 лет характеризуются ростом заболеваемости и тяжести течения бронхиальной астмы (БА) [3, 4]. По социальной значимости БА выходит на одно из первых мест среди заболеваний органов дыхания [1].

В настоящее время, согласно рекомендациям Global Initiative for Asthma (GINA), 2017[4] выделяют следующие фенотипы БА: - Аллергическая астма (вызывают сенсibilизацию и работают по механизму реактивного IgE-ответа), ассоциируется с атопией. - Неаллергическая астма (ассоциирована с назальными полипами, чувствительностью к аспирину; манифестации предшествует респираторная вирусная инфекция. - БА с поздним началом. - БА с фиксированным ограничением скорости воздушного потока (за счет ремоделирования стенок бронхов); - БА на фоне ожирения. - БА + хроническая обструктивная болезнь легких (ХОБЛ) overlap.

Атопическая БА вызывается аллергенами животного и растительного происхождения, а также относящимися к простым химическим веществам, которые сенсibilизируют дыхательные пути обычно ингаляционным путем.

Неаллергическая БА объединяет все случаи БА, связанные с инфекцией. Инфекционными триггерами, ведущими к обострениям БА являются бактериальные и особенно часто вирусные инфекции респираторного аппарата, К неиммунологическим механизмам патогенеза относят дисгормональный и нервно-психический вариант БА. Существует мнение, что развитию БА способствуют некоторые эндокринные нарушения и дисфункция системы гипоталамус-гипофиз - кора надпочечников.

Цель исследования: изучить фенотипы БА и определить атопическую коморбидность, с учетом гендерных различий.

Материалы и методы исследования: методом случайной выборки были обследованы больные БА, находившиеся на амбулаторном и стационарном лечении в терапевтических отделениях клиники медицинского института. Выполнялись общеклинические, лабораторные (общие анализ крови, мокроты с определением уровня эозинофилов), инструментальные (спирометрия, рентгеноскопия/графия, ЭКГ) исследования. Специальное исследование для определения атопии – уровень аллергических иммуноглобулинов Е-антител - IgE. Оценка индекса массы тела (ИМТ) и диагностика ожирения проводились на основе определения ИМТ в соответствии с рекомендациями ВОЗ, 2000 года.

Результаты исследования: был проведен анализ 72 больных БА, из них мужчин было 25% (18 чел.), женщин 75% (54 чел.).

Аллергический и неаллергический фенотипы БА определялись по уровню эозинофилов крови (более 300 кл/мл или  $\geq 2\%$ ) и уровню IgE.



Результаты исследования показали преобладание аллергического фенотипа среди всех обследованных больных - 69,4% (50 чел.), причем достоверно больше среди женщин – 74,1% (40 чел.), по сравнению с мужчинами – 55,5% (10 чел.),  $P < 0,05$ . Неаллергическая БА встречалась у 30,6% (22 чел.), но достоверно чаще у мужчин 45,5% (8 чел.), по сравнению с женщинами – 25,9% (14 чел.),  $P < 0,05$ . При анализе уровня IgE мы получили следующие результаты: число позитивных и негативных результатов было равным и не зависело от гендерных различий. Данный факт мы склонны объяснить, вероятно, небольшим числом исследований уровня IgE (18 чел.).

Фенотип БА на фоне ожирения среди женщин, т.е. при ИМТ  $\geq 30,0$ -34,9 (1 степень ожирения) встречалась у 25%, при ИМТ 35,0-39,9 (2 степень ожирения) – у 6,3%, при ИМТ  $\geq 40,0$  (3 степень ожирения) - у 12,5%. Избыточная масса тела у женщин, т.е. ИМТ - 25,0-29,9 отмечена у 18,7% и нормальный ИМТ имели только 18,7%. Среди мужчин, фенотип с 1 степенью ожирением встречался в 14,3%, избыточную массу тела имели 57,1%, нормальный ИМТ был у 28,6%. Ожирение 2-3 степени отмечено не было. Фенотип БА + ХОБЛ overlap встречался у 11,1% (2 чел.) мужчин и у 3,7% (2 чел.) женщин.

При изучении атопической коморбидности нами получено, что аллергический ринит и конъюнктивит встречались у 55,5% и 38,9% всех больных БА, причем, достоверно чаще встречались у женщин – 66,7% и 48,1%, соответственно, по сравнению с мужчинами – 22,3% и 11,1% ( $P < 0,005$ ). Аллергический дерматит отмечен у 27,8% больных, из них у 33,3% мужчин и у 25,9% женщин,  $P > 0,05$ . Атопическая коморбидность отсутствовала у 33,3% мужчин и у 18,5% женщин. Сочетание аллергического ринита и конъюнктивита встречалось у 33,3% лиц, сочетание аллергического конъюнктивита и дерматита отмечено у 8,3% больных БА.

Обсуждение и выводы: исследование показало, что аллергический фенотип БА встречался у 69,4% обследованных, причем достоверно чаще среди женщин. Неаллергический фенотип, также как и фенотип БА+ХОБЛ чаще встречались у мужчин, что позволяет предположить роль курения и других поллютантов, участвующих в развитии неаллергического воспаления бронхов.

Фенотип БА с ожирением встречался у 34,8% больных, достоверно чаще у женщин – 43,7%, по сравнению с мужчинами – 14,3%. Возможно именно этот фенотип повлиял на значительную частоту БА среди женщин нашей популяции с одной стороны, а с другой стороны подтверждено влияние жировой ткани на формирование аллергического воспаления при БА, за счет лейкотриенов, которые образуются при висцеральном ожирении.

Среди атопической коморбидности лидирующее место занял аллергический ринит - 55,5%, особенно у женщин – 66,7%. Это подтвердило гипотезу, что БА и ринит являются единым заболеванием объединенных дыхательных путей (“united airways disease”, ВОЗ, 2003), что обусловлено

общностью механизмов развития воспаления верхних и нижних дыхательных путей.

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## **ФЕНОТИПЫ ХРОНИЧЕСКОЙ ОБСТРУКТИВНОЙ БОЛЕЗНИ ЛЕГКИХ И ИХ МАРКЕРЫ ВОСПАЛЕНИЯ**

*Аннотация: Изучены фенотипы ХОБЛ, степень ее тяжести, проведена интегральная оценка ХОБЛ. Определены маркеры воспаления при обострении ХОБЛ с учетом ее фенотипа и гендерных различий. Результаты исследования показали преобладание бронхитического фенотипа и тяжелого течения ХОБЛ. Анализируя маркеры воспаления получено, что наиболее чувствительным показателем является*

*С-реактивный белок, который был повышен у 100% больных, независимо от фенотипа и гендерных различий. На второй позиции, как у мужчин, так и женщин, гиперфибриногенемия, особенно при бронхитическом фенотипе. И на третьем месте повышенная СОЭ, особенно у мужчин.*

*Ключевые слова: хроническая обструктивная болезнь легких, фенотипы, маркеры воспаления, обострение, прогноз.*

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## **PHENOTYPES OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND THEIR MARKERS OF INFLAMMATION**

*Annotation: The phenotypes of COPD were studied, its severity, an integrated assessment of COPD was carried out. Markers of inflammation in exacerbation of COPD were determined taking into account its phenotype and gender differences.*

*The results of the study showed the predominance of the bronchitis phenotype and severe COPD in hospital patients. Analyzing the markers of inflammation, it was found that the most sensitive indicator is C-reactive protein, which was increased in 100% of patients, regardless of phenotype and gender differences. In the second position, both in men and women, hyperfibrinogenemia, especially with bronchitis phenotype. And in third place increased ESR, especially in men.*

*Key words: chronic obstructive pulmonary disease, phenotypes, markers of inflammation, exacerbation, prognosis.*

Введение. Хроническая обструктивная болезнь легких (ХОБЛ) является тяжелым инвалидизирующим заболеванием, смертность от которой занимает четвертое место в мире в возрастной группе старше 45 лет. Причем, ХОБЛ, по данным ВОЗ, – единственная болезнь, при которой смертность продолжает увеличиваться [1, 2,]. Внимание исследователей в последние годы обращено на гетерогенность адаптивного иммунного ответа на антигенные факторы у больных ХОБЛ [7]. С вариабельностью иммунного ответа связывают риски колонизации дыхательных путей бактериальными патогенами, укорочение периода ремиссии между обострениями заболевания, частые обострения ХОБЛ у определенных категорий пациентов [1, 2].

Окислительный стресс и структурная перестройка бронхиальных желез с избыточной продукцией бронхиального секрета, обусловленные длительным воздействием поллютантов и респираторных инфекций, являются общими механизмами патогенеза ХОБЛ с синдромом хронического бронхита, сочетания ХОБЛ с бронхоэктазами [3, 6, 8]. Эти фенотипы ХОБЛ связаны с высоким риском смерти от всех причин и от респираторных заболеваний.

Гетерогенность адаптивного иммунного ответа на инфекционные и пылевые факторы у больных с обострением ХОБЛ обуславливает многообразие клинических фенотипов заболевания и связанные с этим различия в эффективности терапии [4, 5]. Используемые маркеры иммунного ответа, такие как С-реактивный белок (СРБ) и провоспалительные цитокины, обладают определенной специфичностью для оценки типа воспаления [5, 7, 9].

Цель исследования: изучить фенотипы ХОБЛ и маркеры воспаления у больных в период обострения, с учетом гендерных различий.

Материал и методы исследования: Объектом для исследования послужили больные, госпитализированные в терапевтические отделения с обострением ХОБЛ. Использовались методы клинической, лабораторной диагностики: общий анализ крови, анализ мокроты, СРБ, фибриноген, интерлейкин-1, ФНО- $\alpha$ . Выполнялись ЭКГ, спирометрия, рентгенография органов грудной клетки, эхоКГ, КТ грудной клетки (по показаниям). Проводилось определение индекса курящего человека (ИндКЧ), определение степени одышки по модифицированной шкале mMRC (Medical Research

Council Dyspnea Scale), теста САТ (COPD Assessment Test) для определения суммарной оценки ХОБЛ и риска обострений.

Результаты исследования и обсуждение: обследовано 122 больных ХОБЛ, из них мужчин было 54,1%, женщин 45,9%. Средний возраст больных составил  $63,3 \pm 0,4$  лет. Гендерных различий по возрасту не было.

Связь между развитием ХОБЛ и анамнезом курения наблюдалась у 57,6% мужчин (38 чел.). ИндКЧ у мужчин был равен  $31,1 \pm 1,2$  пачка-лет. Курящих женщин в нашей когорте пациентов не было. Среди больных, по спирометрической классификации, преобладала ХОБЛ тяжелой степени тяжести, как у мужчин - 50,0%, так и среди женщин – 56,3%, ХОБЛ средней степени тяжести встречалась у 33,3% мужчин и 25,0% женщин. ХОБЛ крайне тяжелой степени встречалась соответственно у 16,7% и 18,7%. Легкой степени ХОБЛ не было, так как нами обследованы больные, нуждавшиеся в госпитализации.

Среди фенотипов ХОБЛ у мужчин и женщин преобладал бронхитический: 65,2% и 80,3%, соответственно ( $P < 0,05$ ), в том числе ХОБЛ с бронхоэктазами выявлена у 16,3% мужчин и 6,7% женщин. Смешанный фенотип (сочетание бронхитического и эмфизематозного) встречался у 22,9%, из них у 30,3% мужчин и 14,3% женщин ( $P < 0,05$ ), эмфизематозный вариант встречался реже у 4,1%, примерно с одинаковой частотой, как у мужчин, так и у женщин – 4,5% и 3,6%, соответственно. Сочетание ХОБЛ и БА встретилось только у одной женщины, составив 1,8%.

Нами проанализированы маркеры воспаления, а также уровень лейкоцитов и СОЭ при обострении ХОБЛ. Результаты анализа отражены в таблице 1. Лейкоцитоз был выявлен у 25,0% больных ХОБЛ: при бронхитическом фенотипе он встречался у 27,3%, при смешанном у 17,8%. Эмфизематозный и фенотип сочетания ХОБЛ+БА не анализировались из-за небольшого числа больных с указанными фенотипами. То есть лейкоцитоз достоверно чаще встречался при бронхитическом фенотипе.

К сожалению, проанализировать уровень ФНО- $\alpha$  и ИЛ-1 нам не удалось из-за небольшой численности данных исследований.

**Таблица 1. Маркеры воспаления у мужчин и женщин с обострением ХОБЛ в зависимости от фенотипа**

Маркеры воспаления фенотип ХОБЛ	Ле йко - цит оз % (аб с)	↑СОЭ % (абс)	↑фи бри ноге н % (абс)	↑С РБ % сред нее зна чен .	↑Ф Н О -α % (а бс )	↑ И Л -1 % (а бс )
бронхитический	n=8 8 27, 3* (24 )	n=88 39,8 (35)	n=62 64,5 *(40)	n=5 8 100 2,7 ±0, 01	n = 9	n = 9
смешанный	n=2 8 17, 8 (5)	n=28 46,4 *(13)	n=26 50,0 (13)	n=2 2 100 2,1 ±0, 01	n = 2	n = 2
Всего:	25, 0 (29 )	41,4 (48)	60,2 (53)	100 ,0 (80 ) 2,4 ±0, 01		

Примечание: \* -  $P < 0,05$

Выводы: 1. В структуре ХОБЛ среди мужчин и женщин преобладал бронхитический фенотип 72,1%, причем он достоверно чаще отмечен у женщин,  $P < 0,05$ . Смешанный фенотип встречался у 22,9 % и достоверно чаще у мужчин ( $P < 0,05$ ), эмфизематозный вариант отмечен у 4,1%, гендерных различий не отмечено.

2. Наиболее чувствительным маркером обострения ХОБЛ является СРБ, который был повышен у 100% больных, независимо от фенотипа и гендерных различий. На второй позиции, как у мужчин, так и женщин, гиперфибриногенемия, особенно при бронхитическом фенотипе. И на третьем месте, повышенная СОЭ, особенно у мужчин.

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## **АКТУАЛЬНЫЕ ВОПРОСЫ В ОБЛАСТИ ПЕДАГОГИКИ**

*Аннотация: Педагогическая наука вступила в более важный период развития, чем когда-либо прежде. Потому что будущее независимой Республики Узбекистан зависит от воспитания подрастающего поколения. В статье рассматриваются актуальные вопросы педагогики в современном обществе.*

*Ключевые слова: педагогические исследования, научная деятельность, актуальные проблемы.*

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## **CURRENT ISSUES IN THE FIELD OF PEDAGOGY**

*Abstract: Pedagogical science has entered a more important period of development than ever before. Because the future of the independent Republic of Uzbekistan depends on the education of the younger generation. The article deals with topical issues of pedagogy in modern society.*

*Keywords: pedagogical research, scientific activity, actual problems.*

**«Судьбу развития решают духовно зрелые люди. Технические знания, способность осваивать сложные технологии должны идти рука об руку с духовной зрелостью, независимым мышлением. Умственный интеллект и духовный потенциал - два крыла просветленного человека».**

**Ислом Каримов**

В нашей стремительно развивающейся стране в связи с национальной независимостью важно повышать уровень знаний подрастающего поколения до требований мировых стандартов, быть в курсе научно-технических инноваций, самостоятельно мыслить, уверенно входить в жизнь, быть предприимчивым и духовно зрелым. Это, в первую очередь, требует совершенствования педагогики, системы образования на основе современных технологий.

В развитии общества, поскольку каждая наука имеет свою цель, важную роль играют конкретные приоритеты и перспективные задачи педагогики. Ведь качество педагогики зависит от периода и уровня развития



общественного мышления, которое было ведущим в этот период. При этом характер периода зависит от характера и особенностей содержания педагогической мысли того времени. Потому что характер периода похож на характер людей, живущих в нем. Отношения и мнения о социальном характере человека в основном формируются педагогической наукой.

Наука и практика педагогики - это социальная деятельность, направленная на формирование у большинства общества таких нравственных качеств, как доброта и доброту, то есть обновление мышления некоторых зрелых людей, изменение их духовности, которое становится фактор нравственности и поведения масс. С преобразованием социального мышления нашего народа в фактор действия и достижения национальной независимости наш путь к независимости, наша национальная идея и идеология были четко определены.

Роль учителя в развитии разностороннего человека, которого требует наше общество, неопределима. Поэтому первый Президент Республики Узбекистан Ислам Каримов в ряде своих выступлений и фундаментальных работ акцентировал внимание на вопросах образования и не обошел вниманием самоотверженный труд учителей. *Потому что в современном обществе подготовка квалифицированных учителей становится актуальной проблемой в области педагогики.*

Если мы посмотрим на систему зарубежного образования, то одной из важнейших ее особенностей является большое количество научно-исследовательских институтов, которые проводят педагогические исследования. В Германии, например, их около 2000, а во Франции, США и Японии есть как государственные, так и частные организации. В результате система образования в вышеупомянутых странах постоянно развивается и совершенствуется. В настоящее время развитые страны интегрируют интегрированные учебные программы в свои системы образования. Другой важный вопрос - расслоение системы образования. Дифференцированное обучение обычно проводится после начального курса.

Одна из важнейших задач сегодня - изменить старое мировоззрение в сознании людей, научить новому мышлению в экономике, политике, культуре, а также понять свои права в контексте укрепления независимости и воспитания человека, который готов избегать неприятных ситуаций.

Родители в семье и проблемы семейного воспитания. Повышение культуры воспитания и их общего воспитательного образования - одна из актуальных проблем современности. Знакомство семей с педагогическими достижениями, их долговечность - одно из средств обеспечения. С другой стороны, это один из способов улучшить соответствующие формы и методы воспитания детей. Поэтому очень важно вооружить родителей и семьи знаниями и методами воспитания. Каждый полноценный человек в нашем обществе должен заботиться о детях, участвовать во всех ситуациях и условиях, которые способствуют полноценному развитию нового человека.

Еще одна актуальная проблема сегодня - это сотрудничество в семье, школе и сообществе. Поскольку воспитание детей - это сложный процесс сотрудничества семьи, школы и сообщества, помимо учителей есть представители производственного сообщества, молодежи, профсоюзов.

Родители и родственники представляют разные рабочие сообщества, обсуждают проблемы в производственной и духовной жизни своих сверстников и говорят о своем отношении к жизни, искусству и семейным обязанностям. Поэтому дети, выросшие в таких семьях, оценивают своих родителей по жизненной деятельности других родителей на улице и в общественных местах.

Если умы людей сегодня не будут укреплены новым образом мышления, если им не объяснят идею, содержание и сущность национальной независимости, великих перемен не произойдет. Одна из наиболее актуальных проблем сегодня - это изменить старые мировоззрения людей, научить их мыслить экономически, политически и культурно, реализовать свои права на укрепление независимости и побудить их бороться со своим затруднительным положением. Думающий человек, способный внести свой вклад в построение независимого, свободного демократического государства, аналитическое и критическое наблюдение, включающий элементы новизны, уникальности, необратимости в процесс мышления, творческий полет, человек, способный открывать инновации, образование - очень актуальный вопрос.

Известно, что узбекские ученые, научно и теоретически обосновавшие важность творческих способностей в образовательном процессе: С.С. Гуломов, Малла Очилов, Василя Каримова; Российские ученые: В. Платов, Ю. Геронимус, В. Бурков; Большое значение имеют взгляды американских ученых: М. Форвейга, Дж. Морено, Дж. Томдайка, Э. Бемламинга.

Педагогические, дидактические принципы, формы и методы обучения, которые Абу Наср Фароби высоко оценил как эффективность обучения, включают:

- ❖ научно-практическая значимость образования;
- ❖ структура, логика и последовательность;
- ❖ отношение к жизни, быть понятным;
- ❖ наблюдения и эксперименты;
- ❖ упражнение, повторение и т. Д.

Таким образом, глубокие идеи Фароби об образовании не утратили своей актуальности и сегодня.

В заключение, обучение молодых людей приобретению самостоятельных знаний - одна из важнейших и актуальных задач современности. «Только по-настоящему просвещенный человек может бескорыстно осознать достоинство человека, достоинство нации, словом, жить в свободном и свободном обществе, самоотверженно бороться за достойное, достойное место в мировом сообществе нашего независимого общества» , - сказал Первый Президент Республики Узбекистан Ислам

Каримов. Следует отметить, что сегодня очень важна духовная и интеллектуальная мотивация молодежи.

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## **СИСТЕМА БЕРЕЖЛИВОГО ПРОИЗВОДСТВА КАК ФАКТОР ОБЕСПЕЧЕНИЯ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ ПРЕДПРИЯТИЯ**

*Аннотация: В статье рассматривается концепция бережливого производства как фактор обеспечения экономической безопасности предприятия. Основная цель статьи показать, как внедрение бережливого производства напрямую влияет на обеспечение экономической безопасности.*

*Ключевые слова: Экономическая безопасность, бережливое производство, производительность труда, потери, ценности.*

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## **LEAN PRODUCTION AS A FACTOR OF ECONOMIC SECURITY**

*Annotation: The article considers the concept of lean production as a factor in ensuring the economic security of an enterprise. The main purpose of the article is to show how the introduction of lean manufacturing directly affects the provision of economic security. What are the main types of losses in the enterprise and how to minimize them.*

*Keywords: Economic security, lean production, losses, values.*

В современном постоянно меняющемся мире одной из значимых проблем, стоящих перед любым развивающимся предприятием, является обеспечение экономической безопасности.

Экономическая безопасность предприятия состоит в обеспечении оптимального использования ресурсов, создании условий для стабильной и эффективной работы, оптимизации процессов производства, управления и сбыта, а также получения прибыли.

В современных условиях хозяйствования внедрение инструментов и принципов бережливого производства играет важную роль в обеспечении экономической безопасности.

Термин «Leanproduction» (Бережливое производство) был введён в общенаучный оборот Джоном Крафчиком в книге «Машина, которая изменила мир», которая вышла в 1990 году. Однако корни возникновения философии бережливого производства восходят к истоку двадцатого столетия [1].

Для достижения высокого уровня эффективности производства, в производственном процессе должны использоваться все без исключения возможности производственных мощностей, формирование непрерывного процесса устранения издержек, для того, чтобы гарантировать выпуск высококачественной продукции в соответствии с потребительским спросом.

При этом уровень экономической безопасности предприятия будет зависеть от того, насколько эффективно специалисты службы экономической безопасности смогут оценить и обойти возможные риски и угрозы, устранить их нежелательные последствия и тем самым обеспечить возмещение убытков в должном объеме.

Важно учитывать, что основным экономическим принципом является максимизация прибыли. Для достижения стабильности финансового – экономического положения необходимо проведение комплексных организационных изменений, на одних лишь операционных прорывах система не станет устойчивой.

Необходимо регулярное поддержание оптимального социально-психологического климата в коллективе, формирование у работников чувства принадлежности к организации, поскольку сотрудники являются главной ценностью компании, и то, как воспринимают они философию бизнеса, так они и привносят ее в производственный процесс и обеспечивают повышение производительности труда.

Функционирует бережливый метод, на первый взгляд, весьма просто. Вначале необходимо обнаружить барьеры, препятствующие росту конкурентоспособности предприятия. Уже после этого - дать оценку, можно ли данные завалы преодолеть, сократить или обойти.

При этом планируется не единичное, однократное действие, не творческий порыв единичных работников либо управляющих, а продолжительная процедура, в которую одинаково втянуты как владельцы бизнеса, так и простые сотрудники, которые работают даже на самых низкоквалифицированных должностях.

Основной путь к максимизации прибыли заключается в задаче отыскивать пути снижения собственных скрытых затрат. Внедряя инструменты и принципы бережливого производства, предприятия могут радикально увеличивать добавочную стоимость продуктов, путем устранения потерь в производственном процессе.

Ключевым понятием в бережливом производстве является ценность. Формирует ценность конкретного продукта производитель, но определяется она потребителем. Каждому предприятию необходимо обеспечить непрерывное течение потока создания ценности.

Вся деятельность предприятия делится на операции и процессы. Их можно разделить на 3 категории:

- Создающие ценность продукции;
- Не создающие ценность продукции;
- Не создающие ценность продукции, но обязательные в силу производственного процесса [2].

Ценность рассматривается как полезность, присущая товару или услуге, которую потребитель хочет приобрести.

В то же время поток ценности понимается как последовательность действий, необходимых для преобразования сырья или информации в продукт или услугу, требуемые производителем. Действия можно разделить на 3 этапа:

- решение проблем (от проектирования до выпуска готового товара или услуги);
- управление информационными потоками (от получения заказа до составления графика проекта и поставки готового изделия);
- физическое преобразование (от сырья или информации в продукт или услугу) [3].

Задачей специалистов является поиск и устранение действия, которые никак не добавляют ценности потребителю и именно обеспечение непрерывного течения потока позволяет выявить скрытые потери.

Для обеспечения экономической безопасности и эффективного производственного процесса предприятия необходимо не только просто внедрять принципы и инструменты концепции бережливого производства, но и понимать, что бережливое производство начинается с выполнения обязательств перед потребителями, сотрудниками предприятия и обществом в целом.

Большинство предприятий пытаются реализовать концепцию бережливого производства, улучшая только один поток – материальный, оптимизируя процессы: разработки, производства, сбыта. Однако, даже для улучшения материального потока предприятиям в ряде отраслей (пищевой промышленности) приходится преодолевать барьеры стратегического характера [4].

Если придерживаться непоследовательного и эпизодического применения принципов и инструментов бережливого производства без пересмотра философии функционирования организации, то можно смело сказать, что компания не входит в число сторонников бережливого производства.

Только когда предприятие осознает и примет для себя утверждение, что реальное бережливое производство является философией и гораздо обширнее набора систем и инструментов, только тогда будет иметь смысл строить проекты по внедрению методологии бережливого производства в производственный процесс.

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## **ОБ ОСОБЕННОСТЯХ БУХГАЛТЕРСКОГО УЧЕТА В ТУРИСТИЧЕСКИХ ОРГАНИЗАЦИЯХ**

*Аннотация: В статье описаны особенности и отличия бухгалтерского учета в туристических организациях*

*Ключевые слова: бухгалтерский учет, турагент, туроператор, туризм*

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## **ABOUT THE PECULIARITIES OF ACCOUNTING IN TOURIST ORGANIZATIONS**

*Annotation: The article describes the features and differences of accounting in travel organizations*

*Key words: accounting, travel agent, tour operator, tourism*

Туризм — является одним из важных секторов экономики множества государств, обеспечивающая: поступление иностранных средств, загруженность отелей, ресторанов, а также работу местному населению. Товар, который предлагает туризм, реализуется в виде услуги. Услуга это производственная деятельность, осуществляемая по заказу и удовлетворяющая потребность покупателя, в чем либо.

Основными особенностями услуг являются:

а) Отсутствие материальности и невозможности хранения и накапливания предполагаемых услуг, из-за чего в бухгалтерском учете не используются счета 40 (Выпуск продукции) и 43 (готовая продукция).



Себестоимость услуги формируется на счете 20 (Основное производство) и списывается в дебет счета 90 (Продажи)

б) Изменения в качестве услуг — может возникнуть разница описываемой услуги и реализуемой. В этом случае туристическая организация должна четко регламентировать порядок решения вопросов по претензиям клиентов, по качеству услуг и по аннулированию заказов

с) Нематериальность предоставляемых услуг. Из-за этого следует необходимость в качестве подачи клиенту информации об услуге, а также повышенное требование к документальному оформлению продаваемой услуги.

Определение «турфирма» довольно распространен, этим термином обычно называют все организации, оказывающие туристическую услугу. В туристическом бизнесе есть только два определения для туристических организаций: туроператор и турагент

В работе турагента можно выделить несколько этапов:

1. Предоставление покупателю набора туристических услуг.
2. Получение денежных средств от клиентов за путевку (тур).
3. Перечисление денежных средств за размещение, экскурсию и проживания – отдельно или целиком за все услуги.
4. Учет доходов и затрат турфирм, налогообложение.
5. Выявление финансового результата

Туроператор занимается комплектацией туров (тур-продукта), который состоит из:

- Разработки туристические маршрутов
- Обеспечение их услугами
- Организацией рекламы
- Определения стоимости тура и их продажа

Все это является продукцией собственного производства, которая учитывается на счете 20 (Основное производство). Сальдо начальное дебетовое показывает незавершенное производство на начало периода. По дебету отражаются затраты на формирование нового тура или экскурсии, по кредиту - фактическая себестоимость тура. Сальдо конечное показывает производство на конец периода. Схема полной себестоимости реализованного турпродукта включает в себя следующие составляющие:

- Производственные затраты: по приобретению прав на услуги сторонних организаций, используемые при производстве турпродукта (затраты по размещению и проживанию, транспортному обслуживанию, по питанию, по экскурсионному обслуживанию, по медицинскому обслуживанию, по добровольному страхованию); связанные с деятельностью производственного персонала (на оплату труда, отчисления на социальные нужды, связанные со служебными разъездами производственного персонала; затраты подразделений туристической фирмы (гостиниц, домов отдыха, транспортные компании), участвующих в производстве турпродукта.

- Косвенные (накладные) затраты: связанные с организацией производства турпродукта; на оплату услуг связи; на приобретение специальных бланков и канцелярских принадлежностей; отчисление на создание разрешенных законодательством резервов и представительских расходов; отчисления в специально отраслевые и межотраслевые фонды; налоги, сборы, платежи и другие обязательные отчисления, относимые на себестоимость; прочие затраты связанные с производством турпродукта (например, затраты связанные с технологическими потерями, возникающие из-за невостребованности туристами части услуг) и другое.

- Коммерческие затраты: связанные с деятельностью точек реализации (турагенств); на рекламу и рекламные мероприятия

Для учета выручки от продажи турпродукта применяют активно-пассивный счет 90 «Продажи». Счет имеет субсчета: 90.1- выручка от продажи путевок (договорная стоимость складывается из суммы фактической себестоимости, НДС и прибыли); 90.2 - формирование себестоимости тура; 90.3 — начисление НДС от стоимости турпродукта; 90.9 — результат от продажи турпродукции (прибыль или убыток). Если кредитовый оборот счета 90 больше дебетового оборота, то появляется сальдо счета 90.9, которое показывает прибыль от продажи турпродукта. Прибыль туроператора формируется из разницы между ценой покупки и ценой продажи туристического продукта. В бухгалтерском учете делаются записи указанные в таблице 1.

Таблица 1

Дебет	Кредит	Содержание хозяйственной деятельности
20	60,76	Приобретены права у различных предприятий на получение услуг по транспортному обслуживанию, проживанию, питанию, экскурсионному обслуживанию туристов
60,76	50,51,52	Перечислены денежные средства поставщикам услуг
20	02, 70,69, 76, 60, 71, 68, 10	Отражены собственные расходы туроператора: амортизация, заработная плата сотрудников, страховые взносы, услуги организаций по аренде, связи, коммунальным платежам
44	60,76	Приобретены услуги сторонних организаций по рекламе
60,76	50, 51, 52	Перечислена оплата за услуги по рекламе
43	20,44	Отнесены фактические затраты по формированию стоимости турпутевки (производственные и коммерческие расходы)
90.2	43	Списана полная коммерческая себестоимость турпродукта (путевки)
50,51,52	62	Получены денежные средства за продажу путевок
62	90.1	Отражена выручка от реализации путевок
90.3, 91.3	68	Начислен НДС от стоимости реализованных путевок
19	60	Отражен НДС по полученным работам, услугам
68.2	19	Возмещен НДС
68.2	51	Перечислен НДС в бюджет
90.9/99	99/90.9	Отражена прибыль/убыток от продажи турпродукта
99	68	Начислен налог на прибыль
68	51	Налог на прибыль перечислен в бюджет

Исходя из положений гл. 21 НК РФ, у турфирмы, осуществляющей туроператорскую деятельность по выездному туризму:

1. Освобождается от НДС — стоимость услуг, оказанных иностранным лицом, принимающей стороной (в частности, по размещению, питанию, экскурсионному обслуживанию на основании договора с принимающей стороной) за пределами РФ.

2. облагаются НДС — услуги по выездному туризму, включенные в стоимость туристской путевки (в частности, посреднические услуги, связанные со страхованием туриста и обеспечением проездными билетами) с учетом всех затрат по продвижению сформированного комплекса услуг на территории РФ. Исходя из того, что отдельные услуги, оказываемые туристскими организациями, НДС не облагаются, они обязаны организовать

и вести отдельный учет хозяйственных операций, облагаемых и необлагаемых НДС. Для этих целей, в частности к субсчету «Выручка» счета 90 могут быть открыты два субсчета «Выручка от реализации услуг, облагаемых НДС» и «Выручка от реализации услуг, не облагаемых НДС».

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**АКТУАЛЬНОЕ СОСТОЯНИЕ СИСТЕМЫ СТРАТЕГИЧЕСКОГО  
ПЛАНИРОВАНИЯ ГОСУДАРСТВЕННОЙ ПОЛИТИКИ В СФЕРЕ  
ЗДРАВООХРАНЕНИЯ НА УРОВНЕ РОССИЙСКОЙ ФЕДЕРАЦИИ И  
ПРОБЛЕМАТИКА ОПТИМИЗАЦИИ СТРУКТУРНОГО СОСТАВА  
ОПОСРЕДУЮЩИХ ЕЁ РЕАЛИЗАЦИЮ ДОКУМЕНТОВ  
(НОРМАТИВНЫХ ПРАВОВЫХ АКТОВ)**

*Аннотация: статья посвящена анализу выявленного её автором феномена уникальной зарегулированности вопросов стратегического планирования государственной политики в сфере здравоохранения на уровне Российской Федерации, выражающемся в доселе не известном отечественной практике публичного управления количестве нормативных правовых актов федерального уровня, содержащих в себе цели, задачи и ключевые приоритетные направления стратегического развития рассматриваемой отрасли государственного управления. В статье приводятся аргументированные доводы о неоптимальности подобного подхода к регулированию, а также выдвинуты рекомендации в адрес уполномоченных субъектов управления о рассмотрении возможности пересмотра подходов к системно-структурному построению массив документов стратегического планирования, их большей внутренней оптимизации и редуцированию.*

*Ключевые слова: государственное управление, государственная политика, стратегическое планирование, здравоохранение, программы, планы, целеполагание, системность.*

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**THE CURRENT STATE OF THE SYSTEM OF STRATEGIC PLANNING  
OF STATE POLICY IN THE FIELD OF HEALTHCARE AT THE LEVEL  
OF THE RUSSIAN FEDERATION AND THE PROBLEMS OF  
OPTIMIZING THE STRUCTURAL COMPOSITION OF THE  
DOCUMENTS (NORMATIVE LEGAL ACTS) THAT MEDIATE ITS  
IMPLEMENTATION)**

*Annotation: the article is devoted to the analysis identified the author of the unique phenomenon of regulation to the strategic planning of the state policy in the sphere of health of the Russian Federation, expressed in hitherto not known domestic practice of public management number of regulatory legal acts of the*

*Federal level, which contains the goals, objectives and key priorities of strategic development of the industry under consideration of public administration. The article presents well-reasoned arguments about the suboptimality of such an approach to regulation, as well as recommendations to the authorized management entities on considering the possibility of revising approaches to the system-structural construction of strategic planning documents, their greater internal optimization and reduction.*

*Keywords: public administration, public policy, strategic planning, health care, programs, plans, goal setting, consistency.*

Актуальность и принципиальная необходимость всестороннего развития и укрепления национальных систем здравоохранения всегда носили достаточно аксиоматический характер в науке государственного управления, а в ситуации всемирной пандемии COVID-19 - вспышки болезни, вызванной новой коронавирусной инфекцией (SARS-CoV-2, 2019-nCoV), более, как представляется, не вызывают сомнения ни у одного жителя планеты.

Вместе с тем, конкретная стратегия и тактика развития системы здравоохранения страны, порядок её реформирования в каждом государстве имеет крайне уникальные черты, логику и последовательность построения.

В сферу научных интересов автора настоящей статьи входят вопросы исследования специфических современного государственного управления вопросами развития системы здравоохранения Российской Федерации.

Проблемной ситуацией, вызвавшей особенный научный интерес и определенное недоумение автора настоящей статьи, а равно – послужившей первопричиной и подлинным мотивом подготовки настоящего текста, стал зафиксированный в ходе собственных научных изысканий, как представляется, – ранее абсолютно не известный теории и практике отечественного государственного управления, факт (феномен) наличия невероятного по своему количественному выражению массива разработанных и принятых документов стратегического планирования в сфере здравоохранения, что, учитывая их объем, не может не вызывать определенных методологических управленческих вопросов. Кратко опишем существо сложившейся ситуации.

Общеизвестно, что последние несколько десятков лет система государственного, регионального и муниципального управления Российской Федерации зиждется на программно-целевом принципе управления.

С середины 2014 фактически сложившаяся управленческая практика обрела новый правовой фундамент, окончательно оформившись в рамках Федерального закона от 28.06.2014 № 172-ФЗ «О стратегическом планировании в Российской Федерации» [1] и в последствие принятых в его исполнение аналогичных региональных законах субъектов Федерации. В общем смысле, Федеральным законом от 28.06.2014 № 172-ФЗ «О стратегическом планировании в Российской Федерации» устанавливается, что документы стратегического планирования разрабатываются в рамках

целеполагания, прогнозирования, планирования и программирования на федеральном уровне, на уровне субъектов Российской Федерации и на уровне муниципальных образований.

Реализация государственной политики в сфере здравоохранения на территории Российской Федерации, не являясь исключением, точно также, как и остальные сферы социального и экономического развития, твердо стоит на рельсах программно-целевых принципов управления.

Характеризуя особенности фактически сложившейся к сегодняшнему дню систему стратегического планирования вопросов реализации государственной политики в сфере здравоохранения на территории Российской Федерации следует отметить, что последняя, как было сказано, осуществляется в рамках положений Федерального закона от 28 июня 2014 года № 172-ФЗ «О стратегическом планировании в Российской Федерации» и обязана базироваться на (1) Прогнозе долгосрочного социально-экономического развития Российской Федерации на период до 2030 года [2], (2) бюджетных посланиях Президента Российской Федерации Федеральному Собранию Российской Федерации, (3) Сценарных условиях долгосрочного прогноза социально-экономического развития Российской Федерации до 2030 года, (4) законодательных и иных нормативных правовых актах в области обороны и национальной безопасности Российской Федерации. (5) При формировании приоритетных направлений реализации государственной политики в сфере здравоохранения в Российской Федерации в обязательном порядке учитывается опыт разработки и реализации аналогичных документов стратегического планирования и социальных инициатив в области развития здравоохранения и за рубежом. (6) Государственная политика в сфере здравоохранения обязана учитывать и основные цели, задачи и направления национальных стратегических проектов, представленных на заседаниях Совета при Президенте Российской Федерации по стратегическому развитию и приоритетным проектам. Правила разработки, реализации и оценки эффективности отдельных государственных программ Российской Федерации утверждены Постановлением Правительства РФ от 12 октября 2017 года № 1242 [3].

Базовый корпус документов стратегического планирования федерального уровня общего характера, устанавливающих ключевые приоритеты реализации государственной политики в сфере здравоохранения в Российской Федерации составляют:

- (7) Стратегия национальной безопасности Российской Федерации [4];
- (8) Государственная программа «Экономическое развитие и инновационная экономика» [5];
- (9) Основные направления деятельности Правительства Российской Федерации на период до 2024 года [6];
- (10) Основные направления совершенствования системы государственного управления [7];
- (11) Национальные цели и стратегические задачи развития Российской Федерации

Федерации на период до 2024 года [8];

(12) Единый план по достижению национальных целей развития Российской Федерации на период до 2024 года [9];

(13) Прогноз долгосрочного социально-экономического развития Российской Федерации на период до 2030 года [10];

(14) Бюджетный прогноз Российской Федерации на период до 2036 года [11];

(15) Основные направления бюджетной, налоговой и таможенно-тарифной политики на 2021 год и на плановый период 2022 и 2023 годов [12];

(16) Прогноз социально-экономического развития Российской Федерации на 2021 год и на плановый период 2022 и 2023 годов [13].

Базовый корпус документов стратегического планирования федерального уровня специального и отраслевого характера, устанавливающих ключевые приоритеты реализации государственной политики в сфере здравоохранения в Российской Федерации составляют:

(17) Государственная программа Российской Федерации «Развитие здравоохранения» [14];

(18) Указ Президента РФ от 07.05.2012 № 598 «О совершенствовании государственной политики в сфере здравоохранения» [15];

(19) Стратегия развития здравоохранения в Российской Федерации на период до 2025 года [16];

(20) Программа государственных гарантий бесплатного оказания гражданам медицинской помощи на 2021 год и на плановый период 2022 и 2023 годов [17];

(21) Концепции развития непрерывного медицинского и фармацевтического образования в Российской Федерации на период до 2021 года [18];

(22) Национальный проект «Здравоохранение» [19].

Более того, в настоящее время на федеральном уровне разработаны, приняты и действуют (реализуются) несколько десятков ведомственных целевых программ в сфере здравоохранения (только на федеральном уровне).

Факультативная, но вместе с тем и юридически обязательную, роль в системе стратегического планирования вопросов реализации государственной политики в сфере здравоохранения принадлежит ещё порядка 20-30 документам стратегического планирования федерального уровня.

Таким образом, установив и выявив черты фактически к сегодняшнему дню сложившегося состояния системы стратегического планирования государственной политики в сфере здравоохранения на уровне Российской Федерации автор настоящей статьи приходит к ряду следующих, возможно небесспорных, но вместе с тем, и не лишенных логической справедливости и позитивного дискуссионного потенциала выводов и умозаключений:

Первое. По глубокому убеждению автора настоящей статьи, показанный численный состав нормативных актов – документов



стратегического планирования в сфере государственной политики здравоохранения является как крайне аномальным, так абсолютно рекордным по своему количеству относительно всех иных сфер государственного регулирования и социального управления в истории и практике современной России.

Второе. Следует твердо понимать, что совокупный объем поименованных выше нормативных актов составляет тысячи страниц весьма запутанного текста, утяжеленного тысячами таблиц. В практическом плане такой объем не просто имеет все признаки нарушения ключевых принципов и базовых подходов правильного нормотворчества, а более конкретно говоря – все признаки невысокого (крайне низкого) качества юридической техники составления нормативных актов, но и предельно затрудняет сам процесс государственного управления. Ведь, не понятно чем вызванная раздробленность и разветвленность государственных программ, по закону, является обязательной к прочтению и управленческому учету абсолютно всеми субъектами государственного, регионального и муниципального управления. Проще говоря, все названные тысячи страниц обязаны исследовать и понимать, и помнить все региональные и местные чиновники, а равно – все должностные лица каждого из нижестоящих звеньев системы здравоохранения, вплоть до главного врача больницы, поликлиники. Безусловно, такой массив данных абсолютно не возможен к восприятию и запоминанию. А следовательно, хотя бы в этой части, цель государственного управления уже становится недостижимой. Подобная излишняя бюрократизация ведет к неизбежному параличу системы управления, заведомой провальности и (или) принципиальному не достижению целей.

Третье. Самостоятельного беспокойства подобный хаотичный (несистемный) характер формирования стратегических приоритетов государственного развития отечественной системы здравоохранения на федеральном уровне заслуживает в той части, что как мы помним и понимаем, что во исполнение и в развитие практически каждого предложения из всех названных федеральных нормативных документов, на уровне субъекта Федерации (и в некоторых случаях муниципального образования), в силу закона, в обязательном порядке, с целью обеспечения единства целей и задач реализации государственной политики, должны быть приняты соответствующие, производные от федеральных, документы стратегического планирования регионального уровня. Последнее же означает, что если федеральным «регулятором» выпущено, условно, 50 документов стратегического планирования, то, будучи помноженными на 85 субъектов Российской Федерации, необходимый к восприятию, допустим мэром города, массив нормативных актов растет по экспоненте и уже приближается к сотням (а в целом по стране – к тысячам).

Четвертое. Вспоминая о важнейшей для современной философии теореме Гёделя, которая гласит, что «любая система логических суждений является либо неполной, либо противоречивой», применительно к предмету

настоящего исследования, мы также можем сделать производный справедливый вывод и о том, что чем большей по своему структурному составу является система нормативных актов – документов стратегического планирования государственной политики в сфере здравоохранения, тем в большей степени, по универсальному принципу, они между собой вступают в логические противоречия. Сказанное, свою очередь, обрекает систему стратегического планирования государственной политики в сфере здравоохранения на максимальную внутреннюю неустойчивость.

Резюмируя всё вышесказанное, её автор считает важным подчеркнуть главную мысль о том, что как было наглядно показано и убедительно доказано, одной из главных, сложившихся к сегодняшнему дню, характерных черт, особенностей современного регулирования общественных отношений, управленческих отношений и в целом правоотношений, вытекающих из вопросов реализации государственной политики в сфере здравоохранения на территории Российской Федерации, является необоснованно избыточный характер нормативно-правового регулирования, выражающийся в множественности изданных на федеральном уровне документов стратегического планирования, при этом – абсолютно не характерный и не свойственный ни одной иной отрасли социального управления.

По мнению автора настоящей статьи, ввиду сказанного, отечественная система стратегического планирования вопросов реализации государственной политики в сфере здравоохранения находится в неоптимальном состоянии. Смысловая противоречивость и текстуальная несбалансированность актов, сама по себе, является неоспоримым признаком излишней зарегулированности и проявлением явной забюрократизированности сферы здравоохранения как отрасли публичного управления, что в конечном счете, неминуемо ведет, и по вертикали, и по горизонтали, к резкому снижению эффективности управления, а следовательно – и принципиальной недостижимости исходного первоначального целеполагания, заложенного в документах авторами.

В заключение статьи её автор готов взять на себя смелость выдвинуть рекомендацию в адрес руководства уполномоченных органов исполнительной власти Российской Федерации, прежде всего – Министерства здравоохранения РФ, о рассмотрении вопроса об оптимизации количественного состава документов стратегического планирования в сфере здравоохранения, пересмотра подходов к их системно-структурному построению, кратно большей внутренней оптимизации и, безусловно, редуцированию.

#### **Использованные источники:**

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2. Прогноз долгосрочного социально-экономического развития Российской Федерации на период до 2030 года. Разработан Минэкономразвития России.

Доступ из справ.-правовой системы «КонсультантПлюс».

3. О разработке, реализации и об оценке эффективности отдельных государственных программ Российской Федерации (вместе с «Правилами разработки, реализации и оценки эффективности отдельных государственных программ Российской Федерации»): Постановление Правительства РФ от 12.10.2017 № 1242 (в ред. от 16.04.2020). Доступ из справ.-правовой системы «КонсультантПлюс».

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8. О национальных целях и стратегических задачах развития Российской Федерации на период до 2024 гг.: Указ Президента Российской Федерации от 07.05.2018 № 204. Доступ из справ.-правовой системы «КонсультантПлюс».

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**МИКОБИОТА СЕМЕЙСТВА SOLANACEAE (ПОМИДОРЫ, БАКЛАЖАНЫ, БОЛГАРСКИЙ ПЕРЕЦ, КАРТОФЕЛЬ) В ФЕРГАНСКОЙ ДОЛИНЕ**

*Аннотация: В наше время в питании людей очень много разных продуктов питания, хотя, конечно, многие из них искусственные, созданные промышленным образом и назвать их полноценной едой невозможно. К такому выводу рано или поздно приходят многие люди, у которых осталась хоть капля здравого смысла. Но далеко не каждый знает и задумывается над пользой овощей, которые ежедневно употребляет в пищу.*

*Люди привыкли думать, что если не считать наличие в овощах нитратов и пестицидов (побочного эффекта современного сельского хозяйства), овощи по умолчанию полезны, ведь это продукты питания, созданные самой природой нам в пищу.*

*Салат из помидор и огурцов стал для нас классическим. Однако всего триста лет назад эти овощи не были знакомы нашим предкам. Насколько наш рацион изменился и так ли полезно иметь интернациональную пищу на столе, можно проследить на примере паслёновых.*

*Ключевые слова: микобиота, сельского хозяйства, овощи, питания, рацион.*

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**MYCOBIOTA OF THE FAMILY SOLANACEAE (TOMATOES, EGGPLANTS, BULGARIAN PEPPER, POTATO) IN THE FERGANA VALLEY**

*Abstract: Nowadays, in the diet of people there are a lot of different food products, although, of course, many of them are artificial, industrially created and it is impossible to call them a full-fledged food. Sooner or later, many people come to this conclusion, who have at least a drop of common sense left. But not everyone knows and thinks about the benefits of vegetables that they eat every day.*

*People are used to thinking that apart from the presence of nitrates and pesticides in vegetables (a side effect of modern agriculture), vegetables are healthy by default, because these are food products created by nature itself for our food.*

*The tomato and cucumber salad has become a classic for us. However, just three hundred years ago, these vegetables were not familiar to our ancestors. How much our diet has changed and whether it is so beneficial to have international food on the table can be seen in the example of nightshades.*

*Key words: mycobiota, agriculture, vegetables, nutrition, diet.*

Актуальность. Одной из важнейших задач современности является снабжение населения страны высоковитаминными, экологически безопасными продуктами питания в течение всего года. Решение этой задачи должно осуществляться в условиях орошаемого земледелия путем применения новейших достижений агротехники, районированных и перспективных сортов и гибридов, адаптированных к условиям региона, создания условий для улучшения качества и сокращения потерь продукции, при минимальных энергозатратах [4].

В области технологии выращивания томатов, перца сладкого и баклажан особое внимание уделяется созданию энергосберегающих технологий, позволяющих сократить затраты топливно-энергетических ресурсов во всех звеньях технологической цепочки. Первостепенную роль в реализации этой проблемы играют агротехнические приемы возделывания овощей, эффективное применение которых обеспечивает существенное повышение урожайности возделываемых культур[2].

Плоды томатов при уборке, транспортировке и послеуборочной доработке подвергаются различным механическим повреждениям, особенно при механизированной технологии, где применяются томатуборочные машины, большегрузные контейнера и сортировальные пункты с вибрационной укладкой плодов для послеуборочной доработки.

С целью подбора сортов велось изучение прочностных свойств плодов в соответствии с разработанной методикой. Прибором ИДП-500 определяли усилие, необходимое для прокола кожицы и мякоти плода, прибором ОПТ-10- усилие для раздавливания плода.

Изучению механических свойств плодов для дальнейшего их хранения, транспортировки и переработки уделяется серьезное внимание [7]. Установлены оптимальные требования, к плодам томатов на пригодность к транспортированию и цельноплодному консервированию. К таким требованиям относится прочность кожицы к проколу не менее 53 г/см<sup>2</sup>, устойчивость плодов к статическим нагрузкам не менее 4 кг. [3].

Основную роль в придании прочности плода играет кожица, от сопротивления кожицы механическим воздействием в первую очередь зависит прочность плода, причем в плодах бурой и молочной степени зрелости прочностные свойства лучше за счет повышенной плотности подкожного слоя [6]. Мякоть также придает прочностные свойства плодам. Считается, что между устойчивостью кожицы и мякоти к повреждениям и транспортабельностью и лежкостью плодов существует прямая корреляция.

Устойчивые к проколу плоды лучше сохраняются при транспортировке и хранении [1].

На прочностные свойства томатов оказывает влияние и влагообеспеченность растений. Так, проведенными опытами установлено, что при повышенной влагообеспеченности 80%НВ, прочность кожицы меньше на 20-27%, по сравнению с пониженной влажностью почвы при пороге влажности 60% НВ и на 29-38% против плодов, растения которых выращены без орошения. Также выявлено, что в процессе созревания и хранения плодов томатов прочность кожицы снизилась и была в 1,2-2 раза меньше исходного. В заданном температурном режиме после 30 суточного хранения плодов молочной степени зрелости прочность кожицы была в 1,3-1,5 раза выше, чем при хранении в естественных условиях хранилища. Травмированные плоды в процессе хранения снижали прочность в естественных условиях в 1,1-1,7 раза по сравнению с заданным температурно-влажностным режимом [5].

Мировая коллекция томатов в настоящее время насчитывает около четырех тысяч образцов. По классификации Д.Д.Брежнева [3] сорта культурного томата объединяют 33 сортотипа. Но современная наука пополнилась новыми сведениями о томатах, в связи, с чем в 1982 году приняты «Методические указания по определению сортотипов культурного томата» (составитель Е.Л.Глуценко, ВИР). В этой методике предусмотрено 6 групп, каждая группа включает 8 сортотипов. Наиболее распространена в нашей стране первая группа (I), включающая 8 сортотипов. В группу входят сорта детерминантного типа от карликовых до высокорослых, различные по вегетативному периоду от ранних до среднеранних. С формой плода эллипсоидной, удлинено-овальной, кубовидной, сливовидной, грушевидной или цилиндрической [4].

Надо отметить, что благодаря интенсивной селекционной работе по созданию сортов томатов, селекционерами выведены устойчивые сорта к вершинной гнили и некрозу, высокоурожайные, пригодные к перевозкам на большие расстояния и длительному хранению.

Цель исследования. Научно обосновать агротехнические приемы повышения урожая и качества овощных культур семейства пасленовых (томата, перца сладкого и баклажан) в Ферганской долине. Разработать отраслевые стандарты на типовые технологические процессы и стандарты отрасли на сушеные томаты, перец сладкий биологической зрелости, баклажан – технической зрелости.

Результаты исследования. Результаты проведенных фенологических наблюдений за ростом и развитием растений томатов, выращенных на различных фонах удобрений, показали определенную зависимость в прохождении фенофаз от применяемых удобрений

Существующие технологии возделывания сельскохозяйственных культур обеспечивают достаточно высокий выход продукции во всех зонах возделывания сельскохозяйственных растений. Но всегда достаточно

достоверно оценивается стоимость производственного продукта по данным технологиям.

Современные технологии производства продукции сельского хозяйства основываются в основном на использовании невозобновляемых видов топлива, в первую очередь нефти, природный газ. Быстрое сокращение запасов ископаемого топлива, значительное повышение его стоимости, заставляет искать пути экономии их использования в сельскохозяйственном производстве, а также пути развития топливных энергетических ресурсов базирующихся на солнечных и ветровых ресурсах (так называемые возобновляемые источники энергии).

При этом анализ взаимосвязей затрат и выхода энергии дает более , полное руководство к работе направленное на экономию энергии, чем анализ денежных затрат.

Энергетическая оценка существующих в современном овощеводстве технологических процессов позволяет выделить наиболее энергоемкие операции и обосновать ресурсосберегающие агроприемы возделывания овощных культур. Одним из важнейших показателей роста эффективности производства является повышение производительности общественного труда. На этот показатель оказывают влияние ряд факторов, но главный из них повышение фондовооруженности труда. В сельском хозяйстве при , повышении фондовооруженности труда в 17,5 раз, производительность труда повышается в 4 раза.

Научно-технический прогресс характеризуется, прежде всего, ростом энергопотребления. С каждым годом этот фактор является все более важным условием для успешного наращивания темпов производства. Без роста основных фондов и потребления топливноэнергетических ресурсов нельзя обеспечить ни получение нужного количества урожая, ни высокого уровня производительности труда.

Таким образом по полученным нами данным следует, что энергетические затраты при производстве овощей, в частности томатов, перца сладкого и баклажан в большей части увеличиваются за счет применения горючего независимо от возделываемой культуры.

Биоэнергетический метод в последнее время получил признание в мире, как универсальный способ оценки потоков энергии в агроценозе. Он позволяет выразить различные приемы, сорта, культуры в единых показателях, установить их своеобразие, обеспечивает возможность научно-обосновать подходы к разработке и совершенствованию технологических процессов и технических условий.

Доказано, что процесс интенсификации сельского хозяйства сопровождается ростом сельского хозяйства, ростом энергозатрат. Энергоемкие способы возделывания овощных культур существенно увеличивают стоимость полученной продукции [219].



Основное место в решении этой проблемы при возделывании, хранении и транспортировке является наличие сортового разнообразия с широкими адаптивными возможностями.

Влияние сорта, срока посадки, густоты стояния растений, режима орошения на биоэнергетические показатели. Показатели рассмотрим на примере выращивания томатов. С энергетической точки зрения элементы технологии считаются эффективными, если обеспечивается условие: соотношение энергии полученной в хозяйственной части урожая и израсходованной совокупной энергии на производство данного вида продукции больше или равно единице.

Наши расчеты показывают, что с точки зрения биоэнергетической оценки возделываемых томатов обеспечивали урожайность от 57,9 т/га до 68,0 т/га. Кроме того, из этой таблицы следует, что выращивание томатов всех изучаемых сортов экономически выгодно. Коэффициент энергетической эффективности был выше единицы. Наибольшие производимые затраты в зависимости от сроков уборки, были при массовом сборе урожая. Это объясняется более высокой отдачей урожая в этот период, а следовательно и большими затратами на уборку, сортировку и доставку урожая к месту реализации и переработки плодов.

Вывод. На основании анализа полученного многолетнего материала исследований разработаны ОСТы на технологические процессы производства и технические условия на продукцию, а также технические условия на сушеную продукцию томатов, перца сладкого и баклажан;

-установлены оптимальные режимы для транспортирования и хранения овощной продукции, обеспечивающие высокую сохранность;

-разработана новая ресурсосберегающая технология солнечно-воздушной сушки товарного (нестандартного) урожая пасленовых; готовый сушеный продукт подтвержден ОСТами, введенными в 2003 г. впервые с правом выдачи сертификатов;

-научно-обосновано использование побочного сырья семеноводства томатов и перца сладкого.

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**СПОСОБЫ СОЗДАНИЯ БЛОКА УПРАВЛЕНИЯ ЗАРЯДКОЙ  
АККУМУЛЯТОРА НА СОЛНЕЧНОМ ЗАРЯДНОМ УСТРОЙСТВЕ  
ПРИ СОЗДАНИИ АЛЬТЕРНАТИВНОГО И ВОЗОБНОВЛЯЕМОГО  
ИСТОЧНИКА БЕСПЕРЕБОЙНОГО ПИТАНИЯ**

*Аннотация: Задачей контроллера блока зарядки аккумулятора для зарядки солнечной батареи является создание мобильного и возобновляемого источника энергии. Вид блока зарядки аккумулятора с помощью солнечной панели. Идеальная блок-схема для подачи электроэнергии для солнечных потребителей.*

*Ключевые слова: Альтернативная и возобновляемая энергия, аккумулятор, солнечная батарея, контроллер.*

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**METHODS FOR CREATING A SOLAR CHARGER BATTERY  
CHARGING CONTROL UNIT WHEN CREATING AN ALTERNATIVE  
AND RENEWABLE UNINTERRUPTIBLE POWER SUPPLY**

*Abstract: The task of the battery charging unit controller for charging a solar battery is to create a mobile and renewable energy source. View of a battery charging unit using a solar panel Ideal block diagram for supplying electricity to solar consumers.*

*Key words: Alternative and renewable energy, battery, solar battery, controller.*

Сегодняшние представления о солнечных элементах (СЭ), батареях и фотоэлектрических устройствах исторически сложились около 40 лет назад, и за последние 10-15 лет они стали источником энергии для населения и простых людей. Природа этих устройств основана на поглощении солнечного излучения в полупроводниковых материалах и разделении результирующих пар зарядов в полупроводниковом барьере и передаваемых во внешнюю цепь.

Практические исследования - это проектирование, подготовка, оптимизация структур СЕ с оптимальными параметрами, разработка СЕ, батарей и фотоэлектрических технологий, а также использование этих технологий для потребителей различной емкости и мощности. внедрение системы электроснабжения.

Большая часть СЕ, в настоящее время производимая и используемая в качестве источника энергии для нужд человека, выполнена из кремниевого материала. Основной причиной этого является кремний, который является основой микроэлектронных устройств, которые часто используются для нужд народного хозяйства. Во-вторых, кремний - это элементарный полупроводник, составляющий около 30% поверхности Земли, а также передовые технологии.

Мы рассматриваем образование твердого тела с точки зрения электронной теории в случае материалов ЯУ. Во время образования твердого тела атомы находятся настолько близко друг к другу, что образуются электроны во внешней оболочке. Вместо отдельных единичных орбит отдельных электронов в атоме образуются совокупные орбиты, и оболочки в атоме связаны со сферами и обычно принадлежат кристаллу. Поведение электронов резко изменится, и электроны в конкретном атоме и на определенном энергетическом уровне смогут перемещаться к другому соседнему атому на той же энергетической поверхности без изменения энергии и, таким образом, свободно перемещать электроны в кристалле.

Все атомы в изолированном состоянии кристалла заполнены электронами. Только в области, где валентные электроны расположены на некоторых верхних уровнях, уровни не полностью заняты. Проводимость, оптика и другие свойства кристалла в основном определяются энергетическим расстоянием от валентного поля до поверхности заполнения и над ней. Тепло и оптическая проводимость могут передавать электроны из валентного поля в электрическую проводимость и участвовать в электрической проводимости. Смещение электронов к свободному полю в

валентном поле создает движение противоположного положительного заряда, называемого порами.

Диэлектрики называются валентными полями и после них. Энергетическое расстояние до области проницаемости называется веществами с относительно большим количеством энергии. Металлы, однако, имеют другую структуру. Они могут быть частично заполнены валентным полем или могут быть смежными со следующим проводящим полем.

Мы рассмотрим функцию зарядного устройства для зарядки солнечной батареи с помощью мобильного и возобновляемого источника энергии. Выходная мощность солнечной батареи составляет около 21-23 Вольт, когда зарядное устройство отключено, и около 17-18 Вольт, когда батарея подключена. В этом блоге по контролю за солнечной батареей хранится информация о напряжении, поступающем от солнечной батареи, поэтому он поддерживает напряжение 13 вольт для 12-вольтовой батареи. Для этого Солнечное Зарядное Устройство Battery Battery Battery Blog

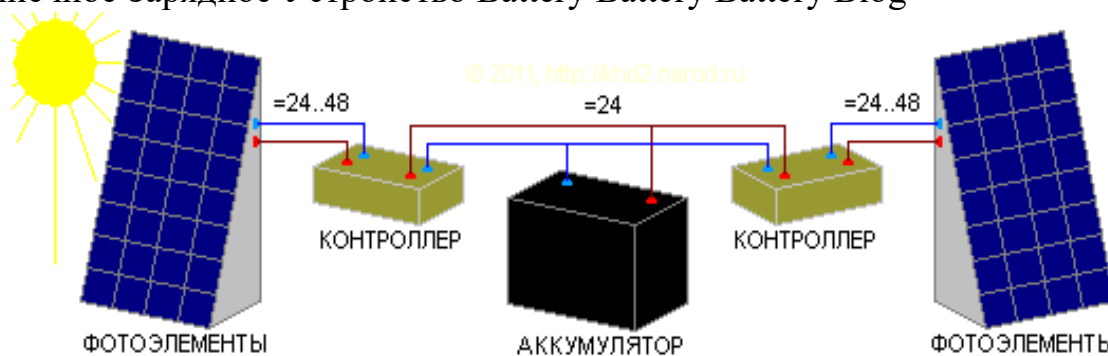


Рисунок 1 Изображение зарядного устройства, используемого в солнечной панели.

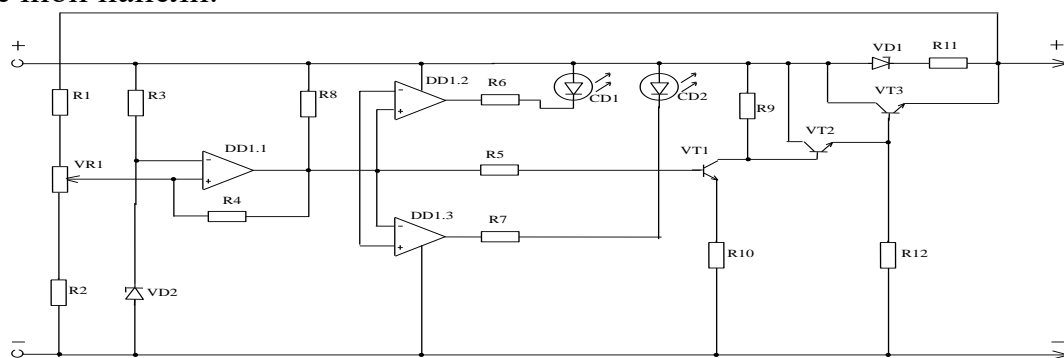


Рисунок 2 Принципиальная схема контроллера, заряжающего аккумулятор от солнечной батареи и поддерживающего ее на уровне 13 вольт. R1,R2-33K; R3-510; R4-1M; R5-1K; R6,R7-470; R8-1K; R9-1,2K; R10-120; R11-100; R12-300; VD1,VD2-KC162; DD1-LM339; VR1-50K; VT1-KT315; VT2-KT605; VT3-KT819.

Мы разработаем следующую блочную схему для обеспечения потребителей солнечной энергией, батареями и электричеством, если они вообще не используют сеть:



Рисунок 3. Идеальная блок-схема для энергоснабжения потребителя солнца

Солнечная батарея в этой схеме блоков преобразует солнечную энергию в электричество и передает ее контроллеру. Контроллер держит аккумулятор на напряжении 13 вольт. Аккумулятор собирает электричество и передает его на преобразователь в нужное время, тогда как преобразователь преобразует 12 вольт в 220 вольт. Сравнительный анализ возможных режимов работы солнечных энергетических устройств. С точки зрения стоимости и удобства устройства желателен тихий режим работы. Он работает в оригинальной схеме цепи, которая автоматически контролирует общую нагрузочную способность для инвертора, которая имеет ограниченную выходную мощность и которая снижает вероятность перегрузки из-за ошибки.

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## ИСПОЛЬЗОВАНИЕ ТВОРЧЕСКОЙ РАБОТЫ В КРУГАХ

*Аннотация: Физика, которая является фундаментальной наукой, которая находится на переднем крае науки и техники, является экспериментальной наукой по своей сути. В этой науке теоретические понятия, закономерности имеют свои экспериментальные основы и практические доказательства. Именно поэтому важно организовывать и проводить демонстрационные эксперименты и практические работы как неотъемлемую и дополняющую часть лекций по преподаванию физики.*

*Ключевые слова: Демонстрация, кружковые занятия, электроды, овощи.*

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## USING CREATIVE WORK IN CIRCLES

*Annotation: Physics, which is a fundamental science that is at the forefront of science and technology, is an experimental science at its core. In this science, theoretical concepts, patterns have their own experimental foundations and practical evidence. That is why it is important to organize and conduct demonstration experiments and practical work as an integral and complementary part of lectures on teaching physics.*

*Keywords: Demonstration, circle sessions, electrodes, vegetables*

Физические эксперименты - практические занятия играют важную роль в формировании научного мировоззрения студентов.

Хорошо известно, что проницаемость глаз больше, чем у восприятия слуха. 90% студентов получают информацию через просмотр. Орган слуха



человека состоит из 15 500 чувствительных элементов, а глаз содержит 126 миллионов чувствительных элементов. То есть глаз имеет в 8000 раз больше чувствительных элементов, чем ухо, и было обнаружено, что информация в глазу в 8000 раз быстрее, чем в ухе [ 1-3 ]. Если уроки преподаются через слово и понимание, приобретение будет 10%.

На демонстрационном уроке эффективность оценивается в 50%, а когда процесс обучения организован на практике с участием студента, качество и эффективность обучения составляют 90%. Вот почему выражения «Сто раз лучше слышать один раз», «Глаз более чувствителен, чем ухо» являются распространенными. Если учащийся управляет событием своими руками, создает устройство и делает выводы на основе анализа, объем памяти информации увеличивается.

Информация достигает уровня понимания и знаний. Чтобы повысить эффективность урока, учитель должен быть знаком с его предметом, его методами преподавания и интегрировать их непосредственно в жизнь, с развитием науки и техники.

Одним из видов самостоятельной работы, организуемой вне классной комнаты, является клуб.

Круг предоставляет разнообразную интересную, независимую работу и помогает создать активного творческого человека. Используя промышленные, недорогие, недорогие, не требующие труда учебные и технологические инструменты для ведения бизнеса в кругах. дает хорошие результаты. Круговая работа позволяет применять теоретические знания, полученные на уроках физики, к практическим занятиям, таким как приборостроение и моделирование. Инструментарий формирует у студентов творческие способности, способность создавать различные устройства своими руками, что необходимо для более глубокого понимания физики.[4-5]

Поэтому в этой статье перечислено одно из практических заданий, которые учащиеся могут выполнять своими руками в кругах физиков и получать экспериментальные результаты.

#### Фруктовый элемент

Инструменты: миллиамперметр или гальванометр, медная проволока, одиночный гвоздь, фрукты и овощи.

Цель: внедрить процесс гальванических элементов путем электролиза фруктов и овощей.

#### Порядок исполнения

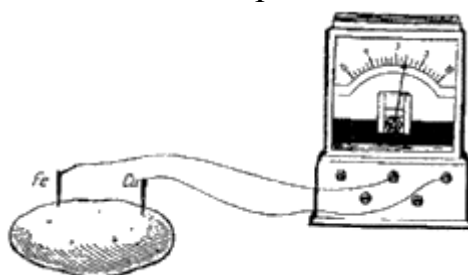
1. Подсоедините медный провод к одной из трубок микрокомпьютера, а железный провод (например, гвоздь) к другой (Рисунок 1).

2. Переключите медную проволоку и гвоздь к картофелю. Он падает с гальванометра. Это связано с различием в солях картофеля и калиевых электродов, производимых различными проводящими электродами.

3. Нарисуйте следующую таблицу, чтобы записать результаты измерений.

№	Тип фруктов или овощей	Гальванометр, мА
1	лимон	
2	картофель	
3	лук	
4	морковь	
5	редис	
6	яблоко	

4. Напишите датчик уровня на столе.
5. Повторите этот опыт для других фруктов и овощей.
6. В конце эксперимента определите, какие фрукты или овощи чаще всего указывают значение гальванометра, и попытайтесь выяснить, почему.



1-рис.

Основываясь на этом опыте, можно использовать простое устройство, чтобы определить, является ли азот высоким или низким в овощах (например, дынях и арбузах). Для этого мы извлекаем дыни или арбузы, которые можно определить количественно другими более точными методами, и этот инструмент измеряется, а количество солей в дыне или арбузе неизвестно. Для получения более точных результатов рекомендуется проверять фрукты и овощи на любом типе устройства. [6-7]

В следующей таблице приведены токи в некоторых сельскохозяйственных продуктах в мкА.

№	Наименование продукции	электрод	№		электрод
		алюминий - медь			алюминий - медь
1	картофель	110-100	11	баклажан	25-22
2	лук	50-46	12	редис	57-55
3	помидоры	100-90	13	арбуз	39-37
4	болгарский перец	42-38	14	дыня	60-58
5	Морковь (желтая)	44-40	15	Пельмени (синие)	20-18
6	Морковь (красная)	28-25	16	Белая асоль	50-48)
7	Свекла (красная)	51-49	17	Чеснок лук	10-8
8	редис	58-55	18	тыква	38-34
9	огурец	60-50	19	Сырой горох	20-18
10	капуста	40-36	20	кукуруза	62-60

Решение проблем, представленных в данной исследовательской работе, поможет повысить содержание и повысить эффективность самостоятельного обучения, которое является неотъемлемой частью современных педагогических технологий.

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## **ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ПЫЛЕПОДАВЛЕНИЯ ПРИ МАССОВЫХ ВЗРЫВАХ НА КАРЬЕРАХ**

*Аннотация: В статье рассмотрен способ снижения пылегазовыделений, обеспечивающий повышение эффективности пылеподавления и увеличение коэффициента полезного действия энергии ВВ при массовых взрывах на карьерах.*

*Ключевые слова: карьер, буровзрывные работы, скважина, забойка, выделение пыли и газов, пылеподавление, массовый взрыв, экологическая обстановка, параметры пылегазового загрязнения, взрывные газы, тепловые потери, давление газов взрыва, плотность заряжения ВВ.*

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## **IMPROVING THE EFFICIENCY OF DUST SUPPRESSION IN CASE OF MASS EXPLOSIONS IN QUARRIES**

*Abstract: The article considers a method for reducing dust and gas emissions, which provides an increase in the efficiency of dust suppression and an increase in the efficiency of explosive energy in mass explosions at quarries.*

*Keywords: quarry, blasting, drilling, tamping, dust and gas, dust control, mass explosion, environmental conditions and the parameters of dust-gas contamination, explosive gases, heat losses, pressure of gases of explosion, the density of loading of explosives.*

Основными источниками вредных выбросов при открытой разработке месторождений полезных ископаемых являются буровзрывные, погрузочно-

транспортные работы и отвалообразование горных пород. Причем, на долю буровзрывных работ приходится до 40% общей массы загрязняющих веществ, оказывающих негативное воздействие на окружающую среду.

Интенсивность пылегазообразования при ведении взрывных работ на карьере зависит от многих факторов, к основным из которых следует отнести физико-механические свойства горных пород и их обводненность, способы бурения взрывных скважин, ассортимент применяемых взрывчатых веществ (ВВ), типы используемых забоечных материалов, методы взрывания (на подобранный откос уступа или в зажатой среде), время производства массового взрыва, метеоусловия на момент массового взрыва и др.

Исследовано влияние состава и физико-химических свойств ВВ на образование ядовитых газов, произведен расчет параметров пылегазового загрязнения атмосферы при производстве массовых взрывов и разработан способ повышения эффективности пылеподавления и увеличения коэффициента полезного действия энергии ВВ при массовых взрывах на карьерах, позволяющий интенсифицировать процесс осаждения пыли над местом взрыва и уменьшить загрязнение окружающей карьер территории.

Объем газов, образующихся при взрыве 1 кг ВВ, рекомендуется определять по формуле [1]:

$$V_0 = \frac{22,42(n_1 + n_2 + \dots + n_k)}{m_1 M_1 + m_2 M_2 + \dots + m_n M_n}, \text{ м}^3/\text{кг}, \quad (1)$$

где  $n$  – число молей газообразных продуктов взрыва;  $m$  – число молей составных частей, ВВ;  $M$  – относительная молекулярная масса составных частей ВВ.

Давление газов взрыва в скважине определяют по выражению:

$$p = \frac{p_0 V_0 T}{273(V - \alpha)}, \text{ МПа}, \quad (2)$$

где  $p_0$  и  $V_0$  – при нулевой температуре, соответственно, атмосферное давление, равное 0,1 МПа, и объем газов ВВ ( $\text{м}^3$ ) при этом давлении;  $T$  – температура взрыва, считая от абсолютного нуля, К;  $V$  – объем скважины,  $\text{м}^3$ ;  $T = T_c + 273$  К ( $T_c$  – температура газов взрыва по Цельсию);  $\alpha$  – коэффциент, учитывающий собственный объем молекул.

В результате проведенных исследований разработан способ повышения эффективности пылеподавления и увеличения коэффициента полезного действия энергии ВВ при массовых взрывах на карьерах, включающем заполнение каждой скважины зарядом ВВ и размещение в ней герметичной оболочки, заполненной соапстоком (отходом масложирового комбината) и водой в соотношении 50:50. Герметичную оболочку с соапстоком и водой размещают в забоечной части скважины. Соапсток с водой передает в качестве рабочего тела свою долю парциального давления на стенки скважины в месте расположения оболочки. Тем самым усиливается запирающий эффект на пути вылета продуктов детонации ВВ из скважины и, следовательно, большая доля энергии взрыва расходуется на полезную работу

разрушения породного массива. В результате коагуляции из пылевого облака в разработанном способе происходит выпадение укрупненных частиц пыли, связанных между собой поверхностными силами смачивающего соапстока с водой. Освобожденное от пыли облако не загрязняет окружающую территорию. Одновременно с осаждением пыли достигается дополнительный эффект нейтрализации ядовитых газов, образующихся при взрыве. Ядовитые газы типа оксидов азота ( $\text{NO}_x$ ) и окиси углерода ( $\text{CO}$ ) вступают в химическую реакцию с соапстоком и водой с образованием жидкой фазы кислоты, которая также осаждается в месте взрыва. Тем самым предотвращается попадание ядовитых газов в окружающую атмосферу и исключаются кислотные дожди.

Температура газов после прохождения через оболочку с соапстоком и водой определяется по формуле [2]:

$$T_{\Gamma} = T_{\Gamma.ф.} - (T_{\Gamma.ф.} - T_0) \exp\left(-\frac{3\alpha \cdot t}{r_o \rho_o C_o}\right), \quad \text{К}, \quad (7)$$

где  $T_{\Gamma.ф.}$  – температура газовой фазы после взрыва, К;  $T_0$  – температура твердой фазы, К;  $\alpha$  – коэффициент теплоотдачи,  $\text{Вт}/(\text{м}^2 \cdot \text{К})$ ;  $t$  – время контакта газа с забойкой, с;  $r_o$  – радиус оболочки с соапстоком и водой, м;  $\rho_o$  – плотность раствора соапстока с водой в оболочке,  $\text{кг}/\text{м}^3$ ;  $C_o$  – теплоемкость соапстока с водой в оболочке,  $\text{Дж}/(\text{кг} \cdot \text{К})$ .

Тепловые потери, затраченные на нагрев забоечной части скважины, определяются по формуле:

$$Q_{\Gamma.п.} = m_o C_o (T_{\Gamma} - T_0), \quad \text{Дж}, \quad (8)$$

где  $m_o$  – масса оболочки с соапстоком и водой, кг.

Массу пыли, выделяемую из блока при взрыве одной скважины, можно рассчитать по формуле:

$$m_n = \rho_{г.п.} V_{бл} \left(1 - \frac{1}{k_p^2}\right) \frac{d_n}{d_{cp}}, \quad \text{кг}, \quad (9)$$

где  $\rho_{г.п.}$  – плотность горных пород,  $\text{кг}/\text{м}^3$ ;  $V_{бл}$  – объем взрываемого блока,  $\text{м}^3$ ;  $k_p$  – коэффициент разрыхления горных пород;  $d_n$  – средний размер пылинок, м;  $d_{cp}$  – средний размер кусков горных пород во взрывном блоке, м.

Таким образом, установлено, что при прохождении взрывных газов через оболочку с соапстоком и водой в забоечной части скважины происходит конвективная теплоотдача от газа оболочке и потеря доли парциального давления на стенки скважины в месте расположения оболочки. За счет потери тепла пылегазовое облако теряет часть своей энергии, что ведет к снижению высоты его подъема и, тем самым, предотвращается вынос его за пределы карьерного пространства.

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## **НОВЫЙ ПОДХОД К КОРРЕКЦИИ КОРОНАРНОЙ НЕДОСТАТОЧНОСТИ У БОЛЬНЫХ ИНФАРКТОМ МИОКАРДА ПОЖИЛОГО ВОЗРАСТА**

*Аннотация: Известно, что сердечная недостаточность в остром периоде ИМ повышает риск развития госпитальной летальности в 3–4 раза и на 55% – в первые 30 дней после острого коронарного синдрома (ОКС).*

*Профилактика и коррекция клинических проявлений сердечной недостаточности у этой группы больных носит обязательный, жизнеспасаяющий характер, применение лекарственных препаратов с этой целью может значительно снизить раннюю и отдаленную смертность от ИМ. Особенно актуален подбор медикаментозной терапии у пациентов уязвимой группы – пожилого и старческого возраста.*

*Представленный в статье клинический случай являет пример реальной клинической практики, когда доступная медикаментозная терапия, улучшающая прогноз пожилых пациентов с ОКС, не всегда используется практическими врачами.*

*Ключевые слова: коронарная недостаточность, миокард инфаркт, пожилой возраст, коррекция.*

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## **A NEW APPROACH TO CORRECTIONAL INSUFFICIENCY CORRECTION IN ELDERLY PATIENTS WITH MYOCARDIAL INFARCTION**

*Abstract: It is known that heart failure in the acute period of myocardial infarction increases the risk of hospital mortality 3-4 times and by 55% in the first 30 days after acute coronary syndrome (ACS).*

*Prevention and correction of clinical manifestations of heart failure in this group of patients is mandatory, life-saving, the use of drugs for this purpose can significantly reduce the early and long-term mortality from myocardial infarction. The selection of drug therapy in patients of a vulnerable group - elderly and senile age - is especially relevant.*

*The clinical case presented in the article is an example of real clinical practice, when available drug therapy that improves the prognosis of elderly patients with ACS is not always used by practitioners.*



*Key words: coronary insufficiency, myocardial infarction, old age, correction.*

Актуальность. По данным отечественных и зарубежных авторов, за последние 10-15 лет отмечается увеличение продолжительности жизни населения, и, соответственно, возрастает доля больных старше 60 лет[3,6]. Согласно геронтологической классификации всемирной организации здравоохранения (ВОЗ) к пожилому возрасту относят пациентов от 60 до 74 лет, к старческому -от 75 до 89 лет[1,5]. Лечение лиц пожилого и старческого возраста является сложной и важной проблемой. Важность ее определяется тем, что сердечно сосудистые болезни занимают первое место в структуре заболеваемости, а у людей пожилого возраста они протекают тяжелее, чаще ведут к осложнениям, смертельным исходам, причем, в каждом последующем 5-летию жизни смертность на 100 тыс. населения увеличивается в 2-2,5 раза[2,7,9].

Существует тесная взаимосвязь между старением и сердечно-сосудистыми заболеваниями: к физиологическим возрастным изменениям у лиц пожилого и старческого возраста часто присоединяются нарушения, связанные с заболеванием; среди лиц старших возрастных групп резко увеличивается распространенность атеросклероза, ишемической болезни сердца (ИБС), артериальной гипертензии (АГ), сосудистых заболеваний мозга[4,8]. Все это иногда кардинально влияет на тактику ведения больных, лимитируя объем вмешательств, заставляя отказываться от радикальных методов лечения, сводя их к симптоматической терапии.

Цель исследования. Изучить возможности медикаментозной и эндоваскулярной коррекции коронарной, миокардиальной и цереброваскулярной недостаточности у больных инфарктом миокарда (ИМ) пожилого возраста.

Материал и методы исследования. Результаты стационарного этапа оценивали у 137 пациентов с вышеуказанной сопутствующей патологией. Средний возраст пациентов составил 68,03 (медиана 67, интерквартильный размах 64-71) лет. Все пациенты были доставлены бригадами скорой медицинской помощи в среднем через 8,8 часов от начала ангинозного приступа. Среди поступивших пациентов пожилого возраста преобладали мужчины - 84 (61,3 %), количество женщин составило 53 (38,7%) соответственно.

Результаты исследования. У больных пожилого возраста с манифестирующими клиническими, ЭКГ и лабораторными признаками ИМ в 84,6 % случаев регистрируется предшествующая длительная АГ, в 62 % случаев стенозирующий атеросклероз ВСА с малосимптомными клиническими проявлениями. У 85 % больных данной категории острый период ИМ протекает с осложнениями, в том числе - сердечной недостаточностью более I класса по КлШр -19,2%, желудочковыми аритмиями выше II класса по Лауну-55,4%, стационарная летальность при

этом составляет 16,01% и статистически превышает таковую у пациентов до 60 лет.

У больных пожилого возраста определена сильная корреляционная зависимость между суммарным индексом поражения КА и миокардиальной сердечной недостаточностью, прямая непрерывная зависимость между продолжительностью анамнеза АГ и наличием стенозирования ВСА с клиническими проявлениями хронической ишемии головного мозга. У больных пожилого возраста с признаками хронической ЦВН назначение антагониста кальция III поколения амлодипина в первые 24 часов от начала развития симптомов ИМ в составе комбинированной консервативной терапии безопасно, не вызывает нарастания сердечной, коронарной и цереброваскулярной недостаточности, способствует стойкой нормализации систолического и диастолического АД.

Инотропная стимуляция кальциевым сенситизатором левосименданом в сочетании с миокардиальной разгрузкой у больных ИМ пожилого возраста с признаками дисфункции ЛЖ способствует регрессу СН, увеличению скорости кровотока по ВСА, клиническому улучшению мозгового кровообращения, в том числе у больных с признаками многососудистого протяженного стенозирующего атеросклероза коронарных артерий, не подлежащего эндоваскулярной реваскуляризации.

У больных ИМ пожилого возраста с признаками локального стеноза коронарных артерий, ХИГМ эндоваскулярная реваскуляризация симптом - связанной артерии в первые 12 часов от начала острого коронарного события безопасна, не вызывает больших геморрагических осложнений, способствует восстановлению перфузии миокарда, увеличению скорости по ЭКА, уменьшению признаков церебральной ишемии. В течение 12 месяцев постгоспитального наблюдения у этой категории больных достоверно реже регистрируются смертельные исходы (10,65% против 21,9% ), частота обострений ИБС (29,8% против 63,6%) , ЦВБ ( 8,5% против 24,4% ) по сравнению с группой без эндоваскулярных методов лечения, что обусловлено исходно более тяжелым поражением коронарного и церебрального бассейнов у таких больных.

Вывод. Результаты выполненной работы позволят при остром коронарном синдроме у больных пожилого и старческого возраста с учетом клинических особенностей течения заболевания, показателей внутрисердечной гемодинамики, проводить дифференцированную терапию, включающую ферментативную и эндоваскулярную реваскуляризацию миокарда. Применение негликозидного инотропного стимулятора левосимендана с бета-блокатором карведилолом после эндоваскулярной реваскуляризации симптом-зависимой артерии (СЗА) при ИМ с признаками сердечной недостаточности у пациентов пожилого и старческого возраста безопасно, способствует регрессу сердечной недостаточности, что позволяет рекомендовать эту комбинацию у данной категории больных. Повышение выживаемости пациентов в течение 12 месяцев наблюдения после

эндоваскулярной реваскуляризации миокарда дает возможность более широко рекомендовать этот метод лечения у больных ОКС с подъемом сегмента ST пожилого и старческого возраста в максимально ранние сроки заболевания.

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## **ВОПРОСЫ ИДЕНТИФИКАЦИИ ЛАКО-КРАСОЧНЫХ МАТЕРИАЛОВ МЕТОДОМ ТЕРМИЧЕСКОГО АНАЛИЗА**

*Аннотация: В статье раскрываются особенности идентификации лакокрасочных материалов методом термического анализа. Термическое поведение образцов зависит от химического состава и количества добавляемых компонентов. Методы термогравиметрического анализа разрабатывались в режиме контроля метрологических характеристик с использованием стандартных образцов лакокрасочных материалов.*

*Ключевые слова: Лакокрасочный материал, термический анализ, дериватографа системы Паулик-Паулик-Эрдей, FAT-000 BPR BASE COAT SOLID, BPR BASE COAT (GAZ).*

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## **ISSUES OF IDENTIFICATION OF PAINT AND VARNISH MATERIALS BY THERMAL ANALYSIS**

*Abstract: The article reveals the features of the identification of paint and varnish materials by the method of thermal analysis. The thermal behavior of the samples depends on the chemical composition and the amount of added components. Methods of thermogravimetric analysis were developed in the mode of control of metrological characteristics using standard samples of paint and varnish materials.*

*Keywords: Paint material, thermal analysis, Paulik-Paulik-Erdei system derivatograph, FAT-000 BPR BASE COAT SOLID, BPR BASE COAT (GAZ).*

Основу лакокрасочных покрытий составляют полимерные пленки преимущественно органической природы. Химическая классификация лакокрасочных покрытий основывается на природе пленкообразующего вещества лакокрасочного материала (состава), из которого оно изготовлено. Так, выделяют эпоксидные, полиакриловые, кремнийорганические, масляные и другие покрытия. По составу лакокрасочные покрытия подразделяются на одно- и многослойные; последние, в свою очередь, могут быть однородными и разнородными, т.е. изготовленными из одного или из разных по химической природе лакокрасочных материалов [3,4].

Термогравиметрический анализ (ТГА) основан на регистрации изменения массы образца в зависимости от температуры в условиях программированного изменения температур среды. При дифференциальном термическом анализе (ДТА) производится регистрация во времени изменения разности температур между исследуемым образцом и образцом сравнения, не претерпевающим в данном интервале температур никаких превращений. Эффекты, регистрируемые ДТА, могут быть обусловлены плавлением, возгонкой, испарением, кипением, изменением кристаллической решетки, химическими превращениями [1]. Термический анализ проводили на дериватографа системы Паулик-Паулик-Эрдей скоростью нагрева  $10^{\circ}\text{C}/\text{мин}$  и навеской 0,1 г. при чувствительности гальванометра Т-900, ТГ-200, ДТА-1/10, ДТГ-1/10 в атмосфере воздуха. Навеска образцов была в пределах 10-40 мг. Образец нагревали в атмосфере воздуха в керамических тиглях в области температур от  $25^{\circ}\text{C}$  до  $700^{\circ}\text{C}$ . Запись проводили при атмосферных условиях с постоянным удалением газовой среды с помощью водоструйного насоса. Держателем служил платиновый тигель диаметром 7 мм без крышки. В качестве инертного носителя использовали оксид алюминия [2].

Обсуждение результатов: FAT-000 BPR BASE COAT SOLID - ЛКМ для окраски пластмассовых изделий. Описание: Это основное покрытие на основе полиэфир-меламиновой смолы со смесью пигмента, обладает хорошей адгезией, является стойким к УФ-лучам и атмосферным воздействиям. Рекомендация к использованию: Предварительно за грунтованное пластмассовое покрытие. Состав: Полиэфир-меламиновая смола, двуокись титана, наполнители, органические растворители, пигменты. Результаты термогравиметрического анализа красок приведены на рисунках. Результаты термогравиметрического анализа краски BPR BASE COAT (GAZ) с четыре эндоэффекта и восемь экзоэффекта. Эндоэффект при  $105^{\circ}\text{C}$  соответствует выходу связанной воды, следующие эндоэффекты  $135, 165, 340^{\circ}\text{C}$  являются характерными для карбоксильных, кетонных, гликолевых и этиловых групп.

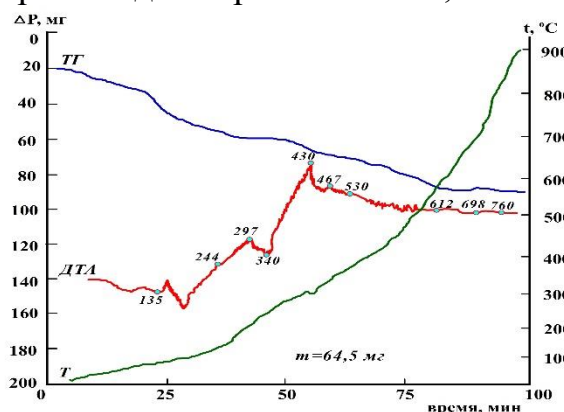


Рисунок 1. Результат дифференциально-термического анализа краски BPR BASE COAT (GAZ)

Восемь экзоэффектов при  $244, 297, 430, 467, 530, 612, 698, 760^{\circ}\text{C}$  термогравиметрическом анализе образца BPR BASE COAT (GAZ)

соответствуют экзоэффектам при термоанализе - полистирина, этил бензена, кселена, метоксипропилацетата, циклопентана, бензена, метилена, циклопропанола..

Заклучения: Изменения температуры образца вызываются физическими или химическими реакциями, связанными с изменением энтальпии. Термическое поведение образцов зависит от химического состава и количества добавляемых компонентов.

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## **СОВРЕМЕННЫЕ МЕТОДЫ ИДЕНТИФИКАЦИИ ЛАКО- КРАСОЧНЫХ МАТЕРИАЛОВ В ТАМОЖЕННОЙ ЭКСПЕРТИЗЕ**

*Аннотация:* Полученные результаты исследования позволят разработать алгоритм оценки подлинности лакокрасочных материалов с целью их однозначной классификации в соответствии с товарной номенклатурой внешнеэкономической деятельности Республики Узбекистан, а также выявления фактов фальсификации при таможенном оформлении данной категории товаров.

*Ключевые слова:* Идентификация, лакокрасочный материал, классификация, ИК-спектроскопия, Royalpox, Neolite, Royaltex, Traffic, Royal mel.

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## **MODERN METHODS OF IDENTIFICATION OF PAINT AND VARNISH MATERIALS IN CUSTOMS EXPERTISE**

*Annotation:* The results of the study allow us to develop an algorithm for assessing the authenticity of paint and varnish materials in order to classify them unambiguously in accordance with the commodity nomenclature of foreign economic activity of the Republic of Uzbekistan, as well as to identify the facts of falsification during customs clearance of this category of goods.

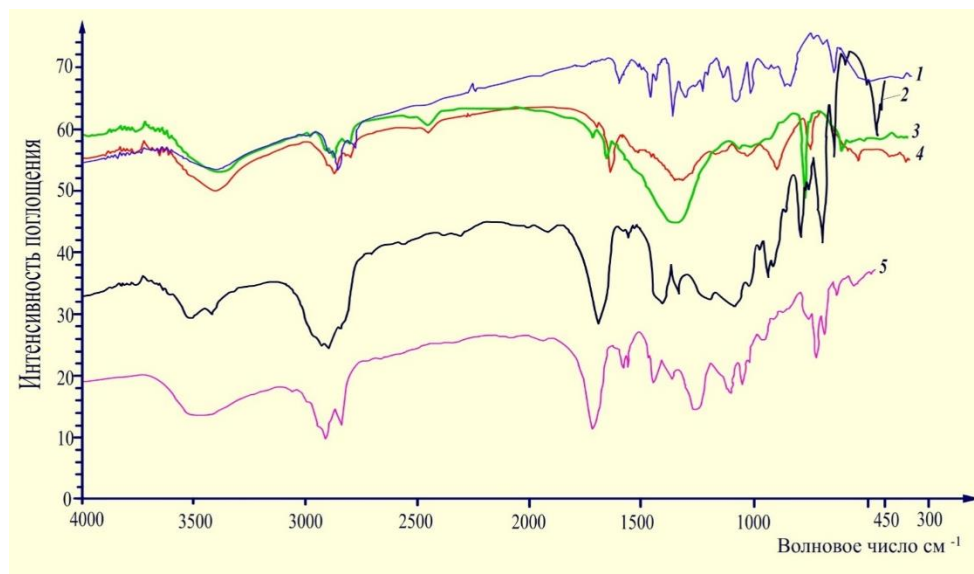
*Keywords:* Identification, paintwork, classification, IR spectroscopy, Royalpox, Neolite, Royaltex, Traffic, Royal mel.

В целях обеспечения полного соответствия, разработанных международных номенклатур всем поставленным требованиям организаций, на сегодняшний день ведутся научно-исследовательские работы, направленные на правильную классификацию товаров в соответствии с товарной номенклатурой внешнеэкономической деятельности, на выполнение международных обязательств в части единообразной классификации, установленных Международной конвенцией о Гармонизированной системе описания и кодирования товаров и объективности таможенной статистики [1].

Качественное сравнение ИК-спектров, исследуемых проб со справочными спектрами производили путем их сопоставления. Было

установлено, что соответствующие спектры совпадают между собой по общему виду, числу, положению и относительной интенсивности полос поглощения. Это позволяет сделать предварительную идентификацию исследуемых проб [2].

В качестве образцов для исследования были отобраны более 5 красок относящихся к различным группам. ИК-спектры получали на ИК-спектрометрах в интервале волновых чисел 400-4000  $\text{см}^{-1}$ . Для этого навеску 1-2 мг каждого образца тщательно перемешивали с 200 мг тонкодисперсного высушенного KBr и прессовали таблетки [3].



1.- Royalrox; 2.- Neolite; 3.- Royaltex; 4.- Traffic; 5.- Royal mel.

**Рисунок 1. ИК спектры промышленных красок.**

Используя ИК-спектроскопию как составную часть исследований по выяснению строения красок, можно с помощью характеристических частот, обнаруженных в ИК-спектре, с большой вероятностью идентифицировать имеющиеся в соединении функциональные группы и структурные элементы. Особое внимание при сравнении спектров следует уделять области от 700 до 1400  $\text{см}^{-1}$ , так называемой области «отпечатков пальцев».

Были исследованы ИК-спектры промышленных красок производимых отечественными производителями: (Royalrox (спектр 1), Neolite (спектр 2), Royaltex (спектр 3), Traffic (спектр 4) и Royal mel (спектр 5).

Все спектры представлены на рис 1. в виде ряда спектров, которые для удобства изучения смещены относительно друг друга по оси пропускания. На всех спектрах наблюдаются характерные полосы поглощения промышленных красок, к которым, прежде всего, следует отнести широкую и интенсивную полосу в области частот 2910-2925  $\text{см}^{-1}$ , характерных для валентных колебаний  $\text{CH}_2$ -групп и полосы поглощения в области частот 1720-1740  $\text{см}^{-1}$  соответствующие валентным колебаниям карбонила сложноэфирных групп C-O-COO. Наличие этих групп может быть



подтверждено присутствием очень интенсивной полосы поглощения в области 1250-1270  $\text{см}^{-1}$ , обусловленной валентными колебаниями связи С–О для алкидных красок. Наличие интенсивных полос поглощения в области 1450-1600  $\text{см}^{-1}$  и 690-770  $\text{см}^{-1}$  соответствует спектральному проявлению ароматических углеводов, которые наблюдаются во всех образцах. Совместные дуплеты интенсивных полос 1120 - 1130 и 1060-1070  $\text{см}^{-1}$  легко обнаруживаются как в спектрах 5 алкидных смол, так и в спектрах ЛКМ на их основе. Наличие ароматического кольца с двумя заместителями в орто-положении обнаруживается по полосе средней интенсивности при 740  $\text{см}^{-1}$ , обусловленной внеплоскостными деформационными колебаниями четырех соседних атомов водорода ароматического кольца. Эта полоса совместно со слабыми полосами в области 690-710 и 760-770  $\text{см}^{-1}$  образует характерную группу, типичную для о-фталевых эфиров. В ИК-спектре аминного отвердителя фиксируют широкие полосы поглощения в области 650-900  $\text{см}^{-1}$  и 1182  $\text{см}^{-1}$  соответствующие аминогруппам в образце 1. Характерная полоса интенсивности при 830  $\text{см}^{-1}$  обусловленная внеплоскостными деформационными колебаниями триазинового кольца, проявляется соответствуя акриловых красках в образцах 2, 3, 4. Таким образом, характерные области поглощения четко выявлены в образцах 2, 3, 4 которые имеет интенсивную полосу поглощения при 830  $\text{см}^{-1}$ , обусловленную внеплоскостными деформационными колебаниями триазинового кольца, широкие полосы поглощения в области 650-900  $\text{см}^{-1}$  и 1182  $\text{см}^{-1}$  соответствующие аминогруппам в образце 1 и интенсивные полосы поглощения 1120-1130  $\text{см}^{-1}$  и 1060-1070  $\text{см}^{-1}$  в спектре образца 5 характерные алкидным смолам.

Полученные результаты исследования позволяют разработать алгоритм оценки подлинности лакокрасочных материалов с целью их однозначной классификации в соответствии с товарной номенклатурой внешнеэкономической деятельности Республики Узбекистан, а также выявления фактов фальсификации при таможенном оформлении данной категории товаров.

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## **ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ХИРУРГИЧЕСКОГО МЕТОДА ЛЕЧЕНИЯ НАРУЖНОЙ ДЕФОРМАЦИИ НОСА У ДЕТЕЙ ШКОЛЬНОГО ВОЗРАСТА**

*Аннотация: Носовое дыхание - нормальный физиологический акт. Рефлексы, возникающие со слизистой оболочки полости носа, регулируют и поддерживают нормальную жизнедеятельность всего организма в целом. Длительное нарушение носового дыхания приводит к целому ряду проблем, включая развитие различных форм хронического ринита, патологии околоносовых пазух, слуховой трубы и среднего уха, воспалительных заболеваний глотки, гортани, а также нижних отделов дыхательных путей, отрицательно сказывается на функциональном состоянии сердечнососудистой системы, приводит к целому комплексу неврологических расстройств.*

*Ключевые слова: аллергический ринит, менингоэнцефалоцеле, полипозный риносинусит, спонтанная назоликворея.*

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## **INCREASING THE EFFICIENCY OF SURGICAL METHOD FOR TREATMENT OF EXTERNAL NOSE DEFORMATION IN SCHOOL AGE CHILDREN**

*Resume: Nasal breathing is a normal physiological act. Reflexes arising from the mucous membrane of the nasal cavity regulate and maintain the normal functioning of the whole organism as a whole. Long-term disturbance of nasal breathing leads to a number of problems, including the development of various forms of chronic rhinitis, pathology of the paranasal sinuses, auditory tube and*

*middle ear, inflammatory diseases of the pharynx, larynx, and lower respiratory tract, adversely affects the functional state of the cardiovascular system, leads to a whole range of neurological disorders.*

*Key words: allergic rhinitis, meningoencephalocele, polypous rhinosinusitis, spontaneous nasoliquorrhea.*

Актуальность. Развитие новых технологий в оториноларингологии позволяет с новых позиций подойти к вопросам эндоназальной хирургии. В настоящее время на смену обширным органо-разрушающим операциям приходят более щадящие методики с использованием эндоскопической и микроскопической техники. Использование операционного микроскопа в хирургии среднего уха и гортани давно уже стало повседневной нормой. Однако в эндоназальной хирургии микроскоп до настоящего времени не нашел достаточного количества сторонников.

Еще в 1958 Н.Неегтоап впервые применил микроскоп при операциях в полости носа, описав при этом резекцию крючковидного отростка. Использование микроскопа в ринохирургии в нашей стране впервые было предложено Б.В. Шеврыгиным в 1971 году. Однако им не было описано методики микрохирургического вмешательства на носовой перегородке. С тех пор в отечественной литературе крайне мало публикаций по применению микроскопа во внутриносовой хирургии. Здесь уместно упомянуть статьи С.Л.Косякова, 2003; В.С.Козлова и А.А.Шиленкова, 2003; в которых была описана сама возможность выполнения микрохирургического вмешательства на перегородке, но не было детального описания техники, отсутствовала доказательная база. В связи с вышеизложенным, существует необходимость в проведении исследования по оценке эффективности и степени травматичности выполнения хирургических вмешательств на перегородке носа под контролем операционного микроскопа.

Цель исследования. Повышение эффективности результатов хирургического лечения у детей школьного возраста с дефектами и деформациями носа различной этиологии путем разработки схемы детального предоперационного обследования и выбора оптимального вида хирургического лечения.

Материалы и методы исследования. За период с 2019 по 2021 гг. в клинике АГМИ в лор отделении прошли клиникофункциональное обследование и хирургическое лечение 43 пациентов с деформациями носа после, что потребовало проведения в общей сложности 43 реконструктивно-пластических операций.

Результаты исследования. Клиническая картина у пациентов с деформацией носа заключается в асимметричной деформации костно-хрящевого отдела носа и рубцовой деформации верхней губы. Степень деформации зависит от множества факторов, таких как ширина первичной расщелины, техника выполнения аутопластики, индивидуальные особенности пациента (склонность к келлоидным, гипертрофическим или

атрофическим рубцам). Чаще всего при осмотре пациента в фас отмечается асимметрия скатов носа, которая возникает из-за сглаженности ската носа на стороне расщелины, а также искривление спинки носа с девиацией кончика на здоровую сторону, уменьшение размера крыла носа на пораженной стороне.

Для уточнения локализации перелома и миграции костных отломков была проведена рентгенография, при которой у 82,9% всех обследованных больных выявлены признаки перелома костей носа.

Рентгенологическое исследование у детей раннего возраста (3-5 лет) было ненадежным в 17,1% случаев из-за технических трудностей его проведения.

При анализе МСКТ, в первую очередь обращали внимание на конфигурацию носовой перегородки и носовые раковины, которые при увеличении провоцируют сужение носового хода и затрудняют дыхание через нос. У всех пациентов диагностировали резкую деформацию перегородки носа в костном и хрящевом отделах, а также увеличение нижних носовых раковин с преобладанием размера носовой раковины на стороне расщелины.

Всем пациентам с деформацией носовой перегородки выполнены септопластика по методике М.Cottle (M.Cottleetal., 1958) с некоторыми модификациями и двухсторонняя подслизистая вазотомия в сочетании с латерализацией и, при необходимости, биполярной коагуляцией задних концов нижних носовых раковин. При наличии буллезной деформации средних носовых раковин выполнялась резекция латеральной порции раковин.

В контрольной группе операции осуществлялись по традиционной методике, но без использования аутопластики.

Вывод. 1. После перенесенной аутопластики, течение послеоперационного периода в исследуемых группах было неравнозначным по целому ряду критериев. Анализ данных по послеоперационным осложнениям показал, что достоверные различия были получены при подсчете количества дефектов слизистой оболочки в раннем послеоперационном периоде. В основной группе они наблюдались значительно реже, чем в контрольной ( $p < 0,05$ ). Гематомы перегородки носа в основной группе возникли в 2 случаях (4%), в контрольной - в 5 (10,2%) случаях. Все они были дренированы и в течение двух-трех дней наступило выздоровление. Послеоперационные кровотечения зафиксированы в 1 (2%) и 2 (4,1%) случаях соответственно в основной и контрольной группе.

Все они были остановлены передней тампонадой носа паачиковымитампонами, которая ставилась на одни сутки.

2. Были получены объективные данные о функции носового дыхания пациентов благодаря выполнению передней активной риноманометрии.

Динамика дыхательной функции полости носа в раннем и позднем послеоперационном периоде не зависела от вида

хирургического вмешательства. Уже через 1 месяц после операции в исследуемых группах отмечалось достоверное улучшение носового дыхания. А через 3 месяца данные показатели приблизились.

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## **УКРЕПЛЕНИЕ ЗНАНИЙ МАССЫ И ЭНЕРГИИ В РАЗУМЕ МОЛОДЕЖИ**

*Аннотация: Данная статья посвящена к рассуждениям об энергии и массе. В ней истолкованы мнения авторов статьи и математически доказаны формулы об эквивалентности массы и энергии, а также зависимости массы от скорости. Данная статья призывает к рассуждению об эквивалентности массы с энергией одарённых учеников, студентов а также всех тех кто уделял внимания и ознакомился данной статьёй.*

*Ключевые слова: инертная масса, гравитационная масса, масса покоя, эквивалентность, давление света, сила света, плотность энергии, импульс света, релятивистическая масса, скрытая энергия, энергия покоя, масса фотона.*

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## **STRENGTHENING THE KNOWLEDGE OF MASS AND ENERGY IN THE MIND OF YOUTH**

*Abstract: The given article is dedicated to the arguments about mass and energy also there are opinions about mass and energy. There has been pionted out mathematical calculations of energy and mass equivalency and the dependence of mass on speed. This article, first of all, evokes our gifted students and other readers to think and analyse the question once more.*

*Key words: inertial mass, gravitation mass, rest mass, equivalence, pressure of light, power of light, the density of energy, light pulse, relativistic mass, hidden energy, rest energy, photon mass.*

В классической механике масса - это скалярная, положительная и постоянная величина. Масса характеризует количество вещества, присутствующего в теле, и проявляется в виде инертных и гравитационных масс, и споры о них ведутся уже давно. Инерционная масса - это мера инерции объекта, которая отражает его инерционный характер, то есть, грубо говоря, чем больше масса в теле, тем больше оно может перемещаться и тем больше оно может двигаться. Остановиться трудно. Инертная масса также играет ключевую роль в выражении основного закона динамики, а именно второго

закона Ньютона и равенства изменения количества движения импульсу силы (теорема об изменении количества движения): [1]

$$F = m\alpha \Rightarrow m_i = \frac{F}{\alpha} \quad \text{и} \quad m\nu - m\nu_0 = F \cdot \Delta t \quad (1)$$

Исходя из этого, чем больше масса в теле, тем труднее набрать ускорение, и, согласно следующему выражению, трудно изменить скорость или импульс, то есть изменить импульс, когда величина приложенной силы не изменится. На выполнение программы потребуется время. Когда мы говорим о гравитационной массе, мы имеем в виду массу в виде гравитационного «заряда», как в случае притяжения объектов к Земле или Земли к Солнцу. Гравитационный «заряд», то есть гравитационная масса, создает вокруг себя гравитационное поле, под действием которого тела притягиваются друг к другу. Позже было доказано, что в классической механике, то есть когда с инертно, гравитационные массы равны массам покоя тела: [1 – 4]:

$$F = G \frac{m_g M}{r^2} \quad m_i = m_g = m_0 \quad (2)$$

То же - равенство инертной и гравитационной масс - доказано даже для масс фотонов. Мы находим это, приравнявая выражения энергии к частоте и массе, а это инертная масса,

$$h\nu = mc^2 \Rightarrow m_i = h\nu/c^2$$

но это не имеет ничего общего с массой в мире, потому что фотон не существует в мире. Позже, в 1960 году, американские ученые Паунд и Ребке экспериментально доказали, что фотон также имеет гравитационную массу, которая количественно равна инертной массе, а это означает, что одна масса имеет два разных свойства [4].

Однако, согласно специальной теории относительности Эйнштейна (при высоких скоростях), масса остается зависимой от скорости и увеличивается с увеличением скорости. Эйнштейн также утверждает, что там, где есть масса, есть энергия, то есть в массе скрыто большое количество энергии, и что масса и энергия являются взаимно эквивалентными величинами [5 – 7]

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}} \quad E = mc^2 \quad (3)$$

Все мы знаем, что взаимосвязь между массой и энергией, взаимосвязь между ними и тот факт, что масса и энергия являются эквивалентными величинами, произвели революцию в истории физики. Утверждение, что масса зависит от скорости, не вызвало особых споров. Когда о них говорят в классе или в классе, их часто просят доказать свое происхождение. Именно поэтому была создана эта статья, и мы надеемся, что, прочитав ее, талантливые студенты найдут ответы на свои интересы.

Если мы начнем доказательство с выражения эквивалентности массы и энергии, мы воспользуемся концепцией светового давления. Предположим, что плоская волна света падает на поверхность  $S$  свободной черной пластины.

В этом случае в обмен на давление света его энергия  $dE$  используется для перемещения пластины  $dh$ . Когда давление света равно  $P$ , его мощность равна  $PS$ , и, учитывая, что энергия преобразуется в работу  $dE=PSdh$  будет В этом случае мы предполагаем, что расстояние  $dh$  - это такое расстояние, на котором свет распространяется со скоростью  $c$  и перемещает пластину на расстояние  $dh$  под действием импульса, который дает  $dt$  поверхности пластины за время  $dt$ :

Предполагая, что  $dh = cdt$ ,  $dE = PScdt$ .

$$\text{Больше давления: } P = \frac{dE}{Scdt} \quad (4)$$

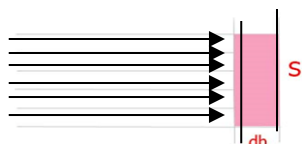


Рисунок 1

Поскольку объем  $dV$  в знаменателе выражения давления равен

$$Scdt = Sdh = dV \quad P = \frac{dE}{dV}. \quad (5)$$

Это выражение (5) и есть плотность энергии, то есть энергия единицы объема. Эту идею предсказал британский ученый Максвелл, который сказал, что давление света или давление лучистой энергии в целом численно равно плотности энергии

Теперь выразим величину импульса  $dK$  или движения, передаваемого сжимающей силой  $F = PS$  на поверхность пластины, следующим образом:

$$dK = Fdt = PSdt \text{ Используя предыдущие выражения : } dK = \frac{dE}{c}. \quad (6)$$

Следовательно, справедливо и следующее выражение: если мы выразим импульс через массу:  $K = mc$ . Приравнявая их, мы получаем  $E = mc^2$ , связь между энергией и массой (3) доказана

Что касается выражения для зависимости массы от скорости, то это выражение известно нам как один из выводов теории относительности Эйнштейна. Для этого воспользуемся динамикой тела переменной массы. Мы знаем, что сила равна изменению импульса, то есть:

$$Fdt = d(mv) \text{ или } Fdt = m dv + v dm \quad (7)$$

Энергия  $dE$ , рассеиваемая на пути  $dS$ , выражается следующим образом:

$$dE = FdS = Fvdt \text{ Это можно записать, используя выражение (7) выше:}$$

Учитывая, что  $dE = mv dv + v^2 dm$  равно  $dE = c^2 dm$ ,

Различаем переменные  $c^2 dm = m v dv + v^2 dm$ :

$$v dv = (c^2 - v^2) \frac{dm}{m} \text{ yoki } \frac{dm}{m} = \frac{v dv}{c^2 - v^2}$$

Прежде чем интегрировать последнее выражение, мы рассматриваем массу при  $v = 0$  как массу покоя  $m_0$ , а массу при скорости  $v$  как релятивистскую массу, и она обозначается  $m$ . В таком случае:



$$\int_{m_0}^m \frac{dm}{m} = \int_0^v \frac{v dv}{c^2 - v^2}$$

После интегрирования:  $\ln m - \ln m_0 = \ln \left[ \frac{c^2 - v^2}{c^2} \right]^{-1/2}$  если:

$$\frac{m}{m_0} = \left[ \frac{c^2 - v^2}{c^2} \right]^{-1/2} = \left[ 1 - \frac{v^2}{c^2} \right]^{-1/2}$$

Наконец:

$$m = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}} \quad \text{или} \quad m = \frac{m_0}{\sqrt{1 - \beta^2}} \quad (8)$$

Итак, у нас есть выражение для массы, зависящее от скорости.

Теперь мы подошли к той части, где мы говорим о кинетической энергии. Для этого подставим выражение для зависимости массы от скорости в выражение эквивалентности массы и энергии:

$$E = \frac{m_0 c^2}{\sqrt{1 - \frac{v^2}{c^2}}}$$

Распространяя последнее выражение по ряд, получаем:

$$m c^2 = m_0 c^2 + \frac{1}{2} m_0 v^2 + \frac{3}{8} \frac{m_0 v^4}{c^2} + \dots \quad (9)$$

Если скорость слишком мала для скорости света, то в формуле (9) можно оставить только первое и второе слагаемые:

$$m c^2 = m_0 c^2 + \frac{1}{2} m_0 v^2 \quad (10)$$

второй член в этом выражении является выражением кинетической энергии, с которой мы хорошо знакомы, что означает, что энергия увеличивается только по мере ускорения тела:

$$\frac{1}{2} m_0 v^2 = \Delta E = m c^2 - m_0 c^2 \quad (11)$$

Оказывается, большое количество энергии соответствует состоянию тела в состоянии покоя ( $m_0 c^2$ ) и находится в скрытом состоянии. Мы убеждены в наличии этой энергии в ядерных процессах. Вот тогда он и проявил себя. Чтобы убедиться в том, насколько велика энергия в состоянии покоя, мы можем убедиться, посмотрев значение энергии на 1 грамм любого вещества.

$$E = m_0 c^2 = 10^{-3} \cdot 9 \cdot 10^{16} = 9 \cdot 10^{13} \text{ J} \quad (12)$$

Если (10) выражает закон сохранения энергии, его также можно записать в терминах сохранения массы:

$$m = m_0 + \frac{1}{2c^2} m_0 v^2 \quad \text{или} \quad m = m_0 + \frac{\Delta E}{c^2} \quad (13)$$

В этом случае  $\frac{\Delta E}{c^2} = \Delta m$  — увеличение массы соответствует увеличению энергии тела или материальной точки на скорости,  $\Delta E$  то есть энергия выражается в форме кинетической энергии.

Итак, когда мы изучаем физику, масса кажется простейшей из всех физических величин. Например, в классической механике, когда мы говорим

о весе, гравитации и массе, сила тяжести зависит от высоты, широты. Масса - это константа, а не зависимость от них. Учитывая, что масса является относительной величиной, то есть она зависит от выбора (скорости) системы координат, и принимая во внимание приведенные выше соображения, а также добавляя эквивалентность массы и энергии, мы убеждены, что эта величина не является так просто. Напротив, это наиболее сложно, из них труднее всего делать выводы.

В классической механике, например, считается, что инерционная, гравитационная масса и масса покоя равны. Но в релятивистской механике, то есть когда скорость близка к скорости света в вакууме, очень трудно говорить об этом уравнении. Более того, согласно выражению зависимости массы от скорости, скорость материала тела, то есть тело с массой покоя, является легким, мы убеждаемся, что скорость не может быть равна скорости в вакууме. В этом случае масса может быть бесконечно большой. Это означает, что материальное тело и частицы с массой покоя не могут двигаться со скоростью света в вакууме. С этой скоростью движется фотон. Основные законы механики - это законы динамики, в которых масса и сила являются основными величинами. Следовательно, в классической механике, поскольку масса постоянна, законы намного проще, и даже инерционная и гравитационная массы кажутся проще. Но в релятивистской механике не только законы динамики и даже все законы массы становятся более сложными, но и более трудными для понимания. Учитывая, что масса эквивалентна энергии, мы убеждены, что у нас очень большой запас энергии. Это подтверждается сегодня в физике ядер и элементарных частиц тем фактом, что деление тяжелых ядер и выделение энергии, особенно при синтезе легких ядер, являются понятиями, связанными с массой. Не было бы большего достижения, если бы мы могли подчинить себе энергию, выделяющуюся при синтезе легких ядер. Потому что это положило бы конец энергетической проблеме на Земле.

В этой статье мы еще раз убеждаемся, что у света есть давление, что у него есть масса, импульс, сила, что световое давление иногда может проявляться в форме энергии на единицу объема, и что масса тела увеличивается за счет кинетической энергии. Мы создали. Мы также надеемся научиться использовать математический аппарат для определения динамики тела с переменной массой, и все это будет полезно при изучении физики для одаренных школьников и студентов.

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## **ОСНОВЫ ТЕННИСНОЙ ТАКТИКИ**

*Аннотация: В данной статье рассматривается цель игры тенниса и его игровой тактики для успеха*

*Ключевые слова: Теннис, игра, тактика, ситуация, тренировка, стратегия*

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## **BASICS OF TENNIS TACTICS**

*Annotation: This article discusses the goal of playing tennis and its game tactics for success*

*Key words: Tennis, game, tactics, situation, training, strategy*

Цель игровой тактики - отвлечь оппонента и добиться успеха, используя технику, которая работает в зависимости от ситуации. У каждого теннисного матча своя цель. Эта цель, в свою очередь, основана на заранее определенных конкретных тактических и стратегических задачах. Конечно, постановка таких целей и задач и их эффективное решение на практике требует технических и тактических навыков, физической, функциональной и психологической подготовки спортсмена. Эти качества развиваются в течение многих лет тренировок. Однако следует отметить, что успешного решения высоких тактических и стратегических задач на соревнованиях можно добиться только при правильной тренировке и, конечно же, игровом опыте.

Стратегические цели будут заключаться в достижении общего и окончательного результата конкурса, который будет разделен на три основные области:

1. Первое направление связано с участием в конкурсном цикле.
2. Второе направление характеризуется участием в конкретном соревновании или турнире, или в турнире.
3. Третье направление - участие в определенной игре (встрече).

Эти задачи включают изучение стратегического плана, тактических методов и технических навыков оппонентов, участвующих в цикле, конкретном соревновании или турнире и конкретном матче, сравнение их стратегических и тактических возможностей с тактическими возможностями оппонентов, а также определение стратегии и тактики. играть против них.

значит делать. Решение этих задач заключается в изучении тактики, технических навыков и физических возможностей противников посредством изучения видеофильмов, информации «очевидцев». Такие факторы, как моделирование тренировочного процесса, персональная игровая тактика и стратегия в пользу возможностей противника, чрезвычайно важны для успешного решения этих задач. Это, в свою очередь, связано с точным прогнозированием и максимально объективной оценкой потенциала противника.

Конечно, тактический и стратегический подход, запланированный для конкретного противника в конкретной игре, может меняться в зависимости от ситуации во время игры.

В современном теннисе, каким бы развитым ни был игрок, радость победы принадлежит только теннисисту, вооруженному продвинутой стратегией и тактикой игры. Поэтому в процессе длительной спортивной подготовки особое внимание следует уделять тактической и стратегической подготовке спортсменов. Этот процесс включает следующие принципы:

Принцип универсального направления. Этот принцип определяет общую спортивную деятельность, стратегическое направление долгосрочной спортивной подготовки теннисиста. Он основан на передовом стратегическом и тактическом опыте, который постоянно меняется и обновляется в современном теннисе, включает в себя разработку интерактивных методов и технологий, используемых в процессе обучения и обучения, а также игровых стилей и навыков, эффективных техник, многовариантных тактических приемов. Поднимает вопрос о формировании уникальной и адекватной игровой тактики и стратегии будущего ракетчика путем наблюдения за играми ведущих теннисистов, их техникой, тактикой, стратегией, физическими и психофункциональными возможностями, анализом видеороликов;

Принцип активности - быть активным во время игры, быть настойчивым, принимать правильные решения, проявлять инициативу в каждой ситуации и на протяжении всей игры и не сдаваться. В основе этого принципа - умение показать свое превосходство перед противником, привить противнику свой стиль игры, одолеть соперника мысленно, подорвать его уверенность, проявить отвагу, настойчивость, высокое джентльменство и другие подобные качества прикладное искусство;

Принцип многогранной и всесторонней игры заключается в умении эффективно применять все технические навыки, присущие игре в теннис в многовариантных вариантах в меняющихся ситуациях, одинаково эффективны в атаке, контратаке, демонстрации игры в защите, универсальном движении и в том, и в другом. позади и впереди поля, призван сформировать умение качественно использовать активные и пассивные движения от начала игры до конца игры;

Принцип создания состояния изменчивости. Этот принцип состоит в том, чтобы наносить удары (включая ввод мяча) с различными скоростями,

направлениями, интервалами на протяжении всей игры, направлять мяч сильным и слабым, высоким и низким, длинным и близким, подчеркивает проблему «сдачи» ситуации на свою сторону. за счет резкой смены стиля и тактики, интенсивности и типов движений. Его основная цель - перейти от стандартных односторонних действий, стереотипных тактик к изменяющемуся стилю игры и, наоборот, от нестандартной ситуации к традиционной игровой тактике;

Принцип возникновения нештатной (неожиданной) игровой ситуации - одна из наиболее эффективных тактик игры. Этот принцип заключается в эффективном использовании ранее неиспользованных или совершенно неожиданных игровых приемов во время игры, действия, не раскрывающие метод и направление удара, раскрытие одного решения и резкое принятие другого решения, поворот вправо при ударе, поощряет использование тактических приемов. такие как взгляд и направление мяча влево и наоборот;

Принцип взаимного действия распространяется и на дублёры. Этот принцип направлен на достижение единой тактико-стратегической цели пары за счет использования взаимосогласованных, но в то же время неизвестных для соперника способов игры. Конечно, в этом плане стиль игры двух теннисистов, составляющих пару, близость психологических характеристик мировоззрения позволят завершить общий стратегический план турнира (игры). В таких парных играх каждый игрок имеет свои индивидуальные способности, технический и тактический стиль, некоторые навыки передвижения (удар ногой, прием или повторная атака, игра за сеткой или перед ней) с точки зрения мастерства и этого преимущества. он эффективно может решить судьбу игры на стороне победителя.

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## **РОЛЬ КОМАНДЫ В ФОРМИРОВАНИИ ЛИЧНОСТИ ИГРОКА**

*Аннотация: В данной статье рассматривается основная задача тренера - формирование сплоченной команды спортсменов и личности игрока*

*Ключевые слова: Игра, тренер, команда, личность, роль, соревнования, спорт*

## **THE ROLE OF THE TEAM IN THE FORMATION OF THE PLAYER'S PERSONALITY**

*Annotation: This article discusses the main task of the coach - the formation of a cohesive team of athletes and the player's personality*

*Key words: Game, coach, team, personality, role, competition, sport*

Команда играет очень важную роль в психологической подготовке игрока и формировании личности. Поэтому одна из основных задач, стоящих перед тренером, - формирование сплоченной команды спортсменов. Чтобы группа спортсменов была командой, это объединение должно сочетать в себе функции общественно полезной деятельности. Например, команда ставит перед собой следующие цели: проблемы со здоровьем, завоевание медалей на международных соревнованиях, повышение престижа спортивного сообщества и воспитание чувства патриотизма и так далее.

Спортивная практика показывает, что хорошо подготовленные, трудолюбивые спортсмены высокого класса часто выходят из команд с сильными традициями, строгой дисциплиной и высокой сознательностью.

Как команда влияет на формирование личности спортсмена?

Во-первых, через отношения с общественностью. Когда командные отношения укрепляются, взаимодействие спортсменов внутри команды охватывает все аспекты их жизни, и их поведение улучшается. Когда черты характера проявляются на тренировках и соревнованиях, легче преодолевать трудности внутри коллектива.

Во-вторых, в процессе развития дружеские отношения проходят в форме консультирования, поддержки, исправления ошибок во время тренировок, психологического приложения во время соревнований.

В-третьих, это достигается взаимным соблюдением установленной повестки дня, дисциплины, гигиенических правил, а также выполнения заданий и инструкций, данных тренером. Когда требования к коллегам совпадают с высокими требованиями к себе членов команды, в коллективе ценятся взаимные требования.

В-четвертых, за счет сплоченности команды. Для этого при соблюдении дисциплины повысится интерес к игре, спорту, тренировкам. Очень важно создание полезных традиций в командообразовании: это поздравление победителей соревнований, приглашение зрителей на выставку, хорошо организованные тренировки, поздравление спортсменов с важной датой, фотомонтаж о жизни и работе коллектива. и т. д.

В-пятых, через организацию самоуправления. При этом необходимо наладить отношения со всеми членами команды, избегать грубости, непристойности, чтобы каждый игрок учитывал мнение команды.

Это одно из условий воспитания уважения к спортивной команде, появления на поле с активными намерениями, внесения вклада в успех оставшихся ее членов, развития и укрепления чувства патриотизма у спортсменов. Таким образом, достижение высоких успехов на крупных соревнованиях остается патриотическим долгом каждого спортсмена.

-Вести дневник для записи характеристик игры противников, их побед и поражений, ситуации до и во время соревнований и других усвоенных материалов;

- Самостоятельный возврат дневниковых записей;
- Устное сопровождение обучаемых со стороны тренера;
- Соблюдение принципа последовательности в обучении от известного к неизвестному, от простого к сложному;

- Попросите долгосрочное запоминание, например: «Я спрошу вас об этом через 10 дней», «Знайте о своих конкурентах, вы всегда должны быть готовы их охарактеризовать», а затем следите за тем, что вспоминают.

Таким образом, развитие памяти у спортсмена ускоряет процесс формирования его опыта. Память требует постоянных упражнений, как мышцы.

*Специализированное познание и его развитие.* Одним из отличительных признаков высокого спортивного мастерства игрока является идеальное владение мячом, что означает, что у него очень тонкое, сложное, специализированное восприятие мяча. Он основан на различении точных и точных приводов разных анализаторов при работе с шариком. Мышечно-моторные ощущения, зрение, тактические ощущения, как и другие органы чувств, играют ключевую роль в этом сложном специализированном восприятии. Исходя из этого, игрок имеет четкое представление о характеристиках мяча, его весе, натяжении, силе удара по мячу, что обеспечивает точные движения с мячом.

«Чувство мяча» формируется при длительных и систематических упражнениях. Для игрока наличие этого чувства является убедительным



доказательством его технического, тактического мастерства и подготовленности.

«Чувство мяча» развивается при выполнении различных упражнений с мячом. К ним относятся: жонглирование мячом, перенос и перемещение мяча, а также специальные упражнения для получения мяча при различных подъемах. Инструктаж тренера во время упражнения помогает лучше развить интуицию и познание, что обеспечивает правильный контроль «ощущения мяча». Например, при выполнении упражнения по жонглированию мячом игрок должен обращать внимание на развитие зрительно-моторной координации, т.е. согласованной деятельности зрительного и мышечно-моторного восприятия и восприятия. Чем сложнее и разнообразнее упражнения жонглирования, тем лучше зрительно-моторная координация. При переноске и вращении мяча игрок должен быть проинструктирован, что сила удара нормальная в соответствии со скоростью бега. При выполнении упражнений на прием мяча внимание игрока следует обращать на траекторию, направление мяча, характер полета в пространстве (правильный, круговой полет), точность восприятия скорости мяча. Самоконтроль в точном восприятии летающего характера мяча проявляется в определении места падения мяча, точном выходе на летящий мяч и точном приземлении мяча на стопу. Зрительно-двигательная координация при подъеме мяча партнеру успешно формируется в результате выполнения упражнений на одинаковой дистанции. При этом глаз «измеряет» силу удара по мячу, чтобы пролететь расстояние, измеренное глазом. Такие упражнения не только развивают у игрока зрительно-моторную координацию, но и развивают способность визуально оценивать расстояние, постепенно развивая умение измерять расстояние.

Развитие визуализации дистанции напрямую связано с повышением навыков игроков, так как правильное и своевременное выполнение каждого приема связано со способностью точно оценить расстояние между движущимися игроками и мячом. Чтобы игрок успел вовремя схватить мяч, он должен знать направление мяча и траекторию полета, точно оценивать расстояние до мяча, до партнеров, до ворот. Визуализация расстояния необходима не только для точной оценки расстояния, на которое направлен мяч, но и для измерения силы удара по мячу с этого расстояния.

Исследования показали, что визуализация расстояния напрямую связана с тренировочной позой спортсмена. В частности, визуальная точность игроков в тренированном состоянии составляет в среднем 35-40% по сравнению с нетренированным (В.В.Медведев).

В футболе, помимо упомянутых, существуют и другие специализированные типы восприятия. К ним относятся «восприятие времени» и «восприятие пространства».

Помимо косоглазия, для игрока важно поле зрения, чтобы быстро забить гол во время игры. Восприятие пространства формируется исходя из объема пространства.

Как показали исследования, восприятие пространства расширяется в тренированном состоянии спортсмена и сужается в нетренированном состоянии.

Если восприятие пространства ограничено, то игрок не сможет воспользоваться возникающими благоприятными ситуациями для развития и завершения атаки, а принятые решения будут неадекватными (неверными) по отношению к ситуации. Это создает условия для успешного движения соперника. Причина в том, что игрок плохо видит игровую ситуацию, делает больше ошибок, потому что продолжение атаки игнорирует большинство благоприятных условий, которые возникают для ее завершения.

Чтобы развить чувство пространства, во время тренировки и игры внимание игрока должно быть сосредоточено на восприятии как можно более широкого пространства, а затем спортсмен должен сообщить тренеру или самому себе о воспринимаемом пространстве.

При обучении игроков необходимо не только развивать двигательные мышцы, зрение, тактические чувства, но и развивать чувство равновесия. Чувство равновесия очень важно во время игры. В первую очередь они помогают сохранять равновесие при беге, разгоне, быстрых поворотах, падениях. Хорошо развитое чувство равновесия усиливает волю спортсменов, а также помогает им быстро нацеливаться в возникающих ситуациях, быстро принимать решения и, наконец, точно и своевременно выполнять технические движения с мячом во время игры.

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**НАПРАВЛЕНИЯ ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ  
ПРЕДПРИНИМАТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ  
ГОСУДАРСТВЕННЫХ БЮДЖЕТНЫХ УЧРЕЖДЕНИЙ  
ЗДРАВООХРАНЕНИЯ**

*Аннотация: В статье приводятся направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения. В статье рассмотрены понятия: «предпринимательская деятельность медицинских организаций» и «процент прибыли, полученной от оказания платной услуги».*

*Ключевые слова: предпринимательская деятельность, государственные бюджетные учреждения здравоохранения, процент прибыли, полученной от оказания платной услуги, направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения.*

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**DIRECTIONS FOR IMPROVING THE EFFICIENCY OF  
ENTREPRENEURIAL ACTIVITY OF STATE BUDGETARY  
HEALTHCARE ORGANIZATIONS**

*Annotation: The article provides directions for improving the efficiency of entrepreneurial activity of state budgetary healthcare organizations. The article considers the definitions: «entrepreneurial activity of medical organizations» and «percentage of profit earned from service».*

*Key words: entrepreneurial activity, state budgetary healthcare organizations, percentage of profit earned from service, directions for improving the efficiency of entrepreneurial activity of state budgetary healthcare organizations.*

Основной целью сферы здравоохранения является предоставление людям медицинских услуг высокого качества, достижение высоких показателей здоровья людей. Для достижения данной цели медицинским организациям необходимо полноценное и своевременное финансирование

для того, чтобы деятельность данных организаций всегда оставалась непрерывной и стабильной.

Полноценное и своевременное финансирование сферы здравоохранения оказывает существенное влияние на качественное оказание медицинской помощи населению [1, с. 15].

Таким образом, финансирование системы здравоохранения является одним из наиболее важных вопросов в современном мире.

Государственные бюджетные учреждения здравоохранения - это организации, которые не имеют основной целью получение прибыли. Однако данные типы учреждений имеют доходы от предпринимательской деятельности, то есть от оказания платных медицинских услуг. Поэтому увеличение процента рентабельности от предпринимательской деятельности является актуальным для государственных медицинских учреждений.

Высокий показатель рентабельности платных медицинских услуг в государственных бюджетных учреждениях здравоохранения позволяет организации закупать современное медицинское оборудование. Это способствует повышению качества оказания как платных, так и бесплатных медицинских услуг. В связи с этим увеличивается количество пациентов, которые обращаются в медицинское учреждение с целью получения платных медицинских услуг.

Показатель рентабельности услуг имеет очень важное значение для деятельности предприятия. Предприятие считается рентабельным, если сумма доходов от оказанных услуг превышает сумму расходов на предоставленные услуги, и в результате предприятие получает прибыль [2, с. 372].

На показатель рентабельности платных медицинских услуг влияют цены на данные услуги. В цену должна быть заложена сумма прибыли, чтобы предприятие было рентабельным по предпринимательской деятельности. Также цены на платные медицинские услуги должны быть конкурентоспособными.

Государственные бюджетные учреждения здравоохранения имеют право осуществлять предпринимательскую деятельность в соответствии с законодательством РФ. Финансовыми результатами данной деятельности являются показатели прибыли и рентабельности.

Основная задача анализа прибыли и рентабельности предприятия – это создание и принятие экономически целесообразных управленческих решений, направленных на полноценный рост ее финансовых результатов и поиск способов улучшения эффективности деятельности [3, с. 6].

Предпринимательская деятельность для любого предприятия - это деятельность, от которой организация получает экономическую прибыль. Государственные медицинские организации не имеют основной цели - получение прибыли. Их главная цель - оказание качественных медицинских услуг населению [4, с. 12]. Государственные бюджетные учреждения здравоохранения занимаются предпринимательской деятельностью, то есть

оказывают платные услуги, на которые они имеет лицензию. И соответственно, получают доходы и имеют расходы по источнику «Предпринимательская деятельность».

В современном мире люди предпочитают получать качественные медицинские услуги и в короткие сроки. По системе ОМС, для того чтобы получить медицинскую услугу, в большинстве случаев нужно ожидать своей очереди на получение медицинской услуги. Поэтому оказание платных медицинских услуг в современном мире стало очень популярным.

Когда человек оплачивает оказание ему платных медицинских услуг, он оплачивает не только за сам факт предоставления услуг, но и за качество оказания этих услуг и предоставления услуг в короткие сроки. В наше время существует много частных медицинских центров, в которых оказывают только платные медицинские услуги. В то же время государственные бюджетные учреждения здравоохранения также занимаются предпринимательской деятельностью. Данные организации утверждают прейскурант цен на платные услуги. Все платные услуги государственные бюджетные учреждения здравоохранения в Самарской области рассчитывают по методике расчета, утвержденной Приказом Министерства здравоохранения и социального развития Самарской области от 15 июня 2011 г. № 774 «Об утверждении Порядка определения платы за оказание услуг (выполнение работ), относящихся к основным видам деятельности государственных бюджетных учреждений, подведомственных министерству здравоохранения Самарской области, находящихся в ведении министерства здравоохранения Самарской области».

Цель - предложить направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения.

Задачи:

1) Сформулировать авторское определение понятия «предпринимательская деятельность государственных бюджетных учреждений здравоохранения»;

2) Уточнить понятие «процент прибыли, полученной от оказания платной услуги»;

3) Предложить направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения, которые можно реализовать.

Предпринимательская деятельность государственных бюджетных учреждений здравоохранения заключается в оказании платных медицинских услуг, которое соответствует всем стандартам качества, медицинским персоналом данных организаций. И в результате этой деятельности медицинские организации должны получить выгоду, эффект, положительный финансовый результат. Поэтому предпринимательская деятельность государственных бюджетных учреждений здравоохранения - это прежде всего финансово - выгодная, эффективная деятельность для данных

организаций. Эффект заключается как в качестве оказания услуг, так и в экономической выгоде для организаций. Если предпринимательская деятельность государственных бюджетных учреждений здравоохранения не является финансово-выгодной для организаций, необходимо предпринимать меры по увеличению рентабельности от предпринимательской деятельности.

Предпринимательская деятельность частных медицинских организаций - это также финансово - выгодная, эффективная деятельность данных организаций.

Финансово - выгодная деятельность - это деятельность, результатом которой является получение прибыли. Государственные бюджетные учреждения здравоохранения в расчет стоимости платной медицинской услуги закладывают процент прибыли, которую организации будут получать от оказания платных медицинских услуг.

Процент прибыли, полученной от оказания платной услуги - это и есть финансовая выгода, которую государственные медицинские организации получают от предпринимательской деятельности. Финансовая выгода - это положение, при котором доходы превышают расходы, а разница между ними и является финансовой выгодой для медицинских организаций. Если организации получают финансовую выгоду, значит, предпринимательская деятельность является экономически-эффективной. Если нет, значит организациям необходимо предпринимать меры, для того чтобы получать финансовую выгоду от предпринимательской деятельности.

Для того чтобы предпринимательская деятельность государственных бюджетных учреждений здравоохранения всегда оставалась эффективной, платные услуги в медицинских организациях должны оказывать качественно, чтобы у пациентов не возникало жалоб. В то же время, медицинские организации должны получать прибыль от оказания платных услуг, а не убыток. В связи с этим автор статьи предлагает следующие направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения:

- увеличение количества пациентов, которые остаются удовлетворены оказанием платных медицинских услуг в государственных бюджетных учреждениях здравоохранения;

- повышение эффективности защиты пациентов в случаях нарушения их прав при оказании платных медицинских услуг в государственных бюджетных учреждениях здравоохранения;

- повышение финансового результата предпринимательской деятельности государственных бюджетных учреждений здравоохранения.

Для того чтобы данные направления реализовать, государственные бюджетные учреждения здравоохранения в организационной структуре своих организаций могут создавать лечебно-консультационные отделения, которые будут функционировать исключительно за счет источника финансирования «Предпринимательская деятельность». Это позволит пациентам обращаться в любое удобное для них время к желаемым высококвалифицированным

врачам-специалистам и получать качественные консультативные и лечебные медицинские услуги.

Таким образом, в лечебно-консультационных отделениях, которые будут функционировать в составе организационной структуры государственных бюджетных учреждений здравоохранения исключительно за счет источника финансирования «Предпринимательская деятельность», именные лечебно-диагностические услуги (в наименовании платных услуг будут указаны должность, почетное звание (если имеется), ученая степень (если имеется), фамилия и инициала врача, который будет оказывать данную платную медицинскую услугу) могут стать особенно востребованными, что в свою очередь приведет к реализации предложенных направлений повышения эффективности предпринимательской деятельности и увеличению процента рентабельности от предпринимательской деятельности государственных бюджетных учреждений здравоохранения. Предложенные автором статьи направления повышения эффективности предпринимательской деятельности государственных бюджетных учреждений здравоохранения являются положительной тенденцией для эффективного развития предпринимательской деятельности государственных медицинских организаций.

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