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CUTTING EDGE-SCIENCE

December, 2020 Shawnee, USA
Conference Proceedings

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International scientific and practical conference **CUTTING EDGE-SCIENCE**

December, 2020 Shawnee, USA
Conference Proceedings

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AGRICULTURAL SCIENCES

SCIENTIFIC SUBSTANTIATION OF ELEMENTS OF TECHNOLOGY OF EFFICIENT USE OF WATER RESOURCES IN DRIP IRRIGATION OF COTTON

Butayarov Abdukodir Tuxtayevich

Abstract: Today, due to climate change, the demand for drinking and irrigation water is increasing all over the world, so the scarcity of available water resources requires the careful use of available water resources. It is necessary to analyze the data on the rational management and efficient use of limited water resources in the country, increase the efficiency of use of water resources in the field, the widespread use of water-saving irrigation technologies and their organization, production, elimination of excess water loss.

Keywords: Weather conditions, cotton, irrigation, water, thrift, resource, technique, technology.

Introduction. The rapid growth of the world's population, the growing demand for food, the sharp increase in demand for water for agricultural products, the rational use of land and water resources for irrigation of agricultural crops are of particular importance. In this regard, one of the most important issues in the cultivation of agricultural crops is the innovative irrigation regime, improvement of irrigation techniques and technology. To date, in the context of rational use of water resources in the cultivation of cotton, which has become one of the key issues in sustainable economic development of the Republic, the development of scientifically based innovative irrigation procedures for major agricultural crops and identification of modern irrigation technologies and irrigation techniques; At the level of public policy, a number of programs are being implemented to address the above problems.

The adoption of the Resolution of the President of the Republic of Uzbekistan dated December 27, 2018 "On urgent measures to create favorable conditions for the widespread use of drip irrigation technologies in the cultivation of raw cotton" is a clear proof of this. It is no exaggeration to say that it is aimed at improving the efficiency of water use. In order to use water resources wisely and economically, to further improve the reclamation of irrigated lands, to increase the yield of agricultural crops, especially cotton, to ensure the sustainable operation of agricultural production: "Cotton growers using drip irrigation technology in cotton growing "Introduction of an effective system of state support, improvement of incentives for enterprises producing drip irrigation systems and their components", "Formation of scientific, practical and methodological basis for the use of drip irrigation technologies, taking into account the soil, climatic and other conditions of the country" is of vital importance.

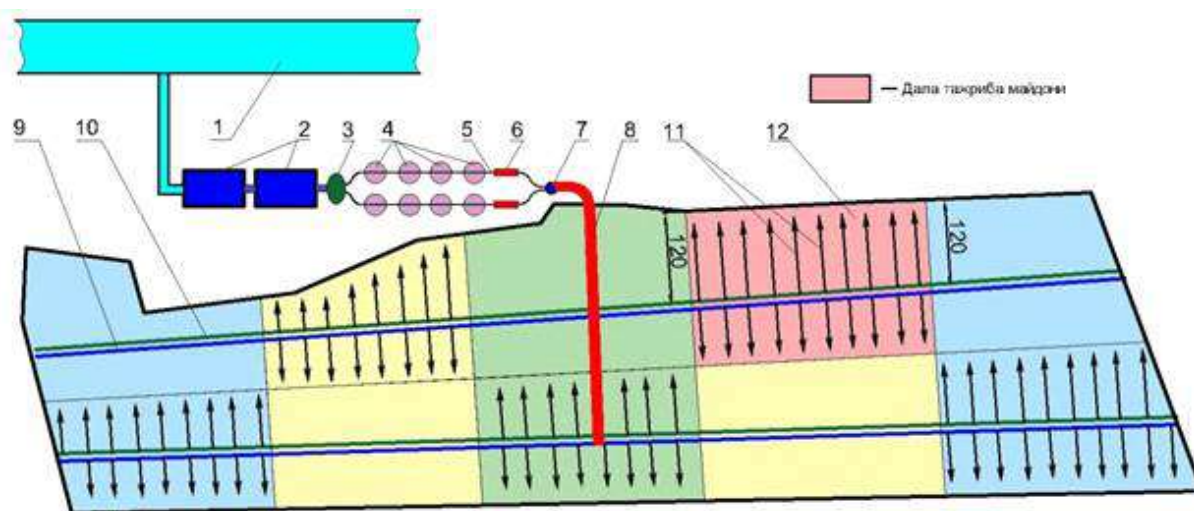
consumed or 118% more than planned. An average of 47 hectares of land was irrigated with 1 m³ / sec of water supplied.

With the given water limit, 53,017 hectares of the 74078 hectares of cotton planted areas were irrigated for the 2019 cotton crop, and the cotton grown for the 2019 harvest was irrigated an average of 6 times or 430,042 hectares. In addition, more than 727,000 hectares of farmland and other irrigation works were supplied with water. As of December 25, 2019, 433.2 million m³ of water was stored in 5 existing reservoirs in the region, which is 44.83 million m³ more than in 2018. Including 154.22 million m³ in the South-Surkhan reservoir; 60.21 million m³ in the Topolang reservoir; 132.93 million m³ in the Uchqizil reservoir; 78.36 million m³ in the Oktepa reservoir; The Degrez reservoir has a capacity of 7.49 million m³.

In Surkhandarya region, it is planned to introduce water-saving technologies on 4,045 hectares in 2019, and in practice, 4273 hectares or 106% of the current plan.

Of these, drip irrigation technologies were introduced on 2,075 hectares of cotton fields, 2010 hectares of orchards and 188 hectares of other crops.

In particular, 3 entities on 2075 hectares of cotton fields, including Denov Oltin Yarlari farm in Denov district on 1970 hectares, Surkhan Sifat Tekstil LLC in Jarqurghon district on 60 hectares and Nurmat Khojakulov farm in Shurchi district on 45.3 hectares. drip irrigation technologies were introduced.



1-Amu-rust main channel; 1a-distribution main channel; 2 water catchment pool; 3-Electric pump; 4- Sand filters; 5 A pipe connecting the sand filter to the mesh filter; 6 different filters; 7-zadvishka; 7a-manometer 8-main pipe; 9 distribution pipe; 10 small distribution pipe; 11-drop hose; 12 field experimental areas;

Figure 2. Schematic view of a drip irrigation system on a field test site

Weather forecast of Termez meteorological station of Surkhandarya region for 2019 Table 1.

Termez metostation data -2019														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Январ	Феврал	Март	Апрел	Май	Июн	Июл	Август	Сентябр	Октяб	Ноябр	Декаби	Ўртача	Жами
Хавони нг харорат и, С	6.2	8. 9	18 .0	19 .4	2 4. 5	3 0. 9	33 .2	29 .2	24 .4	16 .7	10 .1	8. 6	19 .1	23 0. 1
Хавони нг нисбий намлиг и, %	66	63	59	53	5 1	3 8	37	41	45	53	69	71	53 .8	64 6
Етишма ган намлик , мм	4.2	5. 0	10	12 .9	1 7. 2	2 9. 6	34 .3	25 .5	18 .6	11 .0	4. 3	5. 0	14 .8	17 7. 6
Ёғингар чилик, мм	8.8	22 .6	15 .8	12 .9	2 9. 4	-	-	-	-	14 .0	18 .5	24 .9	10 .7	12 8. 4

Introduction of water-saving technologies in 2020 Total drip irrigation technologies will cover 4515.5 hectares, including 2930.8 hectares of cotton,

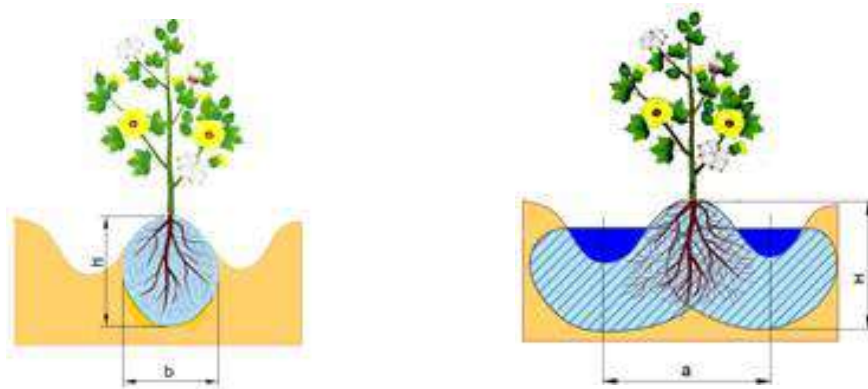
1065.5 hectares of orchards, 345.2 hectares of vineyards, 74 hectares of other crops and 100 hectares of vegetable fields were developed for the introduction of sprinkler irrigation technologies.

The Denov branch of Surkhan Sifat Tekstil LLC in Jarqurghon district conducted a field experiment to determine the irrigation regime, irrigation regime, irrigation norms, and periodicity of irrigation, using a drip irrigation system for 60 hectares of Sultan cotton in the Jarqurghon massif.

Results of the research: The scope of work in this direction, organizational and economic mechanisms are clearly indicated. In particular, the task is to introduce drip irrigation systems on 25,000 hectares by 2020, 45.6 thousand hectares by film and 34.0 thousand hectares by flexible flexible pipes. By 2019, 13.2 thousand hectares in the country. The task is to install drip irrigation on 65.6 thousand hectares and to introduce irrigation systems on 56.0 thousand hectares through flexible flexible pipes. It is known

that drip irrigation, in general, is carried out on the basis of the State Program for the introduction of water-saving irrigation technologies. Without denying the need to manage water consumption in cultivation, use water-saving methods and technologies in the fields, reduce water consumption from the soil surface, ie use economical methods of irrigation, Surkhandarya region "Surkhan Sifat Tekstil" LLC In the cultivation of high quality cotton in 2019, drip irrigation technologies were widely used. According to the results of research conducted in 2017-2019 in the experimental field controls of Surkhandarya region, cotton was irrigated 6 times according to the scheme 1-5-0 irrigation during the growing season under production control, using the 1st (control) variant of the experiment. Due to large irrigation standards (1070-1300 m³ / ha), the pre-irrigation moisture content in the intended layer of soil was moderately high, the crop was not irrigated during the ripening period, seasonal irrigation norms totaled 5960-6910 m³ / ha. The period between irrigations was 24-28 days. In option 1 (control) with the use of drip irrigation, according to the analysis of irrigation time norms, "Sultan" cotton varieties were irrigated 6 times in the order of 60-70-65% irrigation compared to ChDNS. Irrigation interval is 24,26,28,25,23 days, the irrigation norm is 1138 m³ / ha on average 1 hectare. During the season, a total of 6830 m³ / ha of water was poured on 1 hectare.

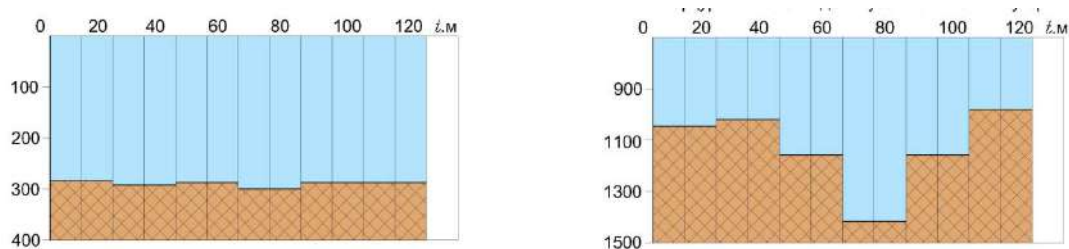
Field experiments were conducted in the development of resource-saving technologies. According to the results of field experiments, 2,3,4 variants of the options in the field experiment in 2019. Medium-pressure drip irrigation technologies were used. According to the analysis of irrigation time norms according to schemes 1-4-1 in options 2,3,4, "Sultan" cotton varieties were irrigated 6 times in the order of 70-75-65% compared to ChDNS. The irrigation interval was 24,26,28,25,23 days, with an average irrigation rate of 305 m³ / ha per 1 hectare. During the season, a total of 1840 m³ / ha of water was poured on 1 hectare.



Moisture in drip irrigation Humidity in irrigated irrigation

Figure 3. Absorption of water in the field where the field experiments were conducted.

In the process of drip irrigation compared to drip irrigation, not only water wastage was avoided, but we can see a significant increase in productivity compared to previous indicators of raw cotton. This means that the drip irrigation regime and the control option have reduced the water consumption by 50-55% compared to 6910 m³ / ha, or 3970 m³ / ha. In other words, the number of irrigations in the drip irrigation regime did not increase but the water consumption decreased by half.



Drip irrigation of cotton in Jarqurghon massif

Figure 4. A curve of the rate of wetting after irrigating cotton

The order of irrigation of cotton in the control and experimental fields of Surkhandarya region in 2019

Table 2.

№	Indicators	Control options						
		Number of irrigations						Seasonal irrigation norm is m3 / ha
		1	2	3	4	5	6	
irrigation								
1	Soil moisture%	10.9	11.1	13.2	14.8	13.7	13.4	
2	Humidity relative to ChDNS,%	62.8	66.7	71.5	69.8	57.5	54.6	
3	Irrigation periods	25.04	18.05	13.06	10.07	04.08	27.08	
4	Irrigation interval, days		24	26	28	25	23	
5	Irrigation duration, hours	17	17	18	19	18	17	
6	Irrigation rate, m3 / ha	1090	1070	1105	1300	1200	1145	6910
Drip irrigation								
1	Soil moisture%	19.5	18.6	17.5	20.1	19.7	18.6	
2	Humidity relative to ChDNS,%	67.3	69.7	69.8	71.3	73.7	70.7	
3	Irrigation periods	03.05	25.05	19.06	17.07	11.08	03.09	
4	Irrigation interval, days		24	26	28	25	23	
5	Irrigation duration, hours	10	12	11	12	11	12	
6	Irrigation rate, m3	300	310	305	310	305	310	1840

Drip irrigation saves water by taking into account the following.

- compliance of the irrigation regime with the water demand of the plant.
- Lack of water evaporating from the soil.
- As there are no weeds, all water should be for crops only.
- water does not spread across the field and does not seep into the soil.
- No water is thrown into the dump.

Drip irrigation saves 30% to 75% of water compared to other irrigation methods. Consumption of labor and material resources is reduced. In drip irrigation, as the water is supplied to the plant through hoses, the field soil does not harden, resulting in no need for soil loosening (cultivation) and drainage. The uncultivated field is easily plowed at the end of the season. Since the fertilizer is applied with water, there is no need to use techniques for fertilization. As a result, cocktails and fuel lubricants are saved. In the field, fishermen do not have to carry a hoe and straighten the ditch, which means that the manual labor in irrigation is sharply reduced.

Irrigation of cotton in the experimental fields was carried out on the basis of the system adopted in the scientific work program. In this case, the duration of irrigation and irrigation standards for the options were determined on the basis of the level of moisture in the soil. In option 2, soil moisture was determined at 0-50 cm in the pre-flowering phase, 0-70 cm in the flowering-budding phase, and 70 cm in the cotton ripening and opening phases.

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CULTUROLOGY

PHENOMENON OF "ENTERTAINMENT" IN THE CULTURE OF ANTIQUITY

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Summary: The article deals with the problem of phenomenon of "Entertainment" in the context of culture of Antiquity. Entertainment is collective activity in primitiveness and Antiquity because of creative activity was actualized by a prevailing method in a context of collective actions that are rituals and ceremonies.

Keywords: Entertainment, culture of Antiquity, collective activity, cultural tradition, rituals and ceremonies.

The person takes partnership in collective actions but he does not understand itself as the individual creator in any case. Entertainment always attracted the attention of people revealing their inner essence. The first examples of entertainment which reveal the essence of human nature were depicted in antic cultural tradition. Entertainment was mostly realized in the form different rituals. With development of slave-owning in the ritual-game formula of entertainment there are corresponding elements of a reflexion in the form of author's attempts to separate some certain attributive characteristics of creativity. Entertainment begins to be associated with creativity. Creativity in Plato's concept is identified with divine magic gift. "Divine creativity, on Plato, occupies the higher position because it creates supreme values, human activity depends from divine" [1, p 43].

It is proved that in the classical period, in aspect of functional distribution of activity on public appointment (the concept of sophists, in particular Protagoras, Gorgias), entertainment is the form of public appointment.

Reorientation of education to real needs definitively occurs on times of Protagoras which proved, that the person is a measure of all things. On the basis of concepts of sophists, entertainment as the form of personification of positions of the civil majority.

Considering of phenomenon of entertainment in a projection of concepts of the Hellenistic age, it is necessary to notice that in a projection of concepts Stoicism, Scepticism, Epicureanism entertainment as the form of adaptation to social being. In the concepts Cleanthes, Seneca, entertainment is studying of laws of the nature, logic of social life which is how to adapt for it better and to feel itself comfortably. Entertainment is an ability of corporal and spiritual dissolution of the individual in socially natural order of life through the apathetic relation to it.

In II century BC entertainment becomes the exemplary form of social behaviour and in due course and professionally class. It was assisted by that the policy of Roman Empire supported entertainments which were direct on external appeal, and thanks to it the requirement for increase of vocational training of actors and musicians was felt.

It is very important that there are distinctions of types of thinking in Hellenistic and east tradition. The bible wise man carried out world and god knowledge not by conceptually-logic judgement and life contemplation, but enduring life in depths of the spirit. This contradicting complex of purely human relations and experiences puts in the forefront in Christianity psychology, and personal psychology. In a projection of concepts of apologists of Tertullian, Clement of Alexandria, Origen, Justin creativity acts as the form of internally spiritual condition. In a context socio-cultural developments of late Antiquity entertainment as the form of an internal spiritual condition, displays such phenomena as a problem of crisis of a slaveholding formation, decline of antique economy, process of correlative connection and reconsideration on the basis of the Greek-Roman culture Egyptian, Persian, ancient the Jewish ideas and cultural-historical traditions. All these specified forms during the Hellenistic age displays features of transition from is sensual-material Space to absolute - personal monotheism (Christianity).

In the middle ages the phenomenon of entertainment was not popular. The church severely punished people who tried to have fun. In the early medieval creativity is charitable activity, in creativity professional skill in the form of abilities and habits to write behind the standards recognised as samples-cans as educational practice of church is appreciated.

In creative activity advantage of typification before an individualization, i.e. instead of penetration into a variety of the vital phenomena is given, artists leave contrast terrestrial and heavenly. All most important elements of art creativity made some kind of religious hieroglyphs, and the artist not could full and use completely the imagination as the art theology was over all.

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ECONOMICS SCIENCE

MODERN APPROACHES TO PERSONNEL MANAGEMENT

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Abstract. The thesis describes the modern approaches used in the personnel management system, including administrative, economic, and socio-psychological methods.

Keywords: management methods, personnel management methods, economic methods, psychological methods, administrative methods.

In every large company or small firm, personnel management takes place. The company's success and the quality of work of employees depend on the qualifications of the manager and the methods that he applies in practice. Modern management methods are designed to maintain a balance between the director and subordinates and do more for the company, having strong motivation for this. Personnel policy, which uses modern methods, serves as a guarantee of the enterprise's stability and development.

Simultaneously, the most common personnel management methods remain both in theory and practice, economic and administrative methods. Let us briefly consider some of them. The former is traditionally based on classical economic laws. And therefore, a considerable number of organizations use this method as an incentive for sufficient staff work, encouraging their employees or, conversely, using it as a punishment [1]. If this method is misapplied, negative aspects arise that can lead to losses, strikes, and even the enterprise's bankruptcy [2]. In the context of administrative management methods, when influencing the team through organizational and administrative mechanisms, both positive and negative aspects also arise. The negative side can be the personnel's turnover, the indifferent mechanical attitude of the team to their duties. But at the same time, the positive aspects of this procedure are organized by the group, accustomed and systematized to discipline, responsibility, etc.

Administrative methods are based on power, discipline, and punishment and are known throughout history as the whip methods.

Administrative methods are focused on such motives of behavior as a conscious need for labor discipline, a sense of duty, a person's desire to work in a particular organization, and work culture. The direct nature of the impact distinguishes these methods: any regulatory and administrative action is subject to mandatory execution. Organizational strategies are characterized by their compliance with legal norms in force at a certain level of management and acts and orders of higher management bodies. The managerial impact of economic and socio-psychological methods is indirect. It is impossible to count on these methods' automatic action, and it is difficult to determine the strength of their impact on the final effect. Administrative management procedures are based on one-person control, discipline, and responsibility and are carried out in organizational and executive influence. The organizational impact aims to organize the production and

management process and includes administrative regulation and methodological instruction.

Economic methods are based on the correct use of economic laws and are known by their influence methods as carrot methods.

Economic management methods are elements of the financial mechanism by which the organization's progressive development is ensured. The most crucial economic management method is technical and economic planning, which combines and synthesizes all economic management methods.

With the help of planning, the program of the organization's activities is determined. Once approved, the plans are sent to line managers to guide implementation. Each division receives long-term and current goals for a certain number of indicators. For example, a site foreman receives a daily shift assignment from the workshop administration. He organizes the team's work using management methods, methodological instructions that determine the order, procedures, and forms of work to solve an incredibly technical and economic problem.

Socio-psychological methods are based on motivation and moral influence on people and are known as methods of persuasion.

Socio-psychological methods are ways of implementing managerial influences on personnel, based on the use of sociology and psychology laws. The objects of the impact of these methods are groups of people and individuals. In terms of the scale and methods of influence, these methods can be divided into two main groups: sociological methods that are aimed at groups of people and their interaction in the process of work; psychological ways that directly affect the personality of a particular person.

One of the innovative tools for personnel management is structuring goals, which, in particular, is characterized by such factors as substantiating the qualitative and quantitative goals of the enterprise, monitoring the purposes of the personnel management system, and their compliance with the goals of the enterprise. Simultaneously, a sound management system can be built only based on an analysis of plans, considered in a hierarchical order, with the determination of each employee's degree of responsibility for the result of his activities. When using the expert-analytical method to improve personnel management, highly qualified specialists solve problems and eliminate existing issues in the organization as experts. They analyze the current situation, identify shortcomings in personnel's work, and the reasons for their occurrence. However, this method is entirely subjective. Therefore, for more accurate assessments, it is necessary to apply a multi-stage examination. The parametric method consists of determining the degree of proportionality of the personnel management system's parameters to the parameters of the organization's production system by diagnosing the functional relationships between them [3].

The variety of existing personnel management methods is excellent; however, the most effective use of techniques will bring only in their application in a complex, and not separately. Thus, with the constant improvement of personnel management at the exit, the team receives the satisfaction of its needs, and the enterprise - the implementation of its own, and profit.

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THE ROLE AND CHALLENGES OF ISLAMIC FINANCING IN UZBEKISTAN

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Abstract. This scientific thesis explores the possibilities of applying the principles of the Islamic banking and financial system in the banking system of Uzbekistan. It is also proposed to apply the principles of "murabaha", "mudaraba", "musharaka", "takaful" in the banking and financial system of the country.

Keywords: Islamic Development Bank, murabaha ", " mudaraba ", " musharaka ", " takaful ", bank, Islamic finance.

The Islamic Development Bank (ISDB) and its affiliates in Uzbekistan, including the Islamic Corporation for the Development of the Private Sector (ICD), the International Islamic Trade Finance Corporation (ITFC) and the Islamic Research and Training Institute (IRTI), have contributed to the development of Islamic finance in Uzbekistan. to date, more than \$ 2 billion has been earmarked for financing based on Islamic finance principles.

A number of Islamic leasing companies operate in Uzbekistan.

In particular, in 2019, the first Islamic insurance company "Mutual" in the country began its activities. An e-Murabaha (financial product based on the Murabaha trade agreement) platform, one of the first not only in Uzbekistan but also in the CIS, has been developed. IsBF (Islamic Business and Finance), the first Islamic finance company (whose main activity is consulting services), was established, and the Islamic Finance Telegram page and website were launched to raise public awareness in Islamic finance. Leasing companies such as Taiba Leasing and Al-Mulk Kapital continue to offer rental products based on Islamic principles to small and medium businesses.

Significant work has also been done in the field of education. A number of trainings on Islamic finance have been held in Uzbekistan, and books on Islamic finance have been published in Uzbek.

These include Malaysian Professor Sudin Harun's "Islamic Finance and Banking System: Philosophy, Principles and Practice," Kazakh economist Erlan Baydaulet's "Fundamentals of Islamic Finance," and Russia's Rinat Bekkin's "Islamic Economic Model and Time."

Given the high demand for Islamic financial services in the country, the ICD Advisory Group is currently working to open Islamic windows (Islamic financial services) in 6 commercial banks of Uzbekistan, including Kapitalbank, Trustbank, Asia Alliance Bank, Agrobank, Qishloq Qurilish Bank and Ipak Yuli Bank. is leading. These windows are expected to launch in early 2021. In addition, Alokabank, People's Bank, Universal Bank and Davr Bank are working to open Islamic windows.

At the same time, it is expedient to put into practice the terms that are widely used in the Islamic financial system. Including:

"Murabaha" is a cross between a classic loan and leasing. In this case, the loan is allocated for a specific purchase. And until the client repays the entire agreed amount, the bank is the owner of the goods. Thus, "murabaha" is a trade transaction in which a bank buys goods at one price and sells at another. And trade in Islam is not prohibited.

"Mudaraba" - this type of banking services is used when placing deposits. The owner of the money places his finances with a partner who uses them to finance some kind of business. The profit received from this activity is shared between the parties to the

agreement. In the traditional financial system, the analogue of "mudaraba" is venture financing.

Muslims also actively use the "musharaka", which involves the co-financing of a project by a group of participants. It can include both individuals and companies. The profit is divided according to the contribution of each of their participants.

"Takaful" - means the payment of insurance premiums to the insurer, provided that in the event of an insured event, the money will be returned. In this case, part of the funds goes to the accumulation fund. From investing this money, the participants receive income, which is indicated in the contract.

Quite common in Islamic countries is "kardul hasana". It is an interest-free loan that is provided to small businesses and is vital to them. In Iran, for example, banks are obliged to spend a certain part of their own funds on "Kardul Hasan". As we recall, it is prohibited to charge interest for the use of money, but the borrower can voluntarily repay the lender by paying a fee ("hiba").

Based on the above information, we believe that the comprehensive introduction of the Islamic financial services industry in Uzbekistan will open the following opportunities for the country:

- increase and diversify foreign investment;
- creation of an environment of fair and transparent competition in the banking sector and the opportunity to diversify the assets of the banking system;
- Ensuring maximum participation of free funds at the disposal of the population and business in the development of the economy;
- development and diversification of the capital market in the country;
- creation of many new jobs;
- increase the activity of the financial market by increasing the financial literacy of the population;
- Coordination and modernization of infrastructure in the country through the development of the Islamic financial services industry;
- establishment of new financial institutions;
- Contribute to the implementation of the state program to combat poverty;
- Development of a training program in a new direction.

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THE NOTION OF INFORMATION AND ITS SIGNIFICANCE IN THE STATE ECONOMY

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Abstract: This article highlights the notions of an informed economy, the importance of information and communication technologies in the development and development of the national economy.

Keywords: Information economy, information society, information and communication technologies.

Since the beginning of 90th of XX century the field of Information has developed intensively. It has become common to say that XXI century-Information and communication century. It makes everyone in our society be interested in these questions naturally that what Information is, what its tasks are, what its main peculiarities are. Because it is difficult to imagine the human activities without information.

In everyday life we have to work with various forms of information such as textual, graphical (diagram), schedule, sound(audio), illustrated(pictured),video etc. In order to work (assemble, save)with each sort of information we need an informational construction which has various technical characteristics.

The development of microelectronic producing technology and the creation of modern processor computers are enlarging opportunities to recycle information.

Nowadays in our society the notion of information economy is spreading widely. Actually, in this situation one question may be appeared: what information economy is. Broadly speaking, in the scientific literature Information economy is considered as an economic trend which studies the effects of information to the decision of information economy. In the work " The structure of Information" by M.A.Nikitenkiva following definition is given to this term " Information economy - a developing stage of producing forces; It is a creation of global information field which is the knowledge and the role of information in the society's life, people's mutual exchanging information effectively.it would give chances for people to use the world's information resources and a provider of the satisfaction of their social and private necessity.

As any country, in Uzbekistan else, it may project the increasing the forming degree of information economy, implementing modern information and communication technologies and a share of the service field in total internal products. In our country the development of Information and communication technologies is implemented based on the program developing branch of national information communication of the Republic of Uzbekistan outlined 2013-2020 years. This program was confirmed in the First President of the Republic of Uzbekistan Islam Karimov's PR-1730 resolution in 2012 "About the actions of development once more and imposing modern information and communication technologies" The main purpose intending to developing information and communication technologies in our country aims to impose state programs successfully according to the development of information and communication technologies and to form information economy in it effectively. The comparative analysis of information economy among countries is implemented with depending on developing of the following tendencies.

- The difference of traditional economy and information economy
- Forming of certain opposition between information economy and the fields of economy of industry period
- Entering the global economy from day to day

The scientists M. Castels , M. Connors , U .Martin and A. Norman have conveyed the analysis of the maintenance of information economy in their scientific work. But the category of information economy was inserted to the science by M. Porat, the American economist, in 1976. Likewise the Spanish-American economist M. Castels emphasized that the term of "Information economy" is not a perfect conception, it does not reflect itself all peculiarities of the new field. Oppositely, the conception "Information economy" has a certain characterization, it is a progressing stage of civilization that has superiority in economic labour and information riches. Therefore, this term also may be given a characterization by theoretically. Information economy is a foundation of postindustrial society, it is considered as philosophic-economic term marking the peculiarities of economy that information is a resource of main production and also in the organization of the being busy the principal place has been occupied by whom are busy with mental work. Including that in 1996-1998 the monography " Information Age: economy, society and culture" written by M.Castels caused the term of information economy to spread widely in the society. The forming of information economy can be separated into 3 period according to the time measure :

- 1.Appearing of information economy and determining the tendency of progressing of new events.(1960-1970)
- 2.Developing of information economy intensively in the leading countries.(1980-1990)
- 3.Studying the theory of information economy connection with knowledge economy.(since 2000)

Generally speaking, in the theory of economy there is not a unique definition or notion of information economy, but there are various approaches to it in scientific literature. However, in the conducted investigation information economy is divided into the group of 3 main scales.

In the first group, economy balances can be introduced ,they denote the share of the total national product which was composed in the information branch of society. The main problem of this approach is that they are considered to come across a certain difficulties in producing total national product of the country. In the second group, social balances can be shown. They determine the information products, producing the means of information and the share of people who are busy in the branch of information service. In the third group, you can see technological balance that defines the point of view of expanding the information technology that is to say to indicate information economy in society.

At this moment, Despite the Time and distance, the development of new technologies with the progress of information and communication technologies is giving a chance to exchange and deliver information, money and other resources. Also, the basis chances occurring with the tie of passing to information economy is causing several problems and conflicts. For instance, such kind of problems can be inserted the changeability and inconstancy of economic life which has appeared owing to information and globalization concerning to various fields in society and studying overall and unraveling which demands to complex approach. From them it is necessary to emphasize separately the increasing the effects of information and communication technologies and innovational, scientific and educational activities to the society, country and economy and possessing new peculiarities of their activities from the aspect of quality. That's why, It is getting

more and more important task to show the individual peculiarities of information economy such as how it describes the conflicts in social life and reflects its essence by theoretical aspect in the world economy of the stage of current time. Therefore, the strategy of developing the system of National information communication which includes and implements all trends of developing information and communication technologies is performing the tendency of active positive increase. It denotes that the total portion of information economy has an influence considerably to economy.

Last short period of globalization processes, in the field of one of main active mechanization Information and communication technologies in new trends are being created corresponding to the requirement of Time. These technologies both offer much enough from classic models of computer branches and sometimes work based on just the same tendencies.

Even though the idea of nebulous calculation appeared in 1960's of previous century it has passed to the developing stage and popularized since 2007 as a result of increasing the demand of users continuously and progressing of connection channels intensively.

To sum, introducing information and communication technologies widely and actively causes to increase the quantity of scientific researches in the service and producing branches of economy, rising up implementing of one branch's activity connecting with others, to the transformation of the role of information, to component unproportion in the labour market.

Sh. Mirziyoyev, The President of Republic of Uzbekistan emphasized in the video selector meeting concerning measures adjusted to shortening the poverty through developing the business work on February 27 "I have spoken about the poverty for the first time in the proclamation to the Supreme Council. We have much of them. It is obvious that, up to now we have given fish to our people. This experience has not justified itself. Then we must teach them to fish."

Taking into consideration, It means one of the most important attempts to conduct scientific researches according to solving the effect of information economy, form and develop information economy on a large scale in Uzbekistan.

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MEDICAL SCIENCES

CRITERIA FOR PREDICTION OF THE FUNCTIONAL STATE OF THE KIDNEYS IN CHILDREN AFTER CONGENITAL UPPER URINARY TRACT OBSTRUCTION IN CHILDREN AFTER SURGICAL TREATMENT

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Relevance. The quality of life of children with obstructive uropathy and the prognosis of obstructive uropathy are determined by the degree of involvement in the pathological process and the nature of kidney damage. In severe cases, obstructive uropathy is accompanied by a decrease and even loss of renal function with the subsequent formation of renal failure and disability of the child. In everyday clinical practice, the question constantly arises why, with the same type of uropathy, in some children, renal function after surgical treatment is rather quickly restored, while in others it continues to progressively decrease. This circumstance dictates the need to search for prognostic markers of the functional state of the kidneys and the progression of these diseases in children.

Goal. In order to search for criteria for predicting the course and outcome of congenital obstructive uropathies to prevent the development of nephrosclerosis and chronic renal failure in children, we studied the results of surgical treatment of congenital OU depending on the initial morphological and functional state of the kidneys and ureters.

Material and methods. For the convenience of mathematical analysis, the mean values of ultrasound and roentgenoplinimetry in children with II and III degree of obstruction in congenital OU were compared before the operation with the data of children examined up to 3 years old and after 3 years of follow-up examination.

Results. After reconstructive plastic surgeries, during follow-up examination, a comparison of the ultrasound data, depending on the morphological picture of the LMS and MPS, showed: the average urinary rate of the URV in children with hypoplastic changes is significantly higher ($p \leq 0.001$) than in children who had sclerotic changes before surgery in the urodynamic nodes of the upper urinary tract (table 1). The duration of one urine ejection in children without sclerotic and decompensatory-atrophic changes in the ureteral wall differed less significantly ($p \leq 0.05$), but confidently (Table 1).

Table 1

Ultrasound indicators in children with congenital uropathies before and after surgery (p / o)
depending on the morphological picture

	TPP (mm)	Average velocity of urine SSV (m / s)	Prolong. one urine SSV per minute (sec)	IR paren. renal blood flow
Before surgery	11,9±1,4 (n-212)	0,1±0,02 (n-145)	2,1±0,8 (n-145)	0,77±0,03 (n-36)
P / o - sclerosis, atrophy	13,2±1,5 (n-87)	0,15±0,02 (n-49)	3,2±0,4 (n-49)	0,73±0,03 (n-11)
P / o hypoplasia	19,8±1,4 *** (n-125)	0,22±0,01 *** (n-64)	4,3±0,34 * (n-64)	0,70±0,02 * (n-18)

$p \leq 0,05^*$, $p \leq 0,001^{***}$

After reconstruction of the upper urinary tract, during the follow-up examination, comparison of the data of TPP on ultrasound and CDC, depending on the morphological picture of the biopsy material of the parenchyma of the affected kidney, showed the following. If, according to the data of morphological examination, hypoplasia was determined in the kidney tissue before the operation against the background of glomeruli of a normal structure, then in the follow-up after the operation, an increase in TPP was noted on ultrasound, and with CDC - a significant improvement ($p \leq 0.05$) of renal blood flow (Table 6.1). If, before the operation, protein dystrophy and focal necrosis were noted in the epithelium of the convoluted tubules, then the recovery of renal hemodynamics in the postoperative period was insignificant, i.e. at the same time, there was no significant difference between the indicators of TPP and CDC at different periods of the follow-up examination (Table 1).

The data of the mathematical analysis of EI after surgery differ significantly from the data before the operation. When analyzing the indicators of X-ray planimetric indicators, depending on the histological picture in the ureter and the renal parenchyma, data were obtained that had significant differences between themselves (table 2).

Table 2

X-ray plan metric parameters in children with congenital OU before and after surgery, depending on the morphological picture of LMS, MPS and renal parenchyma

Children under 3 years old				
	RKI	PI	VMO	RMO
Before surgery (compare values)	0,42±0,03 (n-31)	1,4±0,2 (n-31)	37,7±2,9 (n-23)	1,1±0,1 (n-23)
After surgery, depending on the degree of damage				
Sclerosis and atrophy	0,38±0,02 (n-7)	1,7±0,2 (n-7)	15,2±3,7*** (n-4)	0,8±0,04** (n-4)
Hypoplasia and dysplasia	0,31±0,03** (n-7)	2,3±0,03*** (n-7)	7,2±2,4*** (n-4)	0,4±0,09*** (n-4)
3-7 years old				
Before surgery (compare values)	0,46±0,04 (n-33)	1,3±0,2 (n-33)	44,6±2,5 (n-22)	1,3±0,1 (n-22)
After surgery, depending on the degree of damage				
Sclerosis and atrophy	0,41±0,04 (n-8)	1,5±0,2 (n-8)	16,8±1,4*** (n-4)	1,0±0,04** (n-4)
Hypoplasia and dysplasia	0,28±0,03*** (n-5)	2,6±0,3*** (n-5)	8,8±1,9*** (n-4)	0,35±0,03*** (n-4)
7-11 years old				
Before surgery (compare values)	0,45±0,04 (n-30)	1,4±0,02 (n-30)	57,4±2,8 (n-18)	11,1±0,1 (n-18)
After surgery, depending on the degree of damage				
Sclerosis and atrophy	0,39±0,03 (n-8)	1,9±0,2** (n-8)	20,6±3,4*** (n-4)	0,85±0,03*** (n-4)
Hypoplasia and dysplasia	0,28±0,03*** (n-4)	2,6±0,3 (n-4) ***	9,7±2,6*** (n-5)	0,48±0,01*** (n-5)
11-15 years old				
Before surgery (compare values)	0,48±0,02 (n-25)	1,2±0,02 (n-25)	65,5±0,02 (n-11)	1,1±0,1 (n-11)
After surgery, depending on the degree of damage				
Sclerosis and atrophy	0,34±0,03*** (n-7)	2,1±0,2*** (n-7)	28,3±2,4*** (n-5)	0,9±0,02*** (n-5)
Hypoplasia and dysplasia	0,22±0,04*** (n-7)	3,4±0,4*** (n-7)	11,7±1,3*** (n-4)	0,55±0,01*** (n-4)

In IUD, after the restoration of urodynamics at the level of the ureterovesical segment, the upper urinary tract contracts. Depending on the histological picture of the resected ureterovesical segment, the X-ray planimetric parameters had a significant difference ($p \leq 0.001$) (Table 2). As can be seen from Table 2, after the operation, the degree of decrease in the volume and radius of the ureter in patients with hypo and dysplastic changes is much more pronounced in comparison with patients with atrophic and sclerotic lesions of the wall of the ureterovesical segment.

For dynamic control over the restoration of the integral and local viability of the renal parenchyma, before and after surgical results of renal scintigraphy were compared with the determination of the integral uptake index of the DMSA radiopharmaceutical - Technetium-99m. (table 3).

Table 3.

IIH indices in children with congenital OU, depending on the cause and degree of obstruction

	Refluxing mega ureter	Obstructive mega ureter	Congenital hydronephrosis
Before surgery			
IIS at 2 degrees	45,7±2,2 (n-3)	47,8±2,4 (n-4)	49,1±2,6 (n-8)
IIS at 3 degrees	35,6±2,4 (n-9)	37,4±3,6 (n-3)	40,2±2,9(n-17)
After operation			
IIS at 2 degrees	47,2±1,7 (n-3)	49,3±1,6 (n-4)	52,4±1,3 (n-8)
IIS at 3 degrees	38,2±1,4 (n-9)	40,4±2,8 (n-3)	43,1±3,9(n-17)

When analyzing the data of radiological studies of children with congenital obstructive uropathy, various variants of deviations were revealed. As can be seen from the table, the most profound lesion of the nephrons was observed in grade III obstruction of the upper urinary tract, regardless of the level and cause. After the operation, the dynamics of restoration of the functional volume of the kidney was not observed.

We compared the level of urinary TGF β and interleukin-10 values in children with congenital OU before and after surgical treatment, depending on the presence of nephrosclerosis (Table 4). The scatter of data on the level of the analyzed parameters depending on the cause of congenital OU was significant. So, in children with WMD without signs of nephrosclerosis before and after the operational data with standard values practically did not differ.

Table 4.

Immunological parameters of urine in children with congenital OU
before and after surgery

	IL-10 (pg / ml) before surgery	IL-10 (pg / ml) after surgery	TGF-(pg / ml) before surgery	TGF-(pg / ml) after surgery
VH with nephrosclerosis (n-28)	28,3 ± 5,4	20,6±5,3	39,2 ± 5,9	33,2±3,4
VH without nephrosclerosis (n-22)	22,7 ± 3,3	12,3±3,8 *	31,1 ± 5,9	15,8±2,9 *
WMD with nephrosclerosis (n-18)	14,0 ±3,2	11,2±2,8	9,9 ± 3,5	7,8±2,3
WMD without nephrosclerosis (n-3)	8,21	8,21	1,16	1,16
RMU with nephrosclerosis (n-29)	33,4±4,5	31,2±3,6	36,6 ± 4,5	32,9±3,7
RMU without nephrosclerosis (n-10)	28,9± 3,3	19,9±2,7 *	30,1±3,5	22,3±2,9 *

In case of GV in children with signs of nephrosclerosis, the interleukin-10 and TGF-indices one year after surgery do not differ significantly compared to those before surgery. In patients without nephrosclerosis, interleukin - 10 values significantly decrease and approach the normative data ($p \leq 0.05$). The TGF-values also decrease significantly, but remain significantly higher than the normative indicators.

In RMU, attention is drawn to the high levels of TGF-- and interleukin - 10 both before and after the operation. After surgical correction, only interleukin-10 values significantly decrease in children with RMU without nephrosclerosis ($p \leq 0.05$), but remain much higher than the normative data.

Discussion. Reconstructive plastic surgery for congenital obstructive uropathies in children helps to restore urodynamics, reduce hydronephrotic transformation, grow and develop renal parenchyma from the affected side.

Comparison of the results of X-ray planimetric and Doppler studies with the data of histological examination proved: the less pronounced sclerosis, atrophy in the ureteral wall and dystrophy with focal necrosis of the renal parenchyma, the faster and better the recovery of urodynamics and function of the affected kidney in the postoperative period, due to normally formed nephrons.

The data of histological studies allow us to speak of the irreversibility of pathomorphological changes in the renal parenchyma, which arose as a result of a violation of the formation of a part of the nephrons in embryogenesis. When studying kidney biopsies in children with congenital obstructive uropathies, a dual effect of pathology was noted - interference with nephrogenesis and irreversible tubulointerstitial damage. Therefore, during static nephroscintigraphy, the determination of the integral capture of the DMSA radiopharmaceutical - Technetium-99m in the volume of viable renal tissue in dynamics before and after the operation did not reveal significant differences.

Consequently, after the restoration of urodynamics, the growth and development of the renal parenchyma according to ultrasound and X-ray planimetry results from unaffected or secondarily altered areas of normally formed nephrons.

TGF-B, which promotes interstitial fibrosis and is responsible for renal disorders, was found in children with severe sclerotic renal changes in all studied variants of obstructive uropathies. The presence of congenital dysplastic and atrophic changes in the kidney activates the increased secretion of TGF-even after elimination of uro-obstruction.

Restoration of urodynamics and complex therapy in children with CH and WMD without nephrosclerosis made it possible to arrest the inflammatory process in the kidneys and the upper urinary tract. This fact is confirmed by a significant decrease in the anti-inflammatory cytokine interleukin 10 and the approach of its values to the normative data. In RMU, VH, and WMD against the background of sclerotic and atrophic changes in the renal parenchyma, a high level of IL-10 confirms the assumption of a constantly ongoing inflammatory process.

Conclusions. Thus, the morphological characteristics of changes in kidney biopsy specimens in children with congenital obstructive uropathies allows not only to draw a conclusion about the depth of preoperative structural abnormalities in the renal tissue, but also to predict the course of the postoperative period and the success of surgical treatment.

Static kidney scintigraphy with the determination of the integral uptake of the radiopharmaceutical DMSA - Technetium-99m in dynamics is a minimally invasive, reliable, reproducible and gentle method in relation to radiation exposure for the determination and dynamic control of the integral and local viability of the renal parenchyma. A decrease in this indicator less than 40 indicates a decrease in the volume of viable renal tissue.

An increase in interleukin-10 values in children with congenital OU is a criterion for predicting the development of chronic obstructive pyelonephritis, the severe forms of which predetermine the formation of nephrosclerosis and secondary renal wrinkling.

An increased level of urinary TGF β in patients with congenital obstructive uropathy is an indicator of dysplastic and nephrosclerotic renal changes. Indicators of transforming growth factor TGF β in urine in children with CH, WMD and RMU are prognostic markers of the development and progression of nephrosclerosis in congenital obstructive uropathies.

PREVENTION AND TREATMENT OF INFLAMMATORY COMPLICATIONS OF DENTAL IMPLANTATION

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Abstract. Dental implantation is the most relevant, promising and demanded direction in modern dentistry and prosthetics. According to statistical studies, the prevalence of dentition defects reaches 80% among the working-age population of Uzbekistan. These indicators indicate a high need of the population for orthopedic and surgical care. That is why dental implantation is so relevant today. Despite the many advantages, the rapid development and improvement of technologies, modern implantation has a significant drawback - complications in the postoperative period. As a result, the issue of developing preventive measures to reduce the risk of complications in the postoperative period during dental implantation is of great importance.

Key words: adentia, transgingivally, electrogalvanic, osteoradionecrosis, idiopathic diseases, malignant tumors, dental implantation.

In many countries, the number of patients with fixed dentures on implants is increasing. Each manufacturer, producing implants, makes various changes in their shape or metal composition, which affect the primary stabilization and osseointegration of the implant. In this regard, there are various types of implants. Depending on the shape of the intraosseous part, most dental implants can be divided into implants, to one degree or another, repeating the shape of the tooth root (cylindrical, screw, plate, combined). By design, they can be non-collapsible and collapsible. Depending on the material and surface structure - ceramic and metal, porous and compact, smooth, textured or bioactive. Depending on the installation technique, implants can be one- and two-stage. In addition, the methods of placing implants in the alveolar processes of the jaws are being changed and modified, namely: the incision and formation of the implant bed, transgingivally - directly through the mucosa. The listed techniques also affect the recovery time and the final result of the implantation operation.

Purpose of the study: To describe a set of preventive measures that help minimize the risk of complications in the postoperative period during dental implantation.

Research objectives: To describe a set of preventive measures that help reduce the risk of complications in the postoperative period during dental implantation.

Materials and methods of research: We studied 23 patients with secondary adentia on the basis of the clinic of surgical dentistry of the Tashkent State Dental Institute. All patients underwent clinical and radiological research methods

Results and discussion: Indications for implantation are: dentition defects, complete adentia, inability to use removable dentures, for example, due to allergies or gag reflex. Contraindications to implantation are divided into several large groups, general contraindications are serious diseases of various organ systems, as well as drug addiction, alcoholism and a number of infectious diseases.

I would like to pay special attention to absolute local contraindications for dental implantation, which are:

- 1) malignant tumors, benign tumors and tumor-like formations of the maxillofacial region;
- 2) osteoradionecrosis;
- 3) the presence of precancerous diseases of the red border of the lips or oral mucosa;

- 4) the presence of clinical symptoms of metal intolerance;
- 5) severe form of generalized periodontitis or periodontal disease;
- 6) idiopathic diseases with progressive damage to periodontal tissues (Papillon-Lefebvre syndrome);
- 7) low hygienic culture of the patient and his unwillingness to maintain high hygiene of the oral cavity.

A number of diseases, bad habits and other contraindications that are not taken into account during surgery can adversely affect the further process of implant engraftment. To resolve the issue of the possibility of an operation, patients need to undergo a comprehensive examination. It includes the collection of anamnesis, general clinical analyzes, in particular, a general blood test and a general urine test, an examination of the oral cavity - an assessment of the condition of the teeth, alveolar processes, mucous membranes, the type of bite, the state of oral hygiene.

Also, during the examination, it is necessary to carry out an X-ray examination of the dentition using the methods of X-ray and computed tomography. This method makes it possible to assess a number of important indicators: the condition of the jaw bones, their density, the nature of the trabecular pattern, the type of maxillary sinuses, the height and width of the alveolar processes, the degree of their atrophy, the distance between the alveolar edge and the bottom of the maxillary sinus or the mandibular canal. An important link in the planning of the operation is instrumental examination, namely, measuring the width of the alveolar processes, determining electrogalvanic potentials using dissimilar metals, and conducting stereolithography.

I would like to focus on the mandatory rehabilitation of the oral cavity of patients, including the removal of dental plaque and decayed teeth, treatment of caries and periodontal diseases. In certain clinical cases, the patient is shown surgical correction of scars of the mucous membrane and alveolar process, plastic of the frenum or tongue, as well as orthopedic preparation - normalization of the bite height, elimination of deformities of the dentition.

Conclusion. Apply a set of preventive and therapeutic measures to minimize the risk of complications in the postoperative period during dental implantation.

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MORPHOLOGICAL CHARACTERISTICS OF CHRONIC POLYPOUS RHINOSINUSITIS

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Abstract. Diseases of the paranasal sinuses are among the most common pathologies in otorhinolaryngology, which is facilitated by the modern ecological situation, the widespread prevalence of allergic and viral respiratory diseases, and a decrease in local and general immunity. All researchers agree that in recent years in the world there has been a tendency towards an increase in the incidence of chronic sinusitis, including chronic polypous rhinosinusitis.

Keywords: polypous rhinosinusitis, sinuses, infiltration, stroma, lymphocytes.

The aim of the study was to study the morphological properties of chronic polypous rhinosinusitis.

Material and methods of research: In accordance with the purpose of the study and to fulfill the assigned tasks, clinical studies were carried out in 140 patients with chronic polypous rhinosinusitis and chronic rhinosinusitis, who were examined and treated at the ENT department of the multidisciplinary clinic of the Tashkent Medical Academy in 2017-2019.

Results of the study: Microscopically different clinical and morphological forms were characterized by some signs of chronic inflammation and changes in the integumentary epithelium. The mucous form of polypous rhinosinusitis is the most common form of 17 cases, which amounted to 21.2% and was characterized by uneven edema, angiomatosis, vascular congestion, diffuse or focal infiltration of lymphocytes, with an admixture of eosinophils, accumulations of small mucous glands, and hyperemia. Myxoid masses could always be found in the stroma. Angiomatous polyp contains in the stroma multiple proliferating vessels of the capillary type with foci of lymph - leukocyte infiltration, numerous vessels with granulation sites. In some cases of an angiomatous polyp, slit-like and thin-walled vessels of predominantly capillary type were detected in the stroma, out of the total number of patients, this type was 4 cases - 5%. Inflammatory polyp was 15 cases - 18.75%, histological changes were also characterized by interstitial edema of the connective tissue network with focal or diffuse polymorphic inflammatory cell infiltration, consisting mainly of lymphocytes, histiocytes, with an exacerbation of the chronic process, the number of polymorphonuclear leukocytes with an admixture of plasma foci of hemorrhage, single large, secretory active glands. The surface of an allergic polyp is lined with a multi-row, in some cases single-row, cylindrical epithelium, accompanied by abundant myxoid edema of loose connective tissue of the stroma, vascular hyperemia, numerous eosinophilic leukocytes, separate large lymphoid follicles with a light proliferation center, and lymphocyte proliferation. In some places there were areas of epithelial desquamation. The glandular - cystic form of the polyp - revealed 10 cases, which amounted to 12.5%, the surface is covered with multilayer cylindrical ciliated epithelium with proliferation foci, areas of desquamation and metaplasia in a multilayer flat non-keratinous epithelium. The stroma is represented by loose connective tissue with uneven edema, disseminated lymphohistiocytic infiltration, angiomatosis, and many cystic-dilated serous glands. Individual glands are in a state of proliferation of epithelial cells, they are located in many rows and in layers. The glandular-mucous polyp was 15 cases - 18.75%, the surface is lined with multi-row columnar epithelium with proliferation

foci. The stroma consists of mucous connective tissue with myxoid edema, angiomatosis and a large number of eosinophilic leukocytes with an admixture of plasma cells. In the thickness of the polyp tissue, glands with a cystic-expanded lumen and serous contents, atrophy and flattening of the epithelial lining of the inner wall are noted. Adenomatous polyp, revealed 5 cases - 6.25%. The stroma of formation consists of a large number of glandular structures, sometimes secretory active, glands of various shapes and sizes, their epithelium is more often in a state of cell proliferation, along with them, cells of a hematogenous-histiogenic nature with an admixture of blood vessels in a small amount can occur. Fibrous polyp in only 3 cases -3.75%, in the form of an oval bulging of the mucous membrane lined with multilayer columnar epithelium, with areas of complete desquamation of the epithelium with exposure of the basement membrane. The stroma consists of compacted, in places coarse fibrous tissue with dense lymphohistiocytic infiltration, clusters of small mucous glands and blood vessels.

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OPTIMIZATION OF DIAGNOSTICS OF SECRETORY OTITIS MEDIA**Vokhidov N.Kh., Vokhidov U.N., Shodiev J.A.**

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Secretory otitis media today remains an urgent problem in pediatric otorhinolaryngology and takes one of the first places in the structure of the causes of hearing loss.

The aim of this study is to improve the effectiveness of treatment of secretory otitis media.

The study material consisted of 60 patients with secretory otitis media aged 3 to 18 years, who were on outpatient and inpatient treatment at the Bukhara Regional Children's Multidisciplinary Center. All patients underwent collection of complaints, anamnesis of life, otorhinolaryngological examination, audiological, X-ray, allergological, laboratory methods of research.

Results and discussion. The group of children with the catarrhal stage of secretory otitis media included 25 children, the one-sided nature of the process was noted in 1 child. In children with this stage of secretory otitis media, we detected retraction of the tympanic membrane, a change in its color from cloudy to pink, deformation or absence of a light cone. The most significant findings during endoscopy of the nasal cavity and nasopharynx in children with the catarrhal stage of secretory otitis media were grade 3 and 4 adenoid tissue hypertrophy (21 children - 84%), grade II adenoid tissue hypertrophy with a block of CT orifices (1 child - 4%), "purulent path" through the mouth of the auditory tube (2 children - 8%) - in these children, during further examination, acute sinusitis was revealed. In 1 children (4%) with identified allergic rhinitis, there was a characteristic cyanoticity of the nasal mucosa. We found a curvature of the nasal septum in 2 children (8%), however, it was not clinically significant. Bullous changes in the middle turbinate were present in 1 child (4%), hypertrophy of the uncinate process was also present in 1 child (4%).

The group of children with the secretory stage of secretory otitis media included 30 children, the one-sided nature of the process was noted in 4 children. In children with this stage of secretory otitis media, we detected a thickening of the tympanic membrane, sometimes with a cyanotic shade, its retraction in the upper sections, in some cases, bulging in the lower quadrants. When carrying out endoscopic examination of the nasal cavity and nasopharynx in children with the secretory stage of secretory otitis media, as in children with the catarrhal stage, hypertrophy of the adenoid tissue of III and IV degrees with a block of the CT mouth was most often detected (25 children - 83,3%), while as hypertrophy of adenoid tissue of the II degree with a block of the ST ostium was revealed only in 9 cases (9,2%). Hypertrophy of tubular tonsils was revealed in 1 children (3,3%) with a history of adenotomy. Discharge in the middle nasal passages and a purulent path through the mouth of the CT were determined in 1 case (3,3%). Further examination revealed acute sinusitis in these children. In 12 children (2,4%) with identified allergic rhinitis, there was a characteristic cyanoticity of the nasal mucosa. Curvature of the nasal septum, detected in 27 children (1,1%), was not clinically significant. Bullous changes in the middle turbinate were present in 1 child (3%), hypertrophy of the uncinate process - in 1 child (3%).

Thus, it follows that exudative otitis media in childhood is formed against the background of an unfavorable course of pregnancy of the mother of the child, lack of breastfeeding, pathology of the upper respiratory tract (obstruction of the auditory tube orifice), the presence of chronic opportunistic infections, and is characterized by bilateral localization.

CHARACTERISTIC OF THE CARDIOVASCULAR SYSTEM IN CHILDREN AND ADOLESCENTS AT OBESITY IN ACCOMPANIENCE OF ARTERIAL HYPERTENSION

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62 children and adolescents with obesity accompanied by arterial hypertension were examined. It was revealed that the development of myocardial hypertrophy is affected by body weight, blood pressure, vasoconstriction processes, as well as insulin resistance and atherogenic dyslipidemia. These parameters serve as early markers of myocardial hypertrophy.

Key words: obesity, arterial hypertension, left ventricular myocardial hypertrophy, adolescents.

The urgency of the problem. Left ventricular hypertrophy is an independent risk factor for the development of cardiovascular diseases and mortality in adults, as evidenced by recent studies [2,4]. It should be noted that there are not enough studies that determine the effect of obesity on the myocardium in children and adolescents. According to the authors, in children with borderline arterial hypertension and obesity, the formation of eccentric LVH occurs earlier [1,2], while they confirm the early development of signs of left ventricular remodeling in patients with insulin resistance [3,5].

In this regard, we set ourselves the goal of the work: to determine the influence of individual factors in the development of early signs of myocardial remodeling and left ventricular myocardial hypertrophy in children with exogenous constitutional obesity.

Materials and methods: 62 children and adolescents aged from 12 to 17 years old with exogenous constitutional obesity were examined. The selection criterion for patients was the definition of BMI in children and adolescents with identified overweight and / or obesity, which was compared with percentile charts developed by WHO for children aged 5 to 19 years (WHO Growth Reference, 2007). Also, OT was determined, which was compared with percentile tables for a specific age and gender according to the recommendations of the VNOK (2009), and the ratio of waist to hip (OT / Hip). The study included 28 girls (45%) and 34 (55%) boys, whose average age was 15.32 ± 0.24 years.

Children with exogenous constitutional obesity were divided according to the presence of abdominal (visceral) obesity and the presence of hypertension. In group I there were 20 people (16.83%) with a uniform type of obesity, with OT 80.12 ± 1.31 , OT / OB 0.88 ± 0.01 cm. Group II consisted of 42 children with AO, while OT was 99.87 ± 1.28 cm; FROM / OB 0.93 ± 0.009 . 24 of them had normal blood pressure (IIA group) and 18 children had a confirmed diagnosis of hypertension (IIB group). Differences in the ratio of OT / OT in groups I and II were significant ($P < 0.05$). BMI in group I patients was within the SDS range from $\square + 1.0$ to $+2.0$ and reached values of 29.81 ± 0.50 kg / m²; in group II, BMI was within the SDS range from $+2.0$ to $\square + 3.0$, the mean values of which were 36.08 ± 0.61 kg / m² ($P < 0.01$).

The comparison group consisted of 20 children without obesity, aged 14.31 ± 0.63 years, with OT 64 ± 1.51 cm, OT / OV 0.81 ± 0.02 cm, with the difference in OT / OV ratio was significant with group I ($P < 0.01$) and group II ($P < 0.001$). There were 9 girls and 11 boys. This contingent was selected in the city family polyclinics of Samarkand. All children were assigned to health group I. The average BMI in the comparison group was within the SDS range from -1.0 to $+1.0$ and amounted to 19.44 ± 0.47 kg / m², with a range of values from 18.2 to 20.4 kg / m². The difference in BMI value with the observation group is significant ($P < 0.001$).

Arterial hypertension was diagnosed in accordance with the criteria developed by the Committee of Experts of the All-Russian Scientific Society of Cardiology and the Association of Pediatric Cardiologists of Russia (Moscow, 2009) [4]. Morphometric parameters of the myocardium (myocardial mass - LVMM, myocardial mass index - LVMI, thickness of the interventricular septum - TMZhP, thickness of the posterior wall of the left ventricle - TZSLZH)

were evaluated by ultrasound echocardiography on an Aloka Alpha-7 ultrasound scanner with a cardiological package.

Research results: in accordance with the set goal, we determined the relationship between the degree of BMI and the level of systolic and diastolic pressure in adolescents. The results of the study showed that the level of systolic and diastolic blood pressure for all time intervals was significantly higher in adolescents of group 3 (138.1 ± 8.7 mm Hg, $p < 0.05$ and $p < 0.05$) compared with values of adolescents with obesity of 1 and 2 degrees (117.2 ± 7.4 and 123.2 ± 6.7 mm Hg). At the same time, the revealed direct correlation relationship between BMI and systolic pressure, diastolic pressure and average blood pressure per day ($r = 0.601$; $r = 0.591$ and $r = 0.604$, respectively, $p < 0.01$ for all indicators).

It should be noted that according to the results of a study of blood pressure among adolescents with overweight and obesity, "white coat hypertension" was revealed in 27.4% of cases, labile hypertension in 16.1%, and stable hypertension in 12.9%. At the same time, the stable form was significantly more often detected in obesity of the 3rd degree (22.2%) compared with obesity of the 1st degree and obesity of the 2nd degree (10.0% and 8.3%, respectively).

Echocardiographic study was characterized by the fact that, with obesity in combination with arterial hypertension, a structural and geometric reconstruction of the left ventricular myocardium occurs. In this case, first of all, the wall thickness increases. We found a statistically significant relationship between BMI and the thickness of the posterior wall of the left ventricle ($r = 0.587$; $p < 0.01$), as well as the thickness of the interventricular septum ($r = 0.503$; $p < 0.05$). It should be noted that hypertrophy of the walls of the left ventricle is formed initially as an adaptive response of the myocardium to pressure load and ensures that the contractile function of the left ventricle corresponds to the increased load. The main indicators characterizing left ventricular myocardial hypertrophy are myocardial mass and left ventricular myocardial mass index. Our data showed that the incidence of left ventricular hypertrophy was 45.0% in group 1, 54.1% in group 2, and 61.1% in group 3. At the same time, when analyzing the mass index of the left ventricular myocardium, depending on the variant of arterial hypertension, no significant differences were found. With white coat hypertension - 35.6 ± 3.2 g / m^{2.7}, with labile hypertension - 35.8 ± 4.6 g / m^{2.7}, and with stable hypertension - 36.5 ± 4.5 g / m^{2.7}. This fact suggests that it is obesity that makes a significant contribution to the degree of increase in left ventricular mass.

Reconstruction of the geometry of the left ventricle was found in almost 1/3 of adolescents with obesity, while in group 1 - 30.0%, in group 2 - 37.5% and in group 3 - 33.3%. Eccentric left ventricular hypertrophy was diagnosed in 16.3% of patients, concentric remodeling in 11.4%. It should be noted that concentric left ventricular hypertrophy is associated with the maximum risk of cardiovascular complications; in our studies it was found in 4.9% of cases and only in the group of adolescents with grade 3 obesity.

Structural and geometric reconstruction included a change in the geometry of not only the left ventricle, but also the left atrium. Thus, the difference in the mean values of the left atrium size was revealed between all observation groups (31.4 ± 1.2 mm; 31.8 ± 0.8 mm and 34.5 ± 1.4 mm in groups 1, 2, and 3, respectively). Also, there was a statistically significant correlation between the size of the left atrium and BMI ($r = 0.608$; $p < 0.01$). Changes in the structure of the left atrium are most likely the earliest stage of myocardial remodeling.

The compensatory response of the cardiovascular system in response to obesity was also related to central hemodynamics. This changed the volume of circulating blood and the total peripheral vascular resistance. The minute volume of blood circulation gradually increased with the progression of obesity (5.5 ± 1.1 l / min, 5.8 ± 0.9 l / min and 6.2 ± 1.1 l / min, respectively,

in groups 1, 2, and 3) , which indirectly indicates an increase in the volume of circulating blood. The increase in minute volume was accompanied by a decrease in the total peripheral vascular resistance with increasing body weight (1318.8 ± 289.1 dynes / cm / s-5; 1299.9 ± 274.3 dynes / cm / s-5 and 1287.4 ± 284 , 1 dyne / cm / s-5, respectively, in groups 1, 2 and 3) Also, the total peripheral resistance depended on the type of arterial hypertension, so with labile arterial hypertension this indicator was 1287.8 ± 250.7 dynes / cm / s-5 , and at a stable 1325.6 ± 301.5 dynes / cm / s-5, which characterized the depletion of the adaptive capabilities of the organism and an increase in the total peripheral vascular resistance.

Conclusions: the development of myocardial hypertrophy is influenced by body weight, blood pressure, vasoconstriction processes, these parameters can serve as early markers of myocardial hypertrophy.

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COMPARATIVE ASSESSMENT ON THE EFFECT OF DIFFERENT METHODS OF CORRECTIVE THERAPY ON LIPID METABOLISM AND HOMEOSTATIC RENAL FUNCTION.

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Summary. In total 60 children were examined, over 22 of mature newborns are born from healthy parents, 20 newborns are born from mothers with OPG-gestosis, and 18 newborns born from mothers with OPG-gestosis combined in chronic pyelonephritis. It was identified that in children with complicated course of disease, inheritability was rarely aggravated, the disease was followed by epiphenomenon, in the main group of newborns were observed a low level of glomerular filtration, tubular reabsorption of acidogenesis, which were associated by a disproportion of the phospholipid spectrum of erythrocyte membranes due to the increased blood activity and LPO.

Key words: Gestosis, combined pyelonephritis, newborn, kidney function, LPO, membrane.

The urgency of the problem. The most important condition for a successful outcome of the gestational period and the birth of full-fledged offspring is the absence of extragenital pathology in a pregnant woman (10,12), since pathology leading to high peri- and neonatal morbidity and mortality is formed in the antenatal period (1,2). In recent years, against the background of a decrease in the quality of the reproductive health of women of fertile age (8), the number of children with adverse factors in ontogenesis has increased by 80-85% (4,16). One of the reasons for the increased frequency of gestosis in the population of pregnant women is the increase in the number of people with kidney disease (9,14,13). According to epidemiological studies, every fourth woman aged 15 to 49 suffers from chronic pyelonephritis (5). Many works are devoted to these questions in the special literature (15,3). However, with all the obviousness of the unfavorable influence of both chronic pyelonephritis and OPG-gestosis of pregnancy on the development of the fetus and the adaptive abilities of the newborn, the peculiarities of their combined influence deserve special attention.

Objective: To establish the features of the adaptive capabilities of renal function in newborns born to mothers with OPG-gestosis, combined chronic pyelonephritis about the features of lipid metabolism, phospholipid structure of erythrocyte membranes and the formation of homeostatic renal functions in newborns in the early neonatal period are aimed at the need for mandatory corrective therapy.

Materials and research methods.

The first group of newborns consisted of data from 22 healthy children (control) and, naturally, they were not given any special prescriptions. Taking into account the peculiarities of metabolic adaptation in newborns from mothers with pyelonephritis, consisting of 20 newborns, basic therapy was used, supplementation with vitamin E at a dose of 5 mg / kg for 5 days. At the same time, we proceeded from modern concepts of dysadaptation syndromes as states of oxidative stress, and therefore, we believe that α -tocopherol in such situations should be an integral part of basic therapy.

For the next-third group of newborns, for a comparative assessment of basically the same basic corrective therapy with the previous group, the membrane-protective drug dimephosphon was

patients with chronic pyelonephritis with layering of OPG-gestosis of 2 and 3 degrees of severity.

The role of membrane-destructive processes was judged by the phospholipid structure of erythrocyte membranes (16), the state of peroxidation by the level of malondialdehyde (MD) according to I.D. Stalnaya et al. (15), as well as the phospholipase activity of blood according to H. Brokerhoff, I.R. Jenson (1978). Comparative assessment of the homeostatic functions of the kidneys was carried out according to the clearance of endogenous creatinine according to Van Slayke (8). The numerical data were processed by the method of variation statistics with the calculation of the reliability of numerical differences.

Research results and their discussion. Analysis of the data obtained on the formation of homeostatic functions of the kidneys in healthy newborns showed that the excretory function of the kidneys according to the data of diuresis, clearance of endogenous creatinine, uric acid in the early neonatal period naturally increases from 2 to 7 days of life.

Distinct dynamics were observed in the indices of ammonio-acidogenetic, ion-regulating and osmoregulating renal function ($P < 0.05-0.01$). These functional changes proceeded against the background of an increase in the content of LPC, SFM in the erythrocyte membranes during the physiological adaptation of the newborn to extrauterine life, and a decrease in PC. At the same time, there was a decrease in MDA from 4.2 ± 0.24 to 3.1 ± 0.27 mmol / mg lipids.

The revealed changes indicate deep disturbances in the structural and functional state of cytomembranes and aim at the need not only to compensate for the deficiency of antioxidants, but also to membrane protective therapy.

It should be noted that the indicators of the main functions of the kidneys, the spectrum of lipids and MDA in the compared main groups are essentially of the same type. The basic, generally accepted complex corrective therapy of α -tocopherol supplementation had a clear positive effect on the clinical condition of the newborn and the studied laboratory parameters.

Complex therapy with the inclusion of α -tocopherol led to: a significant improvement in metabolic disorders: a statistically significant increase in the level of total lipids, phospholipids, NEFA, and a decrease in the content of free cholesterol, as well as LPC, SFM, PEA. MDA in erythrocyte membrane. In fact, the indices of total lipids, NEFA, triglycerides, SFM, PC, PEA were normalized and did not statistically differ from the control group. However, a number of indicators of lipid metabolism at the same time had a clear positive dynamics, were still far from normalization.

Thus, the level of phospholipids significantly increased compared to the baseline values, but remained significantly low compared to the control group.

A similar situation was observed in the dynamics of the levels of SH, LFH, MDA.

Consequently, the use of basic therapy supplemented with vitamin E in newborns born to mothers suffering from chronic pyelonephritis and OPH-gestosis to correct dysadaptation syndromes, leading to a significant improvement in metabolic processes, reduces the risk of developing hypoxic lesions, but does not completely eliminate them, despite the clear clinical effect, a number of biochemical markers of increased stimulation of LPO are preserved, which we consider as a preserving high development of membrane-pathological processes - reliably high indicators of LPC, MDA with a relatively low level of PC.

So, the results of the data obtained show that with complex corrective therapy with the inclusion of vitamin E, the dynamics of the patient's condition improved, muscle dystonia disappeared, physiological reflexes revived: the child began to suckle the breast, the skin turned

pink, the edema disappeared. The use of vitamin E improved the indicators of nitrogen metabolism, the phospholipid spectrum of membranes, reduced the level of LPC and led to the normalization of lipid peroxidation indicators: total lipids increased from 2.7 to 4.9 g / l, total phospholipids from 6.9 to 13.6% in almost 2 the level of PC in the membranes of erythrocytes increased by times and LPC decreased, the level of MDA decreased.

However, as can be seen from the conducted data, the levels of PL, TG, PC and higher LPH and MDA remain, in comparison with the indices in healthy animals by this age, i.e. by the end of the early neonatal period in children of this contingent, in comparison with healthy newborns, the modification of the phospholipid composition of erythrocyte membranes is delayed, although there is a distinct antiradical activity of α -tocopherol. This circumstance served as the basis for additional inclusion in the complex corrective therapy of the membrane-protective drug - dimephosphon (group 3).

The dynamics of the spectrum of lipids and phospholipids of erythrocyte membranes in newborns with dysadaptation syndromes when prescribing dimephosphon against the background of complex corrective therapy had a similar orientation and were more clearly positive in relation to indicators of total lipids, PL, CX, NEZhK. (TABL # 1)

Consequently, the cooperative use of α -tocopherol and dimephosphone in the complex corrective therapy of maladaptive states in newborns born to mothers with chronic pyelonephritis and OPG-gestosis allows achieving faster and more complete normalization of lipid metabolism, phospholipid spectrum of erythrocyte membranes, i.e. increasing the stability of cell membranes.

In newborns from mothers of patients with chronic pyelonephritis and OPG-gestosis, the function of ammonio-acidogenesis is clearly suppressed. Against the background of basic therapy on the 7th day of life, along with other indicators, the level of ammonia excretion significantly increases and the level of titratable acids only moderately increases. In contrast, in the group of newborns who simultaneously received dimephosphone, the level of ammonia excretion reaches 2.09 ± 0.27 meq / day, titratable acidity 1.72 ± 0.31 , which correspond to the indicators of the group of healthy newborns.

Thus, the use of a composition of antioxidants (α -tocopherol) and membrane protectors (dimephosphone) in the complex corrective therapy of maladaptive syndromes in newborns born to mothers of patients with chronic pyelonephritis and OPH-gestosis can significantly improve the effectiveness of treatment, and also revealed an improvement in the general condition of patients, slowing ESR, reducing the degree of leukocyturia and proteinuria. An improvement in the concentration function of the kidneys has been noted, has a normalizing effect on the rate of lipid modification of cell membranes and the formation of homeostatic functions of the kidneys.

Table №1

Dynamics of the spectrum of blood lipids, phospholipids of erythrocyte membranes and MDA in newborns with dysadaptation syndromes, depending on treatment methods ($M \pm m$)

Groups	Control Group (n=22)	Study groups	
Indicators		Basic therapy + vitamin E n = 20	Those who received dimephosphon, n = 18
OL, g / l	4,76±0,50	4,26±0,32 P>0,5	4,62±0,32 P>0,5,P ₁ >0,5
FL%	14,9±1,12	10,3±0,71 P<0,05	13,1±0,71 P<0,05,P ₁ <0,05
XC%	18,2±1,3	20,9±0,43 P<0,05	19,1±0,38 P>0,5,P ₁ <0,05
NEJK	8,8±1,28	7,6±0,65 P>0,05	8,3±0,23 P>0,5,P ₁ >0,05
TG	17,6±0,36	17,2±0,21 P>0,5	18,1±0,47 P>0,05,P ₁ >0,05
LFH	13,7±0,86	15,7±0,19 P<0,05	14,1±0,27 P>0,05,P ₁ <0,05
SFM	26,1±1,21	27,9±0,37 P>0,05	26,7±0,32 P>0,5,P ₁ <0,05
FH	31,2±1,8	29,2±0,58 P>0,05	31,6±0,51 P>0,5,P ₁ <0,05
MDA, NMOL / MG LIPIDOV	3,12±0,29	5,06±0,26 P<0,01	3,82±0,25 P>0,05,P ₁ <0,05

Note: P - reliability of differences between indicators of the main and control groups, P₁ - reliability of differences between indicators of main groups.

Conclusions

1. In newborns from mothers with chronic, "fetopathy" is observed due to chronic fetal hypoxia, which is expressed by a violation of the stability of the cytomembranes: the accumulation of LPC SF against the background of a decrease in PC, PEA, NEFA, as well as an increase in the level of MDA
2. Installed. that the degree of impairment of homeostatic functions and changes in lipid peroxidation in newborns depends on the severity of aggravating factors during intrauterine development. The combined effects of infection (chronic pyelonephritis) and toxic agents (OPG-gestosis) cause the most profound and persistent violations and require special corrective measures.
3. The use of α -tocopherol in combination with dimephosphone from the first day of life during the entire early neonatal period in newborns from mothers with chronic pyelonephritis with gestosis of α -tocopherol helps to reduce the activity of lipid peroxidation of cytomembranes, and thereby increase the stability of cell membranes, improve the homeostatic functions of the kidneys.

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DETECTION OF ADRENALINE AND STRESS CONDITIONS IN PATIENTS USING PSYCHOACTIVE SUBSTANCES WITH HIV INFECTION

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The study of the adrenaline content in the blood and the manifestation of a stress state in patients using psychoactive substances (PAS) with HIV infection is one of the key indicators in the provision of medical and psychological assistance and the development of appropriate psychotherapeutic measures. When carrying out these activities, it is necessary to take into account the level of adrenaline and the severity of stressful conditions, in order to be able to overcome stress and adapt to the diagnosis.

Key words: HIV infection, psychoactive substances, adrenaline, stress.

Relevance. The development of the problem of stress in modern science is reflected in the works devoted to the biochemical, physiological, clinical, psychophysiological and psychological aspects of its manifestations. The problem of stress and stress resistance remains acute and relevant both for each person and for society as a whole [2]. A variety of mental disorders in patients using psychoactive substances, when HIV infection is detected, contributes to the study of the severity of stress conditions in patients, especially when diagnosing HIV / AIDS [1].

Psychological stress manifests itself in emotional experiences, motivational-volitional, behavioral and cognitive spheres (subsyndromes). Comprehensive psychodiagnostics of stress is an important link in monitoring its multiple causes and destructive consequences, as well as a necessary part for determining the effectiveness of stress management technologies [2].

The prevalence of HIV infection among injecting drug users has increased from 12% to 60-70% in just a few years [6, 7]. A variety of mental disorders in patients using psychoactive substances, when HIV infection is detected, contributes to the study of the severity of stress conditions in patients, especially when diagnosing HIV / AIDS. Psychological stress manifests itself in emotional experiences, motivational-volitional, behavioral and cognitive spheres (subsyndromes). Comprehensive psychodiagnostics of stress is an important link in monitoring its multiple causes and destructive consequences, as well as a necessary part for determining the effectiveness of stress management technologies [2, 7]. According to ICD-10, post-traumatic stress disorder (PTSD) occurs in response to trauma of extraordinary importance. The traumatic event must go beyond everyday human experience [4]. The defining characteristics of a traumatic event include its ability to induce feelings of fear, helplessness, or terror in response to a threat to the subject's physical integrity or life. In the development of PTSD, negative events are of particular importance, characterized by a threat to life, unpredictability and uncontrollability [3, 5].

In this regard, the study of the stress state and the level of adrenaline in HIV-infected patients using psychoactive substances in the early stages of detecting HIV infection is highly relevant.

The aim of the study is to reveal the relationship between the development of a stress state and the level of adrenaline excretion with urine in patients using surfactants with HIV infection.

Materials and methods. Examined 72 patients aged from 28 to 54 years (average age 35 years), who are registered in the regional drug treatment clinic in Samarkand. The patients were divided into two groups: the main group of 42 patients using psychoactive substances with HIV infection, and the control group - 30 patients with drug addiction. The measurement of the phenomenological structure of experiences was carried out on the scale of psychological stress PSM-25 (Lemur – Tesier – Fillion, adaptation by NE Vodopyanova) [2]. Indicators of the PSM-25 scale of mental state were assessed on a point system as high (> 155), medium (100-154) and low (<100). The content of adrenaline in urine was determined by the spectrophotometric method [5]. The patients were examined according to the following indicators: place of residence, marital status and

education. According to ethical standards, voluntary consent was taken from each patient to conduct the study.

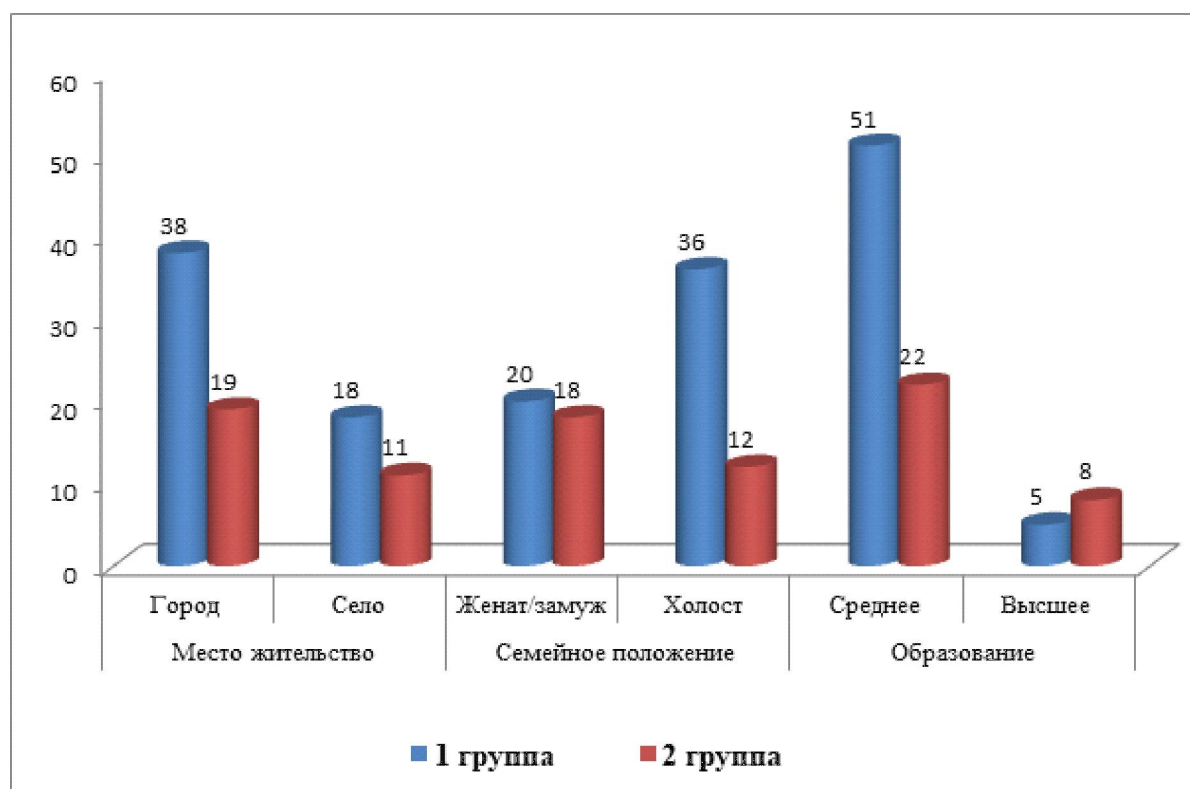
Results and its discussion. In the process of measuring the stress state among the patients of the main group, who use psychoactive substances, when HIV infection was detected, the stress indicators were found to be high level of stress (mean 173 ± 13.8). Among all the subjects, a state of severe neuropsychic tension, negative emotional experiences (exacerbation of anxiety, depression), an increase in the consumption of psychoactive substances, maladjustment and mental discomfort were noted. The average stress level (129 ± 10.3) was especially noted among single patients and patients with secondary education. Whereas patients with higher education showed a state of satisfactory adaptation. A low stress index (90 ± 7.2) was observed in patients who were characterized by a state of psychological adaptation, restrained behavior in a stressful situation, and control of emotional experiences.

Among the sick in the rural population, as well as among patients with higher education, a low level of stress was recorded.

In the control group of patients, indicators of a high level of stress were not revealed, which is obviously associated with sufficient adaptation to the diagnosis within six months. The average stress level (118 ± 9.4) indicates a state with satisfactory adaptation. Low stress score (89 ± 7.1) - state of psychological adaptation, patients are the most restrained.

Fig 1

Fig. 1. The number of patients divided into groups



The significance of the difference between the levels at $\alpha = 0.05$ - * $P < 0.001$.

The significance of the difference between the levels at $\alpha = 0.95$ - * $P < 0.001$.

It turned out that the patients of the main group had a higher level of stress than the control group. This can be explained by the fact that the first detection and reporting of HIV infection, being a dramatic event, causes mental tension in a person, can lead to a breakdown of adaptation mechanisms, changes in behavior and a decrease in the control of emotions. In the control group, a certain period of adaptation to the diagnosis has passed, the mental state of patients is more stable, rational, patients are easier to navigate in a stressful situation and have greater neuropsychic stability.

Table 1

Urinary excretion of adrenaline $\mu\text{g} / \text{day}$

		Group 1	Group 2	P<
Location	City	58,2 \pm 4,7	19,7 \pm 1,6	0,001
	Village	57,5 \pm 4,6	18,7 \pm 1,5	0,001
Family status	Married	60,2 \pm 4,8	18,4 \pm 1,5	0,001
	Single	56,2 \pm 4,5	16,7 \pm 1,3	0,001
Education	The average	56,5 \pm 4,5	18,4 \pm 1,5	0,001
	Higher	58,9 \pm 4,7	20,4 \pm 1,6	0,001

The data in Table 1 suggest the presence of increased production of adrenaline in HIV-infected patients using surfactants. In addition, an increase in adrenaline levels indicates a decrease in stress tolerance. The results obtained indicate that stressful situations influence the metabolism of biogenic amines to a certain extent. For patients with drug addiction only, the increase in the concentration of adrenaline did not differ statistically as compared with the control.

Thus, in patients using psychoactive substances, when HIV infection is detected, there is a high risk of psychological maladjustment and the development of stress conditions. To overcome these reactions, it is necessary for each patient to individually determine specific life goals, to form interests, to develop mechanisms of personal self-preservation.

Conclusions: When identifying and diagnosing HIV infection in patients using psychoactive substances, it is necessary to take into account the high risk of the possibility of stress conditions. In order to provide medical and psychological assistance and plan further psychocorrectional measures, it is necessary to take into account the severity of stress disorders and the level of adrenaline, given that a high level of adrenaline can negatively affect the somatic state of patients.

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TREATMENT OF CERVICAL CANCER IN FERTILIZED WOMEN**Navruzova V.S.¹, Yuldasheva N.Sh., Navruzova R.S.¹, Nabieva U.P.²**¹Tashkent Pediatric Medical Institute²Institute of Immunology and Human Genomics, Academy of Sciences of the Republic of Uzbekistan

Malignant neoplasms of the reproductive system of women are the most frequent in the structure of oncological diseases. Their total share is more than 38% in the structure of the overall incidence of malignant tumors. According to the WHO, 550 thousand cases of newly diagnosed cervical cancer (CC) and more than half of deaths from this pathology are registered annually in the world. In the Republic of Uzbekistan in 2012, 1323 patients with cervical cancer and 623 deaths from this disease were registered. In recent years, there has been an increase in the incidence among women of fertile age. Increasingly, the disease occurs between the ages of 28-45 years. In the Republic, about 60% of cervical cancer is detected in the I-II stage of the disease.

Traditional anticancer treatment in the initial stages allows, in the overwhelming majority of cases, to save the patient's life, but leads to irreversible loss of fertility, which greatly reduces the quality of life of young women who have not previously realized reproductive function. Physiological and psychological consequences of infertility caused by the treatment of a malignant tumor are extremely negative. In addition to the fact of unrealized reproductive function, the majority of young patients in this group have depression of varying severity, stress disorders and sexual dysfunction.

The peculiarities of morphogenesis and carcinogenesis of cervical tumors, high survival rates in early stages and an increase in the number of patients of reproductive age pose the task of oncogynecologists to improve the quality of life by preserving fertility.

Based on these circumstances, it became necessary to develop and implement organ-preserving surgery - radical abdominal trachelectomy.

Cervical cancer is characterized mainly by the local spread of the tumor process. The transition of the tumor to the upper parts of the vagina, parametric tissue and sacro-uterine ligaments is most often observed. The growth of the tumor to the upper parts of the uterus is observed less often in 13-15% of cases. In the initial stages of cervical cancer, the tumor most often affects the transformation zone (), in 28-34% of patients the tumor is localized in the lower segment of the cervical canal, in 15% in the middle and in 2% in the upper segment. The middle and lower third of the vagina is affected in the common stages of cervical cancer and is rare.

Cervical cancer metastases depend on the histological structure of the tumor. In squamous cervical cancer, ovarian metastases, according to various authors, vary from 0.2% to 2.2%, and in adenocarcinoma, 4-10%. The question of the need to remove the ovaries in case of adenocarcinoma of the cervix in the initial stages remains controversial. the likelihood of metastasis during this period is small.

Lymphogenous metastasis in cervical cancer affects the parametric, obturator, ileal, sacro-sacral, presacral, lateral, aortic lymph nodes.

The most significant prognostic factors in cervical cancer that affect the choice of treatment tactics are tumor size, depth of invasion, infiltration of parametric tissue, metastatic lesions of regional lymph nodes, and morphological parameters of the tumor.

MATERIALS AND METHODS:

The aim of this work is to study the quality of life of patients with cervical cancer by using organ-preserving surgical treatment.

In the gynecological department of the Republican Cancer Research Center of the Ministry of Health of the Republic of Uzbekistan, organ-preserving operations were performed on women of fertile age with cervical cancer in the initial stages. The patients' age is from 27 to 37 years.

The patients were examined clinically and instrumentally. Carefully collected anamnesis of patients, including genital and extragenital diseases and conditions. Objective gynecological examination, which makes it possible to determine the volume of the cervical tumor, the form of growth and relationship to the walls of the vagina, the state of the parametric tissue and loco-regional lymph nodes. Biopsies were taken from the affected area, and a morphological study of the material was carried out. All patients have

squamous cervical cancer. In 2 patients, squamous cell non-keratinizing cancer, in 5 patients, squamous cell keratinizing cancer. The history of the degree of tumor differentiation showed that 3 patients had highly differentiated cervical cancer, 4 patients had moderately differentiated cervical cancer.

Radical abdominal trachelectomy includes partial or complete removal of the cervix, upper third of the vagina, pelvic tissue around the cervix and vagina, vesicouterine, sacro-uterine and cardinal ligaments, common, internal and external iliac vessels.

The main difference between **RAT (Radical abdominal trachelectomy)** and **Radical extirpation of the uterus** with appendages is not only the preservation of the body of the uterus, ovaries and fallopian tubes, but also subsequently the reproductive function.

The success of the surgical intervention depends not only on knowledge of the topographic and anatomical features of the small pelvis, but also on the level of technical training of the surgeon and the choice of anesthesia.

RAT is performed under general combined anesthesia and begins with a midline laparotomy and placement of wound dilators to improve the view of the surgical field. Revision of the abdominal and pelvic organs makes it possible to analyze the condition of the abdominal and pelvic cavities. Of particular importance is the presence of adhesions after various auxiliary processes or interventions in these areas, which can be accompanied by functional or organic changes of a different nature.

A thorough revision and study of the topographic and anatomical structure of the uterus and appendages, the state of the vessels, surrounding organs and tissues, the retroperitoneal space and ureters are performed visually and palpably. If there is free fluid in the small pelvis or lateral canals, it is aspirated for urgent cytological examination.

To assess the condition of the ovaries, attention is paid to the structure, the presence of cysts or formations of a cystic-solid nature, if necessary, resected with urgent histological examination during the operation.

The state of the parietal and visceral peritoneum, the presence of deseminates or any changes are studied.

After completion of the revision in the Trendelenburg position, the intestinal loops are moved to the upper abdominal floor and isolated from the small pelvis.

The bottom of the uterus is stitched with a Z-shaped silk suture and fixed with a clamp for free movement of the uterus during the operation, if necessary. This procedure is performed to avoid trauma to the ovaries, fallopian tubes and vessels of the uterus feeding these organs.

The first stage of the operation is pelvic lymph node dissection, which makes it possible to adhere to the principles of radical surgery for cervical cancer in order to avoid loco-regional spread of the tumor process. The round ligaments are dissected alternately on both sides and access to the iliac region is opened. Lymphadenectomy of tissue is performed around the common, external and internal iliac vessels up to the obturator fossa, around the obturator nerve, the cervix and the upper third of the vagina. During lymph node dissection, special attention is paid to careful coagulation and ligation of the lymphatic vessels in order to reduce postoperative lymphorrhea. After lymphadenectomy, tamponade of the obturator zone is performed with gauze napkins moistened with 96% ethyl alcohol on both sides in stages.

After completion of lymph node dissection on both sides with the absence of these metastases in the lymph nodes, stage 2 of the operation begins. This stage includes complete or partial removal of the cervix, depending on the location and size of the primary lesion with the upper third of the vagina, pericervical and paravaginal tissue, cardinal, sacro-uterine and vesicouterine ligaments.

The main task at this stage of the operation is not only to preserve the body of the uterus, ovaries and fallopian tubes, but also to preserve the vessels that adequately nourish these organs.

In this regard, special attention is paid to careful and careful handling of the uterine and ovarian vessels.

After dissection of the peritoneum, vesicouterine folds, the posterior wall of the urinary bladder is separated from the anterior wall of the cervix in an acute and blunt way to the level of the beginning of the middle third of the vagina. Under close control of the ureters, the posterior peritoneum covering the posterior cervix is excised from both sides, carefully dissecting the lateral sheets of the broad ligament, without injuring the ureters taken on the turnstile. The uterine vessels are carefully isolated. At the level of the isthmus of the uterus, the ascending and descending branches of the uterine vessels are carefully separated, and the descending branches of the uterine vessels are crossed and ligated on both sides.

Acutely, the ureters are secreted along the length from the entrance to the small pelvis to the point of intersection with the uterine vessels. The cervix is retracted in the proximal direction, the uterine vessels laterally, the bladder down. Under strict visual control of the position of the ureters, the parametric tissue is crossed by the vesicouterine ligaments in the front and the rectal-uterine ligaments in the back, intersected, tied and fixed with clamps. In a blunt way, the posterior layer of the peritoneum is separated from the posterior wall of the vagina, thereby pushing back the anterior wall of the rectum at a safe distance. The cardinal ligaments are transected and ligated on both sides and fixed with clamps. Removal of the cervix is performed by applying clamps to the paravaginal tissue and the vaginal tube at the border of the upper and middle third of the vagina by excision of all sections.

The soft tissues held by the clamps are sewn and tied. The walls of the vagina are fixed with 6 ligatures on the clamps.

After the above manipulations, the uterus with the upper third of the excised vaginal wall is gently held on the hands, proceeding with the resection of the cervix.

The level of resection of the cervix in each case is determined individually strictly perpendicular to the axis of the uterus, depending on the parameters of the tumor. With a scalpel, the cervix is cut off from the body of the uterus, following strictly perpendicular to the axis of the uterus. To assess the adequacy of the removal of the cervix, an urgent histological examination of the incision line is performed. After that, the rest of the body of the uterus is gradually sutured with atraumatic needles and vicryl threads and fixed to the middle third of the vaginal tube. If necessary, in order to reduce the lumen of the vagina, after an adequate comparison with the body of the uterus, the walls of the vagina are sutured with lateral sutures. The blood supply to the remaining uterus and appendages is monitored. After the completion of the reconstructive stage and revision, it begins to restore the integrity of the round ligaments after removing the napkins from the obturator fossa. The integrity of the anterior and posterior layers of the peritoneum is restored, thereby anatomically separating the abdominal cavity from the small pelvis.

At the final stage of the operation, a Z-shaped suture is tied up and excised at the bottom of the uterus. The adequacy of the blood supply to the uterus and its appendages is re-assessed, the ilio-obturator zone remains non-peritoneal for the outflow of lymph and the prevention of lymphocyst formation. Douglas space is drained with silicone drains. The anterior abdominal wall is sutured in layers after revision and debridement.

RESULTS AND DISCUSSION:

Radical abdominal trachelectomy in women with cervical cancer of fertile age suggests an urgent histological examination of the incision line and removed lymph nodes. In the presence of tumor cells, the operation continues according to the standard method of treatment of extended extirpation of the uterus without appendages and transposition of the ovaries, the average duration of the operation is 140 ± 28.7 min, blood loss is 420 ± 50 ml. Epithelialization of the uterine stump continues from 5 to 8 weeks after surgery. The necessary procedure at this stage is ointment swabs of the granulation site and periodic gentle bougienage of the cervical canal. In the observed patients, the menstrual cycle is restored from 1 to 3 months, in 1 patient 5 months after the operation, amenorrhea occurred, which is possibly associated with insufficiency of the supply vessels. In 2 patients in the postoperative period, lymphatic cysts (lymphocoele) were formed, in the 1st patient after conservative therapy, in the 2nd patient after puncture and evacuation of the cyst contents, the pathological focus was eliminated.

Dynamic observation of patients showed that the subjective state is satisfactory, gynecological and general status, cytological examination of smears from the uterine stump and vaginal walls without pathological changes. According to the indications, ultrasound of the abdominal cavity and small pelvis, R examination of the lungs, determination of the level of sex hormones and CA 125, the level of phosphorus and calcium in the blood were performed.

No patient had a relapse or metastasis of cervical cancer (up to 42 months from the first operation). In the postoperative period, the patients planned to realize the reproductive function, but due to the insufficient period, it has not yet been implemented.

We have developed and performed a modified RAT technique, when total or partial resection of the affected part of the cervix is performed after complete mobilization of the cervix and excision of the upper and middle third of the vagina.

According to the results obtained to date, the oncological effectiveness of RAT is not inferior to the standard extended extirpation of the uterus. It increases not only the quality of life of the young organism, but also restores menstrual and reproductive function.

In conclusion, we presented the results obtained from our own experience with the use of RAT. Ahead of us is the assessment of not only the subjective, but also the objective state of the young patient, the study of reproductive behavior and quality of life, as well as long-term results of treatment.

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PEDAGOGICAL SCIENCES

STRESS RESISTANCE OF THE MODERN TEACHER OF PRIMARY EDUCATION IN THE CONDITIONS OF THE COVID-19 PANDEMIC

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Abstract. The article analyzes the main characteristics of the concepts of "stress", "stress resistance" and reveals the specifics of stress resistance of modern primary school teacher in the conditions of pandemic COVID-19. As a result, it is established that in order to increase the stress resistance of the modern primary school teacher in the conditions of the COVID-19 pandemic, it is desirable to follow the following advices: 1. Choose interesting tools for learning. 2. Do not give a lot of homework. 3. Choose topics skilfully for interesting teaching of material to children. 4. Offer interesting games and relaxation for children, even in quarantine, using interesting teaching techniques and technologies. 4. Offer interesting games and relaxation for children, even in quarantine, using interesting teaching techniques and technologies. 5. Pay attention to yourself, always have a rest, to prevent stress and emotional and professional burnout.

Keywords: stress, stress resistance, primary school teacher, conditions of pandemic COVID-19.

The teaching profession is very important and one of the most respected, honorable and responsible professions. After all, it is the teacher who creates the future of the country, because his work largely determines the diversity of personality development of the younger generation, his beliefs, worldview and moral qualities. Due to the current events, the conditions of the COVID-19 pandemic, the world and educational institutions have switched to remote mode, the teacher has added emotional and intellectual tension, due to the need to develop other lesson plans, how to convey knowledge, skills and abilities. how to remotely check them. The teacher is always and works in the intellectual sphere of activity, so he is most exposed to stress and stressful situations. Therefore, it is very important to maintain the emotional, physical and moral health of the teacher during the educational process.

The purpose of the article is to reveal the specifics of stress resistance of the modern primary school teacher in the conditions of the COVID-19 pandemic.

Issues of stress resistance of teachers in the psychological and pedagogical literature have been considered in the works of many scientists, such as O. Anisimov, N. Klyuyev, N. Lomonosov, R. Makarevich, E. Rogova, L. Sobchuk, V. Sonin and the problem of professional stress is devoted to many scientists. O. Baranov, S. Velichkovskaya, D. Volkov, L. Jewel, L. Karapetyan, V. Kaloshin, S. Cartwright, V. Kovalev, V. Krainyuk, A. Leonova, O. Lozgachova, R. Rozov, N. Samoukina, A. Stolyarenko, Y. Shcherbatykh and others.

Stress is a very common problem of the twenty-first century. Any problem or bad mood can turn into stress, and this has a very bad effect on the physical and moral health of not only the teacher, but also students, parents and the immediate environment in general.

The role of stress in the professional activity of a teacher is directly related to the structures of his inner world (beliefs, aspirations, values). It is interesting to define the concept of "stress resistance as the individual ability of the body to maintain normal performance during the stressor". The teacher, who has high stress resistance, perceives problem situations that arise in professional activities, not as stressful, threatening, but as those that need to be addressed - was studied by V. Malykhina [3, p. 70]. B. Vardanyan defines stress resistance as "a personality trait that provides a harmonious relationship between all components of mental activity in an emotional situation and which thus contributes to the successful performance of activities" [5, p. 224].

S. Subotin revealed the specifics of resistance to stress as one of the most important professionally significant qualities of a teacher that affects the formation of the student's personality. In his study, he proved that students who learn from stress-resistant teachers are more friendly, open, sociable, relaxed, well-versed in the curriculum, and students who are stress-resistant teachers are more closed, cold, emotionally unstable, submissive, dependent, tense, difficult to learn. educational material [1].

There are many factors in school that cause stress to a primary school teacher. The main ones are lack of discipline and disrespect for the teacher, disobedience, unstudied material, constant changes in the educational process, especially during a pandemic. Every teacher has experienced what a COVID-19 pandemic is, because distance learning is new to every teacher, student or parent. The teacher tries to come up with something creative, interactive and interesting, to develop a lesson in which students, even through the Internet, were able to learn and consolidate the educational material.

Teachers cannot physically work 24 hours a day, 7 days a week because they simply burn out, become exhausted and earn stress. Therefore, the key point of work during a pandemic is clear instructions on when and in what form students should submit work, when they will be tested and graded. Students and parents should have access to the platform chosen by the teacher, where they can upload their work. The most important thing is to understand the structure of the working day during distance learning: this should be a unified approach, depending on the age of the children [6].

We agree with V. Krainiuk, in order not to worsen the psychological and emotional state of the teacher, there are some tips on how to work in quarantine: 1. Choose interesting tools for learning. 2. Do not ask a lot of material for the house. 3. Successfully select topics for interesting teaching of material to children. 4. Offer interesting games and relaxation for children, even in quarantine, using interesting teaching techniques and technologies. 5. Pay attention to yourself, always have a rest, to prevent stress and emotional and professional burnout [2, p. 123].

It is worth noting that the health of a primary school teacher can be maintained and strengthened only by hard work on oneself, the habit of self-discipline and self-restraint. It is useful to build your own program for occupational health and protection from

occupational stress. That is why a modern teacher should seriously think about what moments in his work help to relieve tension.

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COMPLEMENT AND RESPONSES OF SPEECH ACTS IN COMMUNICATIVE LANGUAGE TEACHING AND ITS PRAGMATIC AWARENESS

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Abstract: This thesis focused on using compliments and responses of speech acts in students performing skills. It also highlights cultural, pragmatic and linguistic differences of the English Language Learners (ELLs) in the classroom. Language learners are needed to analyze and implement speech acts in any kind of circumstance. All linguistic, social, cultural differences of compliment and response of speech acts were analyzed taking some jobs interviews and majors into examples.

В данной работе основное внимание уделялось использованию "комплиментов и ответов" речевых актов в исполнительских навыках учащихся. Он также подчеркивает культурные, прагматические и лингвистические различия учащихся, изучающих английский язык (ELL) в классе. Изучающие языки необходимы для анализа и реализации речевых действий в любых обстоятельствах. Поскольку налаживание эффективного общения во время изучения языка является критически важным, речевые акты играют важную роль в методе коммуникативного обучения языку (CLT). Все языковые, социальные и культурные различия комплиментов и реакции речевых актов были проанализированы на примерах некоторых собеседований при приеме на работу и различных специальностей.

Key words: compliment, responses, speech acts, accept, mitigate, no response, reject, CLT, ELL

Language learning is life-long process with its complexities and features. Communication is the performance of language skills. However, speakers can reach success in communication if only they can use affective and appropriate phrases, language tools, speech acts and other features of the language. Speech act is one of the most crucial tools in communication strategies. We use different types of speech act such as apologies, complaints, compliments and responses, greeting, invitation, refusals, requests and thanks in our speech. It is important for teachers to pay attention to every single speech act during teaching period. Compliments and responses phrases help people to make successful social connection. It has different strategies and function to implement sufficiently. As to Herbert (1990); Manes (1983), complements and responses are used to establish, confirm, and maintain solidarity. Another main purpose of complements is to indicate admiration or positive opinion to ones' effort, impression and so on. Moreover, Manes and Wolfson (1981) and Wolfson (1989) claims that compliments and responses assist as an alternative to greetings, gratitude apologies and congratulations.

According to Manes and Wolfson (1981) compliments are commonly (97%) used in one grammar structure. Moreover, most of US media use this structure to perform compliments.

For example:

Your cap is/looks (really) beautiful. (NP is /looks (really) ADJ) N=Noun phrase;
ADJ=adjective

I like /love your hair style. (NP like/love ADJ)

This is a nice car. (PRO is a ADJ NP) PRO=Pronoun

You drew a beautiful picture. (You V a ADJ NP) V=Verb

You solved the problem well. (You V (NP) ADV) ADV= Adverb

You have such a nice car. (You have (a) ADJ NP)

What a lovely baby you have! (What (a) ADJ NP)

Nice hobby! (ADJ NP)

Is not your watch smart! (Is not NP ADJ!)

It is natural to use adjectives such as nice, good, beautiful, great, and pretty and others in making compliments. There are different expressions which commonly used by sub-group of the society or youth. (For example: "sweet," "cool," " awesome ", "ill" and so on.)

Americans do not always accept compliments as it has other preferred strategies. However, it is natural for Uzbek culture to use accept compliments. Moreover, according to Uzbek culture, compliments are commonly used to the young than elderly people. Compliment is counted as social, traditional and even political act. Sometimes it is used as a purpose of giving motivation for ones' action. Most adults use compliments to begin conversation in Uzbek culture regardless American speakers.

Accept: Thank you; Thanks; Yeah, It is my favorite too;

- Mitigate: I bought it for the trip to Florida; my brother gave it to me; It really knitted itself; do you really like them? ; It is really quite old.

- Reject: A: You look good and healthy, B: I feel bad.

- No response:

- Request Interpretation: You want to borrow this one too?

Implementing compliments and responses have gender differences. According to (Herbert, 1990) Female speakers tend to have a personal focus and use first and second person pronouns. "I love your purse!" "You look great". As to (Herbert, 1990) and (Holmes 1988) compliments given by male speakers are often impersonal. "Nice game!" "Good job!" Holmes (1988) claims that women give and receive significantly more compliments to each other than they do men or men do to each other. Moreover, Herbert (1990) states that male compliments are more likely to be accepted than female compliments.

As effective communication has a lot of features to acquire the language, one has to pay attention cultural and pragmatic awareness. Complaining, apologizing, requesting, complementing and responding and other speech acts play an important role in people's life. Teachers have to implement all these pragmatic and cultural issues to English Language Learners (ELLs) during the teaching period. As Ishihara and Andrew D. Cohen (2005) stated that speech acts have a basic meaning as conceived by the speaker and intended or illocutionary meaning. Pragmatic knowledge demand effective teaching methods such as Communicative language teaching (CLT). So it is more effective to use appropriate speech acts in CLT and indicative teaching methods because of pragmatic awareness and learners' need.

We wanted to finish our small research work with a quote of Mark Twain: "I can live for two months on a good compliment". And let me tell you my thanks for reading this work. You are incredible!

PHILOLOGICAL SCIENCES

FORMATION AND FUNCTIONING OF MORPHOLOGICAL NEOLOGISMS IN BUSINESS DISCOURSE

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Constant vocabulary replenishment is the essential condition for language development. Being the best representation of language dynamics, it is directly influenced by extralinguistic reality and changes affecting it. Modern linguistic science considers the process of word formation as the form of language functioning necessary for vocabulary organization as well as the specific means of reality representation. Garnering much attention is the role of neologisms as language development indicator, which reflects its adjustment to changes caused by extralinguistic factors, and its functioning as well. The occurrence and functioning of new words is a subject of systematic research. A great deal of currently available information has been researched and published by L. Bondar, N. Drabov, E. Kusch, N. Moisieieva, Y. Zatsnyi, A. Yankov who contributed greatly to linguistic science.

Neology, which has long been classified as a branch of linguistic science, still has difficulty adopting one clear definition of the polysemic term “neologism”. Different points of view are to be taken into account which resulted in the ambiguity of this term [5, p. 59]. There are two approaches to its interpretation suggested by H. Kozmyk. According to the first one, the notion “neologism” embraces new words coined following all word formation rules and patterns present in a specific language, which denotes new, unknown or earlier nonexistent notions, objects or reality. On the other hand, new meanings for the existing words or synonyms to common notions are also referred to as neologisms [5, p. 14]. The same problem is faced while attempting to classify new words. It is different approaches and criteria for differentiation of neologisms that keep scientists from adopting universal classification of new words. Having studied previous experience in published articles, we may conclude that neologisms fall into several categories:

- according to word formation method there are lexical, semantic neologisms and new collocations [3, p. 6];
- according to origin there are new coinages and nonce words [8, p. 5];
- according to purpose, there are nominative and stylistic neologisms [10, p. 276].

The paper deals with neologisms in the sphere of business. The aim is to identify neologisms in business vocabulary.

In the given article we are going to look into the neologisms in the sphere of business, which emerged in the 1990s and later. We have chosen the most commonly used lexical units in business terminology, dictionaries, articles on business being used as a source. The major ways of word formation in English are as follows:

- a) shortening;
- b) blending;
- c) affixation.

One of the most productive way of word formation is **shortening**. Shortening is the process of substracting phonemes and / or morhemes from words and word-groups without changing their lexico-grammatical meaning. Word shortening in the English language can be done in many ways. Abbreviation is quite productive way of word formation in Business Industry.

Abbreviation is a process of shortening the result of which is a word made up of the initial letters or syllables of the components of a word-group or a compound word.

Acronymic abbreviation (acronym) is a shortening which is read as a succession of the sounds denoted by the constituent letters, i.e. as if they were an ordinary word. Shortenings can be found in such terms as [5]:

- **BAM** (*bricks-and-mortar*) *n.* A company with a physical location.

Examples:

*“The days of the pure-play company are not over, but they’re the exception to the rule,” contended Matt Miller, chief operations officer of Internet Venture Works. He believes that the way to find gold in the Internet hills is to leverage more value from prosperous **BAM** companies with loyal existing customer bases. By helping these companies to establish a strong Internet presence, Internet Venture Works hopes to build value for its investors.*

—Linda A. Dickerson, “Internet can broaden bricks-and-mortar markets,” Pittsburgh Post-Gazette, August 27, 2000.

- **MTBU** (*maximum time to belly-up*) *n.* The maximum number of days, weeks, or months that a company is expected to survive.

Examples

*Investors keep track of how much money their portfolio companies have on hand, and how long they can survive without an additional infusion. This is the **MTBU** — ‘maximum time to belly-up.’*

—Scott Kirsner, “Downturn Dictionary,” *The Boston Globe*, November 12, 2001

- **TMT** *n.* The business sector that includes technology, media, and telecommunications companies.

Examples:

*At the moment the office market is enjoying a boom because the demand by **TMT** companies is surging and those in the Old Economy have yet to give up space in a big way.*

—Lee Han Shih, “Office property boom may not last,” *Business Times*, August 15, 2000.

The process of simultaneous combining and shortening is called **blending**.

There is a great number of examples of such words:

- **advergame** (advertising + computer game) *n.* A web-based computer game that incorporates advertising messages and images.

Examples:

*Octopi officials say **advergames** promote repeat traffic to Web sites and reinforce brands in compelling ways. Because users choose to register to be eligible for prizes, the games help marketers collect customer data. And because gamers may invite their friends to participate, the brand benefits from word of mouth, or what these days is called viral marketing.*

—Alan Goldstein, “Web firm’s ads play to gamers,” *The Dallas Morning News*, August 8, 2001;

Examples:

*British writer Fay Weldon opened up a whole new financial can of worms with her novel “The Bulgari Connection,” sponsored by the Italian jewelry company Bulgari in return for a few mentions in the plot. Some critics wailed about the new field of “**fictomercial**,” but most accepted the book for what it is: a harmless little experiment by a talented novelist.*

—“Whew! What a year,” The Atlanta Journal and Constitution, December 15, 2001;

- *Prankvertising* (prank + advertising) n. Using hoaxes or mischievous acts as part of a marketing campaign.

Examples:

*A cabbie takes two supposedly unsuspecting riders on a stunt-filled journey of terror. ...In reality, of course, this is nothing more than **prankvertising**.*

—“Oh goodie, another hilarious example of prankvertising,” Campaign, January 6, 2017;

- *diworsify* (diversify + worse) v. To make something worse by diversifying.

Examples:

*Foreign content: For 10 years, a way to “**diworsify**” your booming Canada-focused portfolio; now, a refuge while Canada gets its stock market comeuppance.*

—Rob Carrick, “The complete cynic’s guide to investing,” The Globe and Mail, August 15, 2012

One more productive way of word formation is **compounding**. Compound words are formed when two or more lexemes combine into a single new word. Compound words may be written as one word or as two words joined with a hyphen. For example [6]:

- *flash crash* n. An extremely rapid decline in the stock market.

Examples:

*Malfunctioning algorithms, “**flash crashes**”, and complex debt-laden companies have been highlighted by the corporate regulator in its review of the Australian Securities Exchange’s supervisory capabilities.*

—Stuart Washington, “Regulator runs rule over ASX capabilities,” The Age, December 1, 2010;

- *vice investing* n. An investment strategy that targets companies selling products related to human vices, such as alcohol, tobacco, gambling, and weapons.

Examples:

*Not only is **vice investing** more fun, she argues, it’s financially sound: The sin stocks have little correlation to the overall market, and the more the economy tanks, the more people need their alcohol, tobacco and pornography.*

—Carolyn Leitch, “Tired of ethical investing? Profit from vice instead,” The Globe and Mail, March 20, 2004;

- *Capacity management n.* A process that seeks to ensure that their organisations operate at optimum capacity whilst maintaining customer satisfaction levels.

One more productive way of word formation is affixation. **Affixation** is the morphological process in by which bound morphemes are attached to a roots or stems to mark changes in meaning, part of speech, or grammatical relationships. Affixes take on several forms and serve different functions. Here are some examples [7]:

- *eco-efficiency n.* The ability to manufacture goods efficiently and with as little effect on the environment as possible.

Examples

McDonough and Alston contend it is not enough for the corporate world to embrace 'eco-efficiency' — a business buzzword coined in the early 1990s.

—William Grady, “Environmental care encouraged,” The Chicago Tribune, November 4, 2001

- *cybergrip v.* Gripping about a company and its products online, particularly by using a website created specifically for that purpose.

Examples:

*Addresses ending in 'sucks.com' have become popular for so-called **cybergripping** sites, where dissatisfied consumers can complain about businesses and their products and services. Especially popular griping sites in the United States include VerizonReallySucks.com and Walmartsucks.com.*

—AP, “Web sites you might never see,” The National Law Journal, September 4, 2000.

- *techno-strike n.* A labour action in which union members and supporters inundate a company with email messages, faxes, and website hits in an effort to shut down the electronic portion of the company’s business.

Examples:

Last Friday, members of the Communication Workers Union and its international sister organisations attempted to flood the company’s e- mail addresses, faxes and web sites in order to disrupt business.

*The CWU calls the action a “**techno-strike**”, aimed at Critchley’s sites in south Wales as well as Nottingham, Cirencester and Gloucester and 12 overseas factories.*

—Sandrine Bradley & Jim Larkin, “Suffocation by cyberspace,” Printing World, February 8, 1999.

To sum up, neologisms represent active changes in society and dynamic trends in language. They are the driving force that triggers language development. Most of the investigated morphological lexical units were formed by means of abbreviation, blending, compounding and affixation. There are also a lot of examples of semantic neologisms in Business industry which need deep analyses.

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TECHNOLOGICAL SCIENCES

NEURAL NETWORK FOR IMAGE RECOGNITION

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The article is devoted to the description of the algorithm for solving the problem of image recognition, based on a three-layer neural network. The author provides a theoretical background and a brief description of the method.

Key words: neural network, image recognition method, Hebb's algorithm, artificial neural network.

Over the past decade, neural networks have been successfully used in various fields of human activity to solve problems of forecasting, analysis and control, which explains the growing interest of developers in methods for developing neural networks. The possibility of nonlinear modeling and the relative ease of implementation are characteristics of neural network methods that often make them indispensable for solving complex multidimensional problems.

Neural networks are inherently non-linear and are purely a modeling technique that can successfully replicate even extremely complex dependencies. For many years, it was decided to use linear modeling as the main method in most areas of human activity, due to the fact that optimization procedures are well developed for it. And in those cases where the linear approximation is unsatisfactory and the linear models work poorly, and there are a lot of such problems, the neural network method becomes the main solution of such problems. In addition, neural networks cope with dimensional problems that do not allow modeling linear dependencies in the case of a large number of variables.

The principle of neural networks is learning by example. The user of the neural network selects a certain data sample (dataset), and then runs some learning algorithm that automatically perceives the data structure and remembers the information, and subsequently, can successfully recognize the data in the future. Undoubtedly, this requires a certain set of heuristic knowledge from the user about how to prepare and select data, choose a suitable network architecture and interpret the results, but the level of knowledge required for successful application in the activity of neural networks is much poorer than, for example, using traditional methods of obtaining statistics [1].

The definition of an artificial neuron is as follows:

1. A neuron receives input signals (initial data and output signals of other neurons in the network) through several input channel signals.

2. Each input signal goes through a connection that has a certain weight. This weight

corresponds to synaptic activity, as well as a "living" neuron. A certain (threshold) value is associated with each neuron and the result is the magnitude of neuron activation (or the postsynaptic potential of a neuron - PSP)

3. The activation signal is converted using the transfer function and the result is the output of the neuron.

So, to solve a problem using an artificial neural network (ANN), one should: design a network structure adequate to the task at hand. There are two main stages in the structure of a neural network:

- choice of neural network (NN) architecture;
- NS training.

When choosing the type of neural network, you must select the following parameters:

- number of inputs, transfer functions;
- connections among themselves;
- network inputs and outputs.

The choice of the structure of the neural network occurs in accordance with the characteristics and complexity of the formulated task. You also need to remember that:

- with an increase in the number of network layers and neurons in them, the capabilities of networks increase;
- the complexity of the algorithms for the functioning of the network also contribute to the enhancement of the power of neural networks.

After analyzing these tasks, we will choose a neural network for image recognition applicable to the conditions of the task. Figure 1 shows the image on the basis of which the choice of the neural network will be described. First, overlay the photo with a coordinate system with the origin in the lower corner. Then we will overlay a grid consisting of 6 fragments. The dimension of the image is 800x600, which means that the dimension of each individual fragment is 400x200.

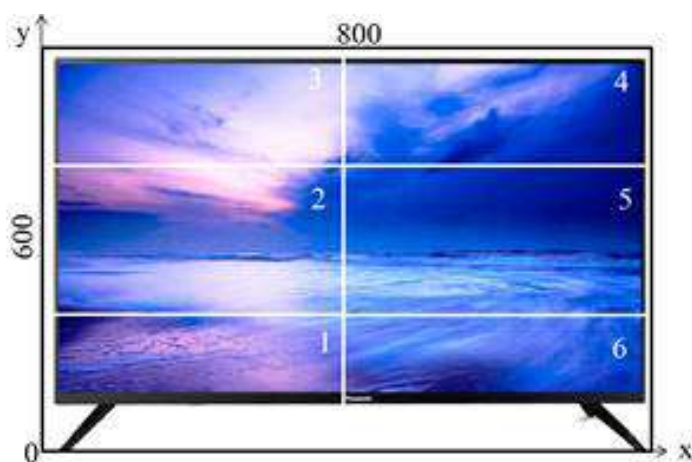


Figure 1 - Original image

To recognize this image, the most optimal will be the use of a multilayer network, the diagram is shown in Figure 2.

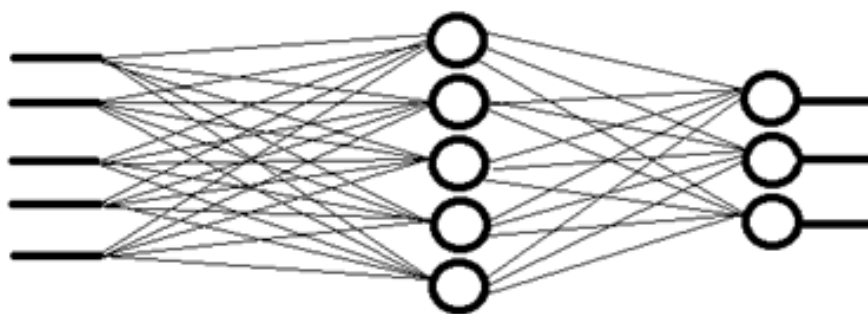


Figure 2 - Scheme of a neural network

The neurons are combined into layers to form multilayer networks. Each layer contains a certain number of neurons with the same input signals. Depending on the functions that the neurons must perform in the network, there are 3 main types of neurons [2]:

- input (in this case, fragments 1 - 6);
- intermediate;
- finished result.

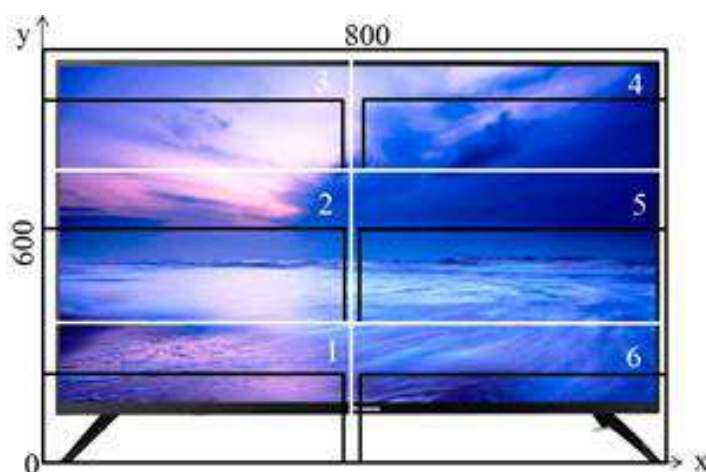


Figure 3 - Training

Let's define the boundaries for each fragment separately (table 1).

Table 1 - border areas of the fragment

Fragment number	Borders with:
1	2 and 6
2	1,3 and 5
3	2 and 4
4	3 and 5
5	2,4 and 6
6	1 and 5

We get the following view of the neural network (Figure 4).

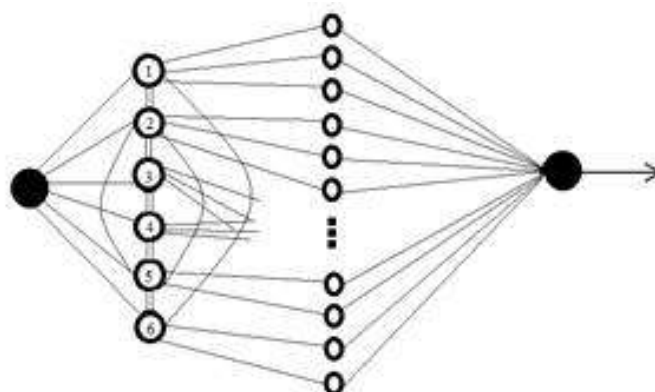


Figure 4 - Neural network

To solve this problem, it was decided to use:

- NS model - multilayer perceptron;
- number of entrances - 6;
- the number of hidden layers is 128;
- number of outputs - 1;
- verification of the received data is provided.

To train this neural network, it was decided to use the Hebb algorithm. This method consists in changing the weights according to this rule:

$$W_{ij} = W_{ij} + \eta O_j^{n-1} O_i^n$$

где O_j^{n-1} – the output value of the j-th neuron of the layer (n-1);

O_i^n – output value of the i-th neuron of layer n;

W_{ij} – weight coefficient;

η – is the learning rate coefficient.

It should be borne in mind that by layer n we mean an arbitrary NS layer.

The algorithm of this neural network looks like this:

1. All weights are assigned random values;

2. A processed image is fed to the network inputs (Figure 4) (Figure 3) and for each neuron the weighted sum of its inputs is calculated, which is processed through the activation function and we obtain the output value.

3. According to formula 1, the weight coefficients are changed

4. The algorithm is looped from step 2 until the accuracy is obtained [3].

As a result of the work performed, an analysis of all fragments of the processed initial image presented in Figure 3 will be obtained. The operation of the neural network was described and an example of image processing was given.

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PECULIARITIES OF ACCOUNTING IN THE FORMATION OF THE STRUCTURE OF ANALYTICAL BANK ACCOUNT ACCORDING TO THE IBAN STANDARD

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Keywords: bank, bank account, non-cash settlements, deposit accounts, international bank account number, current accounts, settlement documents.

Cashless payments - the transfer of a certain amount of funds from the accounts of payers to the accounts of recipients of funds, as well as the transfer by banks on behalf of enterprises and individuals of funds deposited in cash at the bank, to the accounts of recipients. These calculations are performed by the bank on the basis of settlement documents on paper or in electronic form [1].

In order to optimize non-cash payments, the introduction of an international bank account number (IBAN) in Ukraine was introduced.

IBAN (International Bank Account Number) - international bank account number in accordance with the standard № 13616 of the International Organization for Standardization ISO of the European Committee for Banking Standards ECBS.

Participants in non-cash payments open accounts in the manner prescribed by regulations of the National Bank on the opening and closing of accounts, as well as accounts for accounting of funds in payments for specific transactions.

From January 13, 2020, domestic banks make payments exclusively according to the international standard. Accordingly, customer accounts (including those "linked" to payment cards) have been reformatted to the standards of IBAN (International Bank Account Number) - an international bank account number.

The IBAN account number consists of 29 characters. They are conventionally divided into two groups. The first 10 characters are the country code, check number, and bank code. The first two letters - UA - code of Ukraine. Two characters after the code - control, they are designed to verify the authenticity of the account and protect information from errors when entering data. The next six digits are the MFI code of the bank.

The second group of characters (19 characters) is the bank customer's account number. The first five zeros usually complement the IBAN to 29 characters, and 14 digits is the card account number.

Bank account number (IBAN) is formed in accordance with the National Standard of Ukraine "Financial transactions. Rules for the formation of an international bank account number (IBAN) in Ukraine":

UA + nn + nnnnnn + ccccccccccccccccc, where the first two letters identify the country participating in the calculations (UA - Ukraine). With the help of the control category you can check the correctness of the entered details. What makes it impossible to accidentally credit funds to someone else's account in case of errors in registration of transactions UA - (2 letters) - country code Ukraine DSTU ISO 3166-1;

nn - (2 digits) - control digit, which is calculated according to the algorithm for calculating the control digit;

nnnnnn - (6 digits) - code of the bank in which the client's account is opened;

ssssssssssssssssss - (19 digits) - customer account.

If the account number has less than 19 digits, the corresponding number of zeros is

added to it, which is put in front of the account number.

During the formation of the bank account number according to the IBAN standard, the structure of the account number of analytical accounting, the requirements for numbering to the Instruction on the application of the Chart of Accounts of banks of Ukraine [2] are used.

IBAN applies to current, deposit (deposit) accounts of individuals and legal entities, escrow accounts, correspondent bank accounts and intrabank accounts. Budget accounts opened by the Treasury of Ukraine also have an IBAN account number [3].

IBAN was designed to standardize interbank payments throughout the European Union. Currently, this standard is used in more than 60 countries, to which Ukraine has joined.

Thus, thanks to the introduction of IBAN it is easier to identify the payer and recipient of funds, as well as the bank of Ukraine that serves them.

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JUSTIFICATION OF THE APPROACH TO INCREASING THE ACCURACY OF IDENTIFICATION OF THE CIRCULATING LOAD IN A CLOSED CIRCLE OF ORE GRINDING

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Theoretical studies of determining the circulating load in closed cycles of ore grinding have been carried out. It is possible to identify this parameter behind the sands in between the coiled space of the spiral. As a result of the research, the functional relationships of the characteristics of the sands with their height have been established and make it possible to accurately identify the value of the circulating load in the closed cycles of grinding ore at concentration plants. The accuracy of the parameter determination with a significant margin meets the requirements of the technological process.

Key words: single-spiral classifier, circulating load, sand product, identification

Ukraine occupies leading positions in the world production of iron ore raw materials for the metallurgical industry. The low content of the useful component in the ores requires their beneficiation, where grinding accounts for up to 50% of all energy costs and a significant amount of grinding bodies and lining. This increases the cost of the finished product - concentrate and makes domestic products from it not competitive in the world market. The way out of this situation is usually found by automating a closed cycle of grinding the source ore, which includes a ball mill and a mechanical single-spiral classifier. However, the obstacle in this way is the low accuracy of identification of the circulating load, which cannot ensure the proper functioning of automated ore preparation systems in the first stage of grinding. In view of this, the topic of this article is relevant.

Scientists have been engaged in automation of ore preparation both in Ukraine and in the near and far abroad for a long time. A number of devices and methods for identifying the circulating load have been proposed. The most widespread are the means for identifying the circulating load by the current or active power consumed by the spiral drive motor, and devices that measure the mass or volumetric flow rate of the pulp in the sand trough of the classifier. The devices of the first group have low accuracy due to the negative impact of the state of the classifier bed, changes in the volume of the pulp in it, the state of the spiral, its operation and other factors. Of the means of the second group, the volumetric flow meters of the scanning type have the highest accuracy, but it is also insufficient with high requirements for the accuracy of circulating load identification in specific automated systems. Therefore, the task becomes to improve the accuracy of identification of the circulating load in closed cycles of ore grinding.

The analysis shows that the decrease in the accuracy of identification of the circulating load in the known approaches is due to the dynamics of processes - the interaction of the spiral and sands, the interaction of scanning devices with pulsating pulp. It is

possible to change the situation by moving to technological points where there is no dynamics. Such a point can be the space between the two turns of the spiral where the sands are formed. There are more or less of them, there are no pulsations and it is possible to accurately fix the parameters. However, no one conducted such studies.

The purpose of this work is to substantiate the approach of increasing the accuracy of identification of circulating load in a closed cycle of ore grinding.

Substantiation of the approach to increase the accuracy of circulating load identification is performed on the most common single-spiral classifier 1-KSN-30, which is set at an angle of $18^{\circ}30'$ to the horizon. Its spiral with a diameter of 3 m is made two-way with a step of 1.8 m, usually rotates at a speed of 3 rpm (0.05 rpm) and is equipped with working elements with a height of 0.33 m.

Sands in the inter-turn space of the spiral can be fed in two parts - lower and upper. The lower part is a segment of the cylinder, and the upper - a geometric shape in the form of a truncated pyramid located above the cylinder. The analysis showed that it is not possible to determine the volume of sands analytically due to the low accuracy of the dependences proposed in mathematics for these figures. Therefore, their volume was determined by graph analytical approach, giving sands by the sum of parallelograms, dividing the space between turns by horizontal and vertical planes in accordance with the constant step Δl and Δh , starting from the highest height of sands h_C , which for the accepted classifier is $h_C = 0,28557$ m. The analysis showed that the sufficient accuracy of determining the volume of sand will be at $\Delta h = 0.0318$ m, i.e. when h_C will be given by 9 horizontal layers. The maximum value of the height of the material is a constant for the classifier and is equal to

$$h_C = \frac{B_C}{2} \sin \alpha, \quad (1)$$

where B_C – step spiral classifier; α – angle to the horizontal classifier.

The shape of the sands between the turns is complex and is determined by projections onto the horizontal plane of specific sections passing through heights (1...9) Δh . The projections of any geometric figure have elementary components that are located symmetrically relative to the vertical plane perpendicular to the axis of rotation of the spiral and runs along the vertical line h_C . The current values of the sand height h_{CH} will be located on the same line, depending on the value of the circulating load. In the vertical direction, the elementary components of each horizontal layer of material create columns of width Δl , containing a different number of elements, which is determined both by the level h_{CH} of the sands between the spiral turns and by the position of a particular column along the sands between the spiral turns.

According to the found volumes of material in successively located columns of the lower part of the sands, a dependence is plotted in Fig.1, where the height of the columns corresponds to the sand content. It can be seen from it that the volume of material in the initial part of the sands is rather small, then it gradually grows, reaching a maximum in the central part, and then gradually decreases to the same value as in the initial phase. The resulting dependence can be approximated by the expression

$$V_H = 8940 \exp \left[-\frac{(l - l_{cp})^2}{909} \right], \text{ cm}^3, \quad (2)$$

where l – sands length between the spiral windings along the axis, ranges from 10 to 120 cm; l_{cp} – average length equal to 60 cm; 8940 – constant expressed in cm^3 ; 909 – constant, expressed in cm^3 .

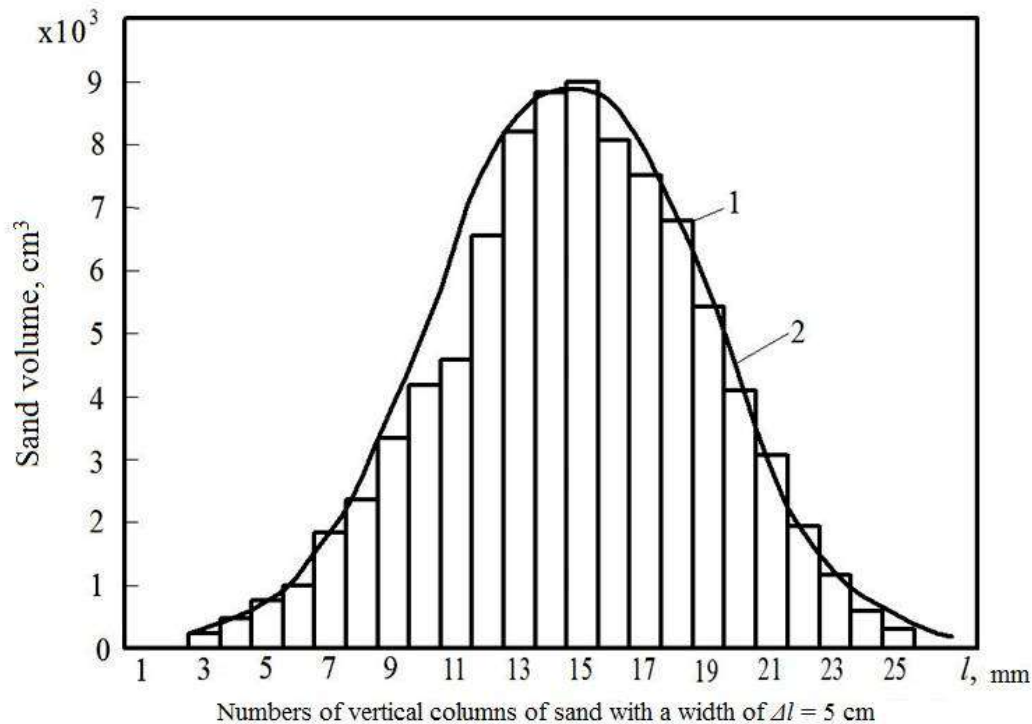


Fig.1 – The value of the volume of the material in vertical columns and the analytical dependence, characterizing the regularity of the location of the sands along the lower part between the turns of the classifier spiral: 1 - actually set amount; 2 - analytical dependence

The graph corresponding to dependence (2) is plotted in Fig. 1 (curve 2). It can be seen from it that expression (2) quite accurately reproduces the regularity of the location of the material along the lower part of the sands of the classifier. The correlation coefficient of the connection was $r=0.9911$, and the coefficient of determination was $R^2=0.9823$.

The top of the sands can include as little as two balls. The dependence obtained in the process of mathematical modeling is also fairly well approximated by the Gaussian function (Fig.2). For the upper part of the sands in the turn-to-turn space of the classifier spiral, an approximating expression is obtained

$$V_B = 4784 \exp\left[-(l - l_{cp})^2 / 47.31\right], \text{ cm}^3, \quad (3)$$

where l – length along the axis of sand, varies from 10 to 140 cm; l_{cp} – average length equal to 70 cm; 4784 – a constant, which is expressed in cm^3 ; 47.31 – constant, which is expressed in cm^3 .

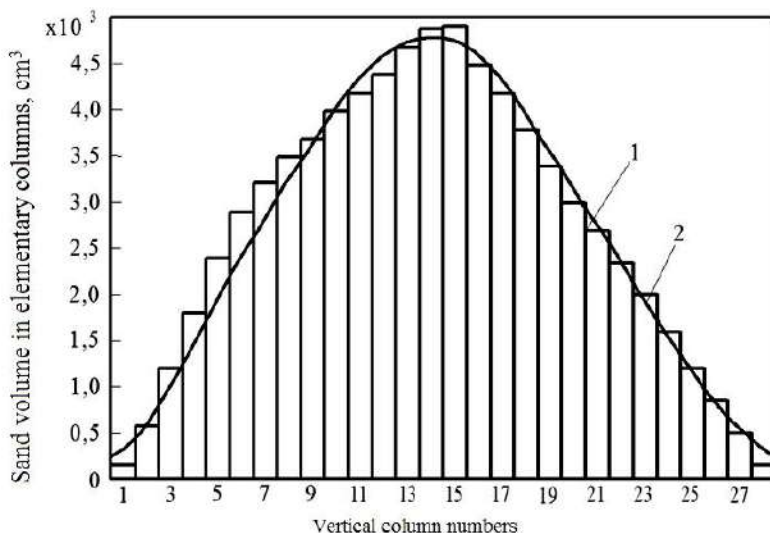


Fig. 2 – The volume of material in the elementary columns of the upper part of the sands and the analytical dependence characterizing the regularity of their location along the space between the turns of the classifier spiral: 1 - actually set amount; 2 - analytical dependence

The graph corresponding to dependence (3) is plotted in Fig.2 (curve 2). From Fig. 2 it can be seen that expression (2) quite accurately describes the regularity of the location of the material along the upper part of the sands of the classifier. The correlation coefficient of the connection was $r=0.9866$, and the coefficient of determination was $R^2=0.9734$.

From Fig.1 and Fig.2 it follows that there is a close correlation between the actually determined volumes of material and analytical dependences. This allows analytical dependences to be used in the study of the formation of sands in the interturn space of the spiral. The given dependences were obtained for the highest values of the height of the lower and upper parts of the sands. They can be similarly determined for all intermediate values $1\Delta h$, $2\Delta h$, $3\Delta h$..., $8\Delta h$ of the lower part and $10\Delta h$ of the upper part of the sands. According to the following dependencies, it is possible to construct transient processes of sand ascent through the sand threshold of a single-spiral classifier. They will be close to harmonic oscillations, but are represented by the first and second oscillations with slightly different periods and amplitudes. Transients are characterized by the average value of the flow of sands at different levels, the amplitude of the first oscillation, the amplitude of the second oscillation and the amplitude ratio.

According to the results of the obtained transients of sand ascent in the classifier, the connection of their parameters with the current level of h_{CII} of the material was investigated in more detail. In the transients, the amplitudes A_{1min} of the first oscillation, A_{2max} of the second oscillation, and the mean value of the sand flow rate were determined as the arithmetic mean for both oscillations at different values of $h_{CII}=n\Delta h$.

The dependences of the average value of the consumption of sands Q_{VP} , A_{1min} , A_{2max} i A_{2max}/A_{1min} on their current height h_{CII} are given in Fig.3. From Fig.3, it can be seen that there are functional connections between the characteristics of the material and the current height of the sands in the inter-turn space. The average value of the consumption of sand (volume) in the cycle of ascent of the material (Fig. 3, a) increases nonlinearly with increasing height. In the range from $8\Delta h$ to $11\Delta h$ this dependence is linear. The amplitude of the first extremum A_{1min} of the first oscillation (Fig. 3, b) linearly depends on the height of the sands $n\Delta h$, increasing with its increase over the entire range. The amplitude A_{2max} of the second oscillation (Fig. 3, c) changes functionally, but more complex, but almost without deviating from the line in the process of growth with increasing height of the sands. The ratio of the extremums of the second oscillation to the first characterizes the uneven ascent of the material. From Fig.3,d it is seen that it changes functionally with a minimum in the middle of the range of changes in the height of the sands. That is, the most uniform material descends within $7\Delta h$... $9\Delta h$. Irregularity in the range $5\Delta h$... $7\Delta h$ is determined by a shortage, and in the range $9\Delta h$... $11\Delta h$ – by an excess of material. That is, the best flow uniformity will be at average values of the circulating loads. At the smallest and largest circulating loads, the conditions for the movement of the pulp in the sand trough will be greatly complicated, which makes it practically impossible to measure the parameter. The sand material, which is stationary, allows measurements to be made accurately regardless of the value of the circulating load.

Thus, the established functional relationships of the characteristics of the sands in the inter-turn space of the spiral of the classifier with their height allow to accurately identify the value of the circulating load in closed cycles of ore grinding in concentrators. Fixed material with a sufficiently good fluidity in the inter-turn space of the spiral of the classifier creates a horizontal plane, which during transportation does not change its position. The height (level) of the sands at a certain value of the circulating load retains its position, which emphasizes the ideal conditions

Therefore, to assess the circulating load in a closed cycle of ore grinding in the first stage, it is necessary to measure the height (level) of sand in the inter-turn space. The height of the h_{CII} sands can be defined as the difference between the base distance L_{δ} from the beginning of the level measurement to the installation point of the device and the measured distance l_B from this point to the horizontal surface of the material, i.e.

$$h_{CII} = L_{\delta} - l_B. \quad (4)$$

The measurement conditions provide for a relatively short distance l_B , approximately 0.6m. The ULM-11-NE radar (radio wave) level gauge has the best characteristics. Its maximum absolute measurement error is $\pm 1\text{mm}$, operating temperature is from -60 to $+50^\circ\text{C}$. Its readings are independent of the composition of the atmosphere above the measured product. When using a radar level gauge, the relative error in measuring the height of sands is $\delta_h = 0.37\%$, and their volume is 1.11% .

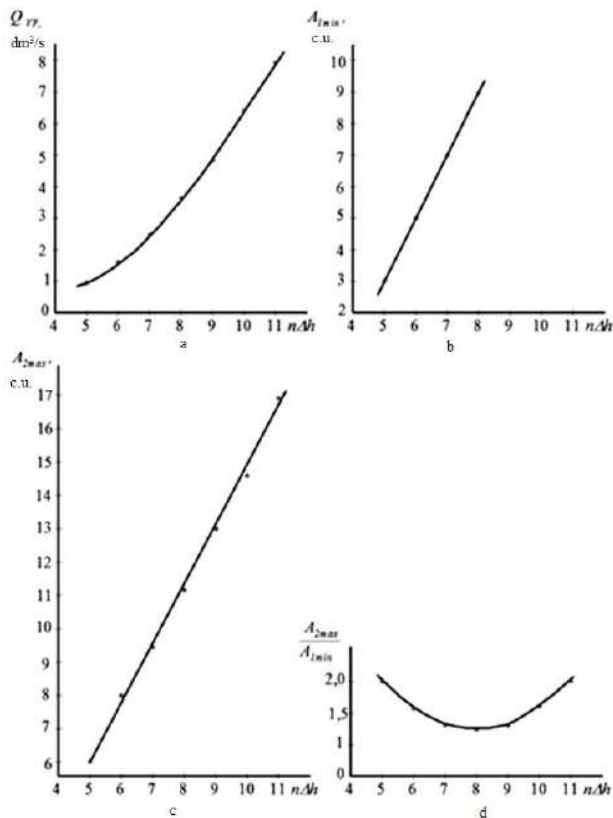


Fig. 3 – Dependence of the parameters of the transient processes of ascent of the sands of a single-spiral classifier on their height in the inter-turn space: a – the average flow rate in the convergence cycle; b – amplitudes A_{1min} of the first vibration; c – amplitudes A_{2max} of the second vibration; d – ratio of amplitudes A_{2max}/A_{1min}

Therefore, using the sand product in the inter-turn space of the classifier spiral and measuring its level can significantly increase the accuracy of identifying the circulating load in a closed ore grinding cycle. Such accuracy will meet the requirements of the technological process with a significant margin.

INCREASING WORK EFFICIENCY BY IMPROVING THE WORKING CAMERA AND CONTRUCTION OF SAW AND ROLLER MECHANISM

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The brief information about the article: Increasing the fibre yield by improving the machines for sorting raw cotton, which are currently working on the technology of primary processing of cotton. The working chamber of saw and roller machine.

Key words: Saw and roller raw cotton sorting machines, fibre, the working process of cotton cleaning factories, geometry of the saw tooth, the process of ginning.

Main body: In our period, improving fibre yield, improving quality, efficiency , productivity and ensuring timely seed germination of cotton by developing the seed sorting machines, which are currently working on the technology of primary processing of raw cotton is one of the urgent issues. The efficiency of the ginneries and the quality of the product depends on the smoothly operation of the machines installed in the technological process. This, in turn, is due to the effective working of gin machine, which separates the fiber from the seed, located in the technological process. After drying and cleaning the cotton from various contaminants in the cleaning factories, it is sent to the main part of the factory in order to separate the fibre from the seeds. Ginning is the main process in the technology of processing seed cotton, in which the fibre is separated from the seed by mechanical force.

The main working body in saw blades is a cylinder made of saws. The cotton that falls into the gin`s working chamber is picked up by sawing teeth that rotate next to the seed comb and carried to the grate. This raw material roller rotates in the opposite direction to the saw cylinder rotation, and it provides the saw teeth cotton fibre continuously. The fibres attaches to the saw teeth are passed through the columns, and the seeds do not pass so that the fibres are separated from the seeds.

Over the years , a number of studies have shown the different ways to increase the effectiveness of gins. These includes the configuration of the working chamber , the position of the seed comb for the free exit of ginned seeds from the working chamber, the shape of the column , the geometry of the saw tooth, the speed mode of the saw cylinder , the diameter of the saw cylinder, the distance between the saws.

It is known that, the saw cylinder is the main working tool in the process of ginning cotton. The process of ginning occurs as a result of the gin coming into the working chamber and the raw cotton coming into contact with the rotating saw teeth.

In the working process , the raw cotton material also rotates like a gin saw, forming a massive roller consisting of fully depleted , partially depleted seeds. This mass increases the density of the roller towards to the center of working chamber. As a result , over time, due to the formation of a crack between the working chamber and the grate, the depleted seeds move downwards under the influence of their own weight and separate from the gin machine. In many cases, the rotation of the saw cylinders slows down due to the improvement in the density of the mass roller in the working chamber.in some cases , the process of ginning may stop. Despite the existence of practical, scientific work devoted to the study of these cases from a physicommechanical point of view, the problem

has not been completely resolved.

R.M. Kattaxodjaev studied the effect of large diameter of saws on the technological parameters of the process of ginning in different modes. He found that the main factor influencing the stability of the ginning process was the separation of the depleted seeds from the raw material roller and their removal from the working chamber. The efficiency of the seed separation depends on the density of the raw material roller, the diameter of the saws and the length of the sawing bow, and the output from the working chamber depends on the convex part of the saw.

The process of ginning is not only depends on a saw gin machine, but also on a roller gin machine.

The main function of the roller gin machine is to separate the fibres of the long-stemmed cotton from the seeds.

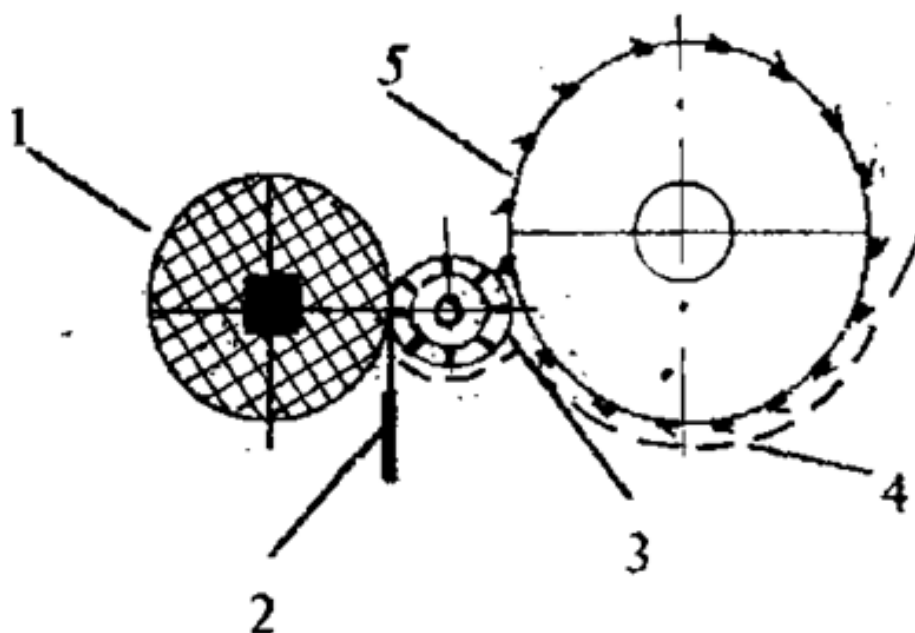
The first production of XDG roller gins in our industry began in 1954. Then the XDV - type of roller gins began to be cast out, with its beating device being soft because the beating hammers were attached to the bullet leather.

The productivity of this machine was much higher at that time (40 kg fibre/ h), but still the seed damage was much lower. Its disadvantage again, was its novelty, namely, it was fastened with leather, which made it much more unreliable, as it would break at high speeds (2200 rpm) and hit the seed, leading to disruption or cessation of the whole process. Of course the quality of the fibre and the seed would deteriorate.

Therefore, further scientific research was engaged in providing cotton roller coasters, finding a way to change the structure and base of warhead, as well as changing the material and structure of the working roller. As a consequence of these studies, the types of roller gins XDV-2M, DV-1M, 2DV appeared.

The roller ginning process has been established to separate the high - grade varieties of cotton from the fibre seed. The essence of the roller gin is that the fibre cotton from the seeded cotton is transferred to the surface of the working roller under a stationary knife, and the remaining seeds are knocked down by sliding device.

The roller ginning process is as follows: the cotton from the mine passes through the receiving rollers and falls into a drum with a pile or a knife, in which the cotton is cleaned of fine impurities and falls into the saw drum. The saw drum rotates to pick up the cotton with its needles and carry it to the working roller surface. To return the excess cotton, the return roller rotates and lowers the excess, passing the cotton through it to the needle drum accelerator roller, which in turn throws the cotton onto the working roller surface. The working roller is made of RKM material, as a result of which the fixed blade is pressed against it, the surface heats up and the bonding property of the fibre increases. The fibre adhering to the surface of the working roller is moved under the stationary blade, and the seed remains out of reach, so that the beating device separates it from the fibre by striking or sliding it along a horizontal axis. The separated seed falls on the mesh surface under the tresher, passes through its holes and exits the machine. If there are seeds whose fibre has not been completely removed they cannot pass through the fibre hole in the surface of the net and pass into the needle drum, after which the needle drum repeats the above process together with the new seed cotton. This situation continues several times until there is a normal amount of fibre hair on the surface of the seed. The fiber completely separated from the seed is lowered down from the surface of the working roller by its own weight or by means of a brush drum and removed from the machine.



The main working parts involved in the ginning process:

- 1- working roller, 2- fixed blade, 3- percussion device,
4- mesh surface, 5- needle-shaped drum.

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MODERN ENGINEERING APPROACHES TO INCREASING THE EFFICIENCY OF TECHNOLOGICAL PROCESSES, REDUCING TECHNOGENIC LOAD AND SAVING RESOURCES

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The innovative development of industry presupposes modern personnel and material support, including efficient equipment, advanced technologies, solving problems of energy saving, environmental and industrial safety. A decrease in the technogenic load on the habitat is determined not only by the activity of public control by international and local environmental organizations, but also by routine engineering activities in this area.

Keywords: chemistry, technology, drying, dispersed, sazhin

The efficiency of production in the chemical and related industries is largely determined by energy consumption [1-13]. Among the most energy-intensive processes, we note the drying and fibre washing processes (the latter, for example, in the textile industry). Efficiency has four main components: intensity (determining the speed and duration of the process, and, therefore, productivity), efficiency, quality (of finished product) and safety (both environmental and production) of the technological process and production in general. We have proven that to intensify these processes (which leads to significant energy savings in the industry as a whole, since drying processes, for example, account for up to 85% of all energy consumption of a chemical enterprise), it is necessary to apply active hydrodynamic regimes, including suspended layer regimes. The theory of active hydrodynamic regimes developed by us is based on the fact that any heat and mass transfer process depends on hydrodynamics. This is reflected in the criterion equations for heat transfer and mass transfer (both thermal and diffusion Nusselt criteria are a function of the Reynolds criterion). Therefore, activation of hydrodynamic regimes, associated with an increase in the speed of the relative movement of phases and the degree of turbulence of flows, plays a very important role in the intensification of processes.

Methods for increasing the efficiency of drying and washing processes of materials with superposition of fields deserve due attention: nozzle blowing, infrared irradiation, vibration effects, ultrasound.

So far, there are no sufficient grounds to believe that such intensification methods as, for example, drying with high frequency currents (HFC) and superheated steam (SP) are promising. Drying with HFC, in contrast to drying with ultra-high frequency (UHF) currents, is always high-cost, moreover, in comparison with HFC, microwave drying is highly selective and in some cases very effective, but even it has not yet found wide application in industry. There are a number of technological complications for the realization of SP drying (the danger of condensation, the complexity of the design, etc.), although on this issue I.P. Korniyukhin and L.I. Zhmakin and co-workers carried out fundamental research.

A significant part of industrial heat-using installations of chemical technology consists of standard apparatuses and units, in which processes associated with the transfer of matter, energy and momentum occur. These can be heat exchangers, furnaces, pumps,

compressors, dryers. Despite the difference in the structure and composition of installations, a unified methodological approach to their calculation is possible. This approach is based on the determination of exergy indicators of the efficiency of individual heat and mass transfer and hydromechanical processes [1, 5, 7, 9].

If the purpose of the exergy calculation of an installation is to assess the losses of exergy in it and to identify the causes that cause them, there is no need to determine all exergy flows, as well as the results of their interaction. The calculation method at this level should make it possible to determine the external and internal exergy losses and the places of their manifestation. The information obtained in this calculation makes it possible to establish the distribution and characteristics of losses both for the installation as a whole and for its individual devices. It is also possible to evaluate the efficiency of interaction of the installation with external objects.

At a higher level of calculating the exergy indicators of the operation of heat-using installations, along with losses in them, the exergy flows of all types are determined. In this case, the efficiency of the installation is assessed using relative characteristics - exergy efficiency, exergy productivity, etc. In this case, the calculation method should ensure that estimates of all exergy transformations occurring in the installation are obtained, which will make it possible to compare various technical solutions and outline ways to improve the studied installation.

The highest level of exergy calculation and analysis of the plant operation efficiency is associated with obtaining functional dependencies that allow to study the influence of process parameters on the exergy performance indicators of the given plant. The methodology for such a calculation and analysis should take into account the structural features of such a calculation and its economic characteristics.

It should be noted that when exergy indicators are used to analyze the operation of installations at all levels, there is no need to select processes or installations as a standard for assessing the efficiency of the analyzed object. The use of exergy allows you to directly determine the minimum energy costs that are necessary to implement the process in the limiting case, i.e. with its complete reversibility. Thus, the comparison scale is set automatically. When solving a number of practical problems, it is enough to determine the exergy losses and their distribution in the units of the installation in order to highlight the most "bottlenecks" of it in order to improve them.

The drying process can be considered as heat exchange, complicated by mass transfer and phase transitions, which causes certain difficulties in carrying out the thermodynamic calculation of this process. Often such a calculation is carried out with varying degrees of approximation. For example, some researchers consider the drying process isobaric, but in fact the process is polytropic. [1]. The beneficial effect of the process is not energy (work or heat), but a change in the quality of the processed product. In this, dryers are similar to many other types of processing equipment, such as heating furnaces, rectification columns, chemical reactors, etc.

The efficiency of the drying units is evaluated by the specific heat consumption per 1 kg of evaporated moisture:

$$q_{уд} = Q/G_{БЛ}$$

This indicator is not objective enough. Consider two dryers, one of which runs on flue gases obtained from burning fuel in the furnace of the dryer, and the other on the exhaust flue gases of some equipment (furnace, steam boiler). If the amount of heat supplied to these dryers, as well as their productivity, are the same, then the specific heat consumption is equal. However, in economic calculations, they are not equivalent,

since for the operation of the first dryer it is necessary to burn valuable fuel, and the second uses waste heat, which otherwise would be uselessly given to the environment. In addition, $q_{уд}$, characterizing the costs of the supplied heat in the dryer, does not carry any information about the degree of use of the energy potential of the drying agent.

The efficiency of the dryers is assessed using the thermal efficiency η_t , which is the ratio of the heat consumed to evaporate moisture to the total heat consumption:

$$\eta_t = (Q_{исп} / Q') r (X'' - X') / (h' - h_0)$$

However, this indicator does not fully characterize the process (for the two dryers mentioned above, it will be the same).

Therefore, it is possible to assess the efficiency of the drying plant only by carrying out an exergy calculation.

The calculation shows [1, 3, 5, 7, 9, 12-13] that the greatest losses of exergy are observed during fuel combustion and during mixing of combustion products with air (more than 60% in total), while in the heat balance these losses are not taken into account at all. Useful expenditure of exergy is 7.7% (in the heat balance - 50%).

It is possible to objectively estimate the exergy losses during the drying process on the basis of the complete exergy balance of the main apparatus of any drying installation - the drying chamber.

Let's write down the general exergy balance of the drying chamber:

$$E'_{c.a} + E'_M = E''_{c.a} + E''_M + E_{БЛ} + \Delta E_{o.c} + \Delta E_T + \Delta E_{пп} + \Delta E_{cm} + \Delta E_{внеш} + \Delta E_{вн} \quad (3)$$

where $E'_{c.a}$, $E''_{c.a}$ - is the exergy of the drying agent at the inlet and outlet of the dryer; E'_M , E''_M - exergy of wet and dried material; $E_{БЛ}$ - exergy of evaporated moisture; $\Delta E_{o.c}$, ΔE_T , $\Delta E_{пп}$, ΔE_{cm} , $\Delta E_{внеш}$, $\Delta E_{вн}$ - exergy losses into the environment through the chamber walls, due to the hydraulic resistance of the chamber, external air leaks, irreversibility of mixing processes of evaporated moisture with a drying agent, irreversibility external heat transfer, irreversibility of heat and mass transfer inside the material, respectively

Exergy losses due to uneven internal heat and mass transfer are small, but they increase with an increase in the moving forces ∇T , ∇C , ∇p and for some of the most intensive drying processes can be significant.

The greatest losses due to irreversible external heat exchange between the drying agent and the material to be dried occur in the drying chamber. It is possible to determine these losses, as well as losses from internal heat and mass transfer, using thermodynamic methods for calculating irreversible processes.

When using liquids and gases as working substances and heat carriers, exergy losses are associated with irreversible processes of heat and impulse transfer in the boundary layer.

In practice, losses from external heat transfer are determined as the difference between the exergy of the drying agent at the inlet and the sum of all costs and losses of exergy:

$$\Delta E_{внеш} = E' - (E'' + \Delta E_M + E_{исп} + \Sigma \Delta E)$$

The exergy efficiency of the drying chamber

$$\eta_e^{\text{суш}} = E_{\text{исп}} / E'$$

As a rule, it is relatively low. The exergy efficiency of the entire drying plant is even lower, since losses during the preparation of the drying agent are added to the losses of exergy during the drying process (when it is heated in air heaters or when fuel is burned).

We have shown that the efficiency of an industrial plant can be correctly assessed only on the basis of its exergy calculation, which makes it possible to identify the places where energy losses occur and calculate their numerical value. In our research with prof. B.S. Sazhin and colleagues [1-13] (in contrast to the well-known works) Exergetic analysis has been applied to analyze the operation of large-scale industrial installations. In addition, for the first time in world practice, we applied exergy analysis to determine the comparative efficiency of active hydrodynamic modes, which opened up the possibility of an objective assessment of the effectiveness of various competing technical solutions in terms of exergy efficiency values (and not only in the field of drying). We have shown that these measures can significantly reduce the thermal pollution of the environment by industrial facilities.

Considering the decisive importance of the hydrodynamic situation in the apparatus when drying dispersed materials, we pay sufficient attention to the choice of the hydrodynamic regime of the suspended layer depending on the technological task (based on a comprehensive analysis of materials as drying objects), taking into account the performed within the framework of the scientific schools of analysis of the advantages and disadvantages of each mode and the classification of typical hydrodynamic modes of a suspended layer developed by us [1, 3, 5, 7, 10, 11, 14-20]. We have developed a classification of materials as drying objects on the basis of their hygrothermal and sorption-structural characteristics (in the special literature - the "Sazhin classification"). For each location of the material in the classification, taking into account many years of experimental research of typical dryers on model materials corresponding to all types of classified materials, the best technological solution is matched, including the optimal hydrodynamic regime and the typical drying apparatus that implements it in the best way (from the number of specially selected typical devices, characterized by a large area of rational application (ARA). A large number of well-known standard devices (fluidized bed, spouting bed, vibroboiling bed, etc.) were rejected by us due to the low ARA.

We have developed special codes (a sequence of letters and numbers that briefly designate the main and auxiliary devices in the drying plant), taking into account the type of hydrodynamic regime. We have presented an algorithm for determining (based on the analysis of the technological problem and complex analysis of materials as drying objects) such a code for the drying plant as a whole. The code includes the main dryer, as well as heat generators (heaters, furnaces, etc.), feeders, loading and unloading equipment and adust and gas cleaning system [1, 7, 18, 20]. The author, together with prof. B.S. Sazhin and co-workers introduced the concept of "active hydrodynamic regime" [3, 19]. Most specialists mistakenly consider only the mode with high relative phase velocities as "active". We call "active" only the hydrodynamic regime with high energy efficiency in full compliance with the nature of the set technological problem and taking into account the sorption-structural characteristics of the material. A simple example: for materials with moisture that is difficult to separate, large relative velocities of phase movement are meaningless and ineffective. For such materials, the use of, for example,

adrying pipe will lead to a defective (underdried) product at enormous energy costs.

Later we introduced the concept of "effective hydrodynamic regime" [1, 5, 7], which, along with the requirements of "regime activity" (in our understanding) and its energy efficiency, it must also meet the requirements of environmental cleanliness and general resource efficiency. Moreover, energy efficiency should be determined from the analysis of exergy optimality, since we have proven that the calculation using the balance equations gives an error of about 40-60%.

The most important issue of the ecological cleanliness of drying plants is considered by us both in the aspect of dryers that implement drying with simultaneous dust collection, and in the aspect of calculating and industrial application of two-channel dust collectors and gas purifiers of the CSF type (counter swirling flows), which are developed and widely implemented in the industry. So the author, together with academician B.S. Sazhin and the staff of his scientific school have introduced about 10,000 such devices in various industries.

Such devices (their name in Russian - "VZP devices") surpass in their technical and economic indicators all known devices of this type, including in terms of productivity (their performance with equal dimensions is three times higher due to the fact that the dusty gas mixture in Russian devices, VZP is supplied through both channels, while in similar devices of the VDC type (vortex dust collectors), purified gas (70% of the total amount of gases supplied through both channels in the device is) only supplied through the main channel to avoid dust entrainment. At the same time, in the Russian VZP apparatus, the energy consumption for dust cleaning is significantly less (the hydraulic resistance of the VDC apparatus is much higher than that of the Russian VZP apparatus). Unlike VDC devices, which have a compressor through the main channel and two high-pressure fans at the inlet and outlet of the apparatus, the Russian VZP apparatus has only one medium-pressure fan installed at the outlet of the apparatus.

The most promising solution to the problems of cleaning dusty gases is the implementation of these processes in centrifugal separators of the VZP type [1, 3, 5, 7, 8, 19]. A model and an algorithm for the engineering calculation of such devices have been developed, which makes it possible to directly determine the target indicator of the dust collector's operation - the amount of solid phase captured (most of the known models of the centrifugal separation process do not represent such an opportunity). VZP devices have proven themselves as efficient dryers or dust collectors (the latter are installed both in single and in battery form). In addition, devices with the VZP mode allow combining the simultaneously occurring drying processes (drying with the granulation mode, drying with the simultaneous collection of micron dust, etc.).

It is important to emphasize that, not yielding to modern dust collectors and dryers in terms of fulfilling the target function (and often surpassing them in terms of the target indicator), such devices are always compact and give significant gains in saving production space, energy resources, and also differ in low material consumption and cost in manufacturing.

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PROBLEMS OF IMPLEMENTING THE RIGHT TO PROTECT SMALL BUSINESSES IN UZBEKISTAN

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Modern development and successful integration of the Republic of Uzbekistan into the world economy largely depends on the presence of a highly developed and efficient private business and small business. As a result of successfully implemented reforms, this sector today plays a key role in the modernization of the country's national economy. Special attention in our republic is paid to the liberalization of the economy, the introduction of market principles and management mechanisms, the development of private property and entrepreneurship. In Uzbekistan, the activities of the private enterprise sector have become the basis for the formation of a social stratum of owners - small business owners. Despite the difficulties and obstacles, small business is developing and growing at a rapid pace, while solving economic, social, scientific and technical problems. The state guarantees freedom of economic activity and entrepreneurship. In accordance with the Constitution of the Republic of Uzbekistan, private property, along with other forms of property, is inviolable and protected by the state. The owner, at his discretion, owns, uses and disposes of the property belonging to him.

Protection of the rights and freedoms of citizens, including small businesses and private entrepreneurship, as well as legal support of their interests, form the basis of the judicial and legal reforms carried out in Uzbekistan.

Today, among the claims submitted to the courts, there are a large number of disputes on debt collection under credit agreements arising between banks and business entities. When applying to commercial banks with applications for a loan, entrepreneurs submit a business plan for a specific period. And commercial banks, when considering these applications, dictate their terms and issue a loan for a shorter period, thereby increasing the likelihood of businessmen violating the terms of its repayment.

For example, a businessman applies for a loan of 100 million soums with a repayment period of 15 years. A commercial bank, having considered the application, speaks of the impossibility of issuing a loan for such a long period and proposes to reduce it to 5 years. Thus, banks, instead of orienting entrepreneurs on the correctness of drawing up a business plan and preparing other documents, prepare them in advance for a situation in which the business entity will not be able to fulfill the conditions of the loan agreement.

The next problem in the field of business is inspections carried out by regulatory authorities. These processes are regulated by a number of normative legal acts. At the same time, in practice, "controllers" widely use "raids" as a form of control over the activities of economic entities. But this type of inspections is not provided for by the Law "On State Control over the Activities of Business Entities." In addition, the legislation allows for "control checks", which are not clearly regulated.

In addition, after conducting inspections to collect additional taxes and mandatory payments, the regulatory authorities often use measures such as "seizure of funds in the account", "seizure of the account", "suspension of account transactions", "blocking of the account", "freezing of the account" ... However, these measures are not always legally justified. Their consequences for business entities are very serious. The right of a legal entity to dispose of the funds on its account, which are managed by authorized

third parties (mainly state bodies), is limited.

In order to prevent violations of the rights of business entities established by law, today business entities are given the right to use all legal means, in particular, to use the services of lawyers when defending against unjustified extrajudicial application of measures of influence to them.

Despite the fact that Uzbekistan has created a sufficient legal framework to support and develop the activities of small businesses and private entrepreneurship, legislation in the field of protecting their rights by alternative means, in particular, through arbitration, needs further study and improvement based on analysis.

It is no secret that state courts work with significant workloads. Considering that at the same time, most of the claims of small businesses and private entrepreneurship filed in economic courts are claims for amounts not exceeding a significant amount, and where the interests of the state or third parties are not affected, and also that such claims are often the reason increasing the burden on economic courts, it is advisable to make broader use of the potential of the institution of arbitration courts and mediation, including lawyers - mediators.

Among the factors that determine the availability and effectiveness of judicial protection in the system of economic courts, one can point out such as the timely and trouble-free acceptance of statements of claim, timely initiation of cases, compliance with procedural deadlines, high quality of decisions made, their legality and validity, and the obligation to enforce court decisions.

An additional guarantee of the availability of justice can be judicial specialization. Based on world practice, the issue of creating specialized labor, tax, patent courts, bankruptcy courts and others should be considered.

Summing up, it seems necessary to note that at present, overcoming certain stereotypes that have developed in business circles regarding the support of their activities by lawyers and associated with mistrust, fear of high expenses for fees, confidence in their legal literacy will undoubtedly have a beneficial effect on bringing small businesses closer to each other. and the legal profession in general. At the same time, a lawyer must also take into account the interests of small business, "be vigilant and always ready to rush into battle for his client."

The result of this consolidation of interests will promote freedom of economic activity and protection of all forms of ownership and, ultimately, will make a significant contribution to the formation of the rule of law and civil society in the Republic of Uzbekistan.

THE PROBLEM BEHAVIOURS AND WHAT TO DO ABOUT IT?

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Abstract: The article describes issues related to the problems which appears while the lesson. As well, author expresses the firstly non-teacher related challenges as technical, no-student, no-register, no-room. Secondly teacher related problems are clarified as feel nervous, forgetting, nosy class, voice, unclear instruction. Students' behaviour which cause to the problem are the third part of the article. The researcher shares some alternative solutions to the discussed points.

Key words: teachers, students, problems, solution, group, behaviour.

Teacher should be open hard, kind and good listener and of course be ready the lessons. Even you do not let any question to the lesson some factors really influence to the quality of the lesson. 'Whether you're just starting or have taught for decades, teachers everywhere in the world are faced with similar challenges. The obstacles you encounter can arise from many directions: with students, parents, administrators, or with the many roles and responsibilities you have to maintain' Now we will talk some of them.

The problems appear while the lesson

1. Non-related to the teacher

One of the famous problems is no-teacher related issue. Nevertheless, the teacher ready the lesson, the class no suet to begin the lesson. It consists of some elements:

a) no-electricity - in this situation teacher should draw the presentation to the board while the explanation. (of course s/he do it if the presentation done by her/himself);

b) the computer breaks down - not only teacher but everyone should save their necessary documents to multiple place. The reliable one is our e-mail;

c) no any student - teacher should take at list monitor's phone number. The whole class is not be absent without any reason. Any way you should submit written apply to the administration;

d) no register of the group - before starting the lesson do not forget asking the register of the group. If it does not fined notes to your copybook and write notification to the administration. Dou to the theme and attendance is not mentioned, it means you do not teach your students;

e) No in the classroom your Students and another group of Students - sometimes the timetable is made by more than one person owing to several faculties or course. So that two groups come to the same class at the same time. Before start the lesson connect with the responsible person to you timetable.

2. Teacher related problems

Sometimes teacher do the best lesson plan and be ready to her/his lesson. But still exist some challenges:

a) feel nervous - teacher never be a sensitive without causeless so that you should find it and solve, if you can't solve it just give to the Solver and do your lesson confidently;

b) Forget necessary word - if your brain busy more than one questions you will lose concentration and it basis some unpleasant circumstances. When you have no anything to think over, please, check your blood pressure and your health;

c) the class is too nosey - there are some solutions as clap your hand, say 'keep

calm' or 'keep silent' loader than usual, that wards are more effective if you are taking them all towards you and slowly lower both hands with the palms facing down;

d) students cannot hear the teachers voice clearly - teachers' voice should be loader than normal tone of voice. The first year of your teaching Ss will be you have that kind of issue. Often 2 or 3 lessons a pear day, unless you have some experience you can lose your voice. Please, do not drink cold or hot drinks, keep warm your throat. If you notes your tone of voice become poor not try to rise it at that time but keep silent and drink warm tea or coffee;

e) Students often have several questions after starting the task - if students cannot gain the teacher's instructions they give question either teacher or each other what to or how to do. We recommend, invite one of the student to the board and give instruction to individual student. Than the student should give instruction to his/er friends. Listen carefully student's explanation, because you will use his/er way of sharing information the fallowing lessons

3. Students' behaviours which cause to the problem

Kindness is not solution for every question while the lesson. Ice-break technique is the best type of tool in order to start the first lesson, however not be so open hard, due to some students may ask from your boy/girlfriends till your income. The first lesson is the essential one, which you should create and put your classroom rules.

a) any way ill-behaved people tend to give out of topic question in the middle part of the lesson, even you are enough serious teacher - there are some alternative answers: the answer of your question is neither help you while the examination nor rest of your life; no out of topic questions, please; if you are really interest in my private life after the lesson ask your question not kill lesson's time; let's make speaking part and discuss this question with whole group...;

b) talks with other students - actually, you are hardly catch all students' attention everytime, so let SS talk and share their ideas with each other. If SS start chatting it means you should be gather their attention to the class, you may tell a jock or do another warm-up activity after it you can continue you lesson;

c) stay and walk in the class without asking permission - actually, adult learners rarely do this, but primary school pupils tend to do walk in the class. Again as a teacher you should be kind, so that, please, add action activities and tasks to your lesson plan. On the other hand if SS do not feel the lesson atmosphere their attitude not suitable the lesson. From entering to the class, please, great with SS and tell the lesson is begun;

d) call on students' parents in order to discuss your mark - in fact, it is good when parents interested their child's mark and teaching process, however, some of them do not interest the kids' knowledge but mark. If they call on or come to the class in order to discuss your assessing, please, tell them with polite tone 's/he is an individual person who has own barer and rights. Please, respect her/im, and let solve her/is problem herself/himself. I only discuss the mark with my student, not their parents.';

e) although your student do not proper it, one respectful person ask higher mark to him/her - honestly, we live with people, that is way, sometimes respectful people ask higher mark than their proper. If it is happen the beginning part of the teaching process it is better. You can give enough tasks to the SS and help they fit the asked mark. Whereas, mainly the mark asked the ending part, which you can change nothing. There are some alternatives: politely explain the condition; give them additional task for some day and tell it is a last chance to them; the last one is, you should listen your soul and follow it;

f) some students late or not ready to the lesson regularly - call students after the lesson and speak with they, may be they have some problem. If they do not interest tell

them 'person has no interest when they don't know the subject. Try to learn it, I will help you.' Stay your word and help them every lesson individually.

Thousands of issues will be appear the class before, while and after the lesson while your teacher career. Do not take it to your body as one illness but try to solve it on the way, there is no stress/problem free profession.

We talk only problems but you forget all of them when your SS' growing, see their success, and bright their eyes when they understand something new for them. As our president mentioned 'Indeed, it is worth praising our hard-working and noble teachers, who instill in the hearts of millions of our children the knowledge of science and bring them up as worthy people of the country'

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A PRIMARY SCHOOL TEACHER IS A KEY FIGURE IN PRIMARY EDUCATION REFORM: FORMING GENDER COMPETENCIES

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Key words: gender competence, gender stereotypes, male teacher/female teacher, students, psychological disciplines, primary education.

The child-centered educational paradigm is refined in the requirements for the preparation of future primary school teachers with advanced professional competences, high levels of gender and psychological culture, with professional and meaningful qualities, among which gender competence and gender sensibility play an important role. Particularly high are the requirements for the content of the first teacher's professional training, since the primary level of education plays a special role in the cultivation of a personality who would be able to protect human values in adulthood, create his or her own actions and deeds as humane, value himself or herself and others as equal personalities.

The modern educator should be aware that he is faced with the requirement to create conditions for gender socialization of modern girls and boys of primary school age, satisfy their need for self-affirmation in educational and cognitive activity, ensure equal opportunities and rights for each male student / female student for the development of creative gifts forming a sense of dignity, self-esteem and respect for others. Successful gender socialization of younger students will be facilitated by different areas of work with children: supplementation of areas of self-realization (encouragement of activity, which is not primarily gender, but interests the individual); the use of social, natural and substantive means to enrich children's activities; organizing experiences of equal cooperation between girls and boys in joint activities; lifting traditional cultural prohibitions on boys' emotional self-expression and encouraging them to express feelings; prevention of girls' acquired helplessness and gaining experience of self-promotion, independence and self-empowerment; creation of conditions for training of gender sensitivity, empathic understanding and development of gender tolerance; unlocking the potential of partnerships between girls and boys; studying the variability of mastery of the sex-role repertoire of behavior; active involvement of parents of both sexes or their substitute in the upbringing of children [1; 3].

The effectiveness of the educational process will depend to a large extent on the level of psychological culture of the primary school teacher and his theoretical and practical psychological training. When teaching psychological disciplines, it is advisable to integrate gender and psychological knowledge, to apply interactive gender-oriented technologies, which promote the principles of dignity and equality, respect and mutual respect between the sexes, creation of a gender-sensitive school environment and educational environment in NUS [3]. When developing the programs of the disciplines "Age Psychology" and "Pedagogical Psychology" gender knowledge is organically integrated into the content of lectures, seminars and labs within the topics of all content modules [2].

Our experience confirms that gender issues can be organically incorporated into the study of virtually every psychological topic. In addition, there are opportunities to

highlight in the structure of training courses and individual topics. We also did not miss the opportunity to integrate gender into students' project, research work, and writing courseworks in psychology.

Within the content module "Age Psychology" special emphasis is placed on topics that are required by the specifics of the specialty. We characterize the age-related aspects of gender socialization and the acquisition of gender identity by pre-school and early-school girls and boys. In the context of the topic, we reveal the psychological mechanisms of development of children of a certain type of gender behaviour: direction (organization of "female" and "male" environmental microenvironment of children), modeling (development of certain models of gender behaviour by the children imposed by society), encouragement (reward to the child for compliance of certain types of gender behaviour), as well as the specificity of impact of all the agents of gender socialization (parental family, pre-school, general secondary and extracurricular education, media, peers, etc.).

For each topic of age psychology, students are offered problematic psychological and pedagogical situations and tasks of different types: to identify and substantiate the age patterns of development of a psychological phenomenon of girls and boys; to determine the stage of the child's age development by his or her actions; understanding the motives of a child of a certain age and gender; pedagogical vision of the effect of educational influence and prevention of pedagogical mistakes caused by gender bias and stereotypes, etc.

Conclusions. This creates the ability to use knowledge of psychology to create favourable conditions for active collaboration of boys and girls in the areas of their actual and immediate development and meet the cognitive needs of students in accordance with their personal needs in the process of life and creativity without discrimination on the basis of sex.

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PART II

BIOLOGICAL SCIENCES

CELL THE SMALLEST UNIT OF LIFE

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Abstract: the article refers to the cell that is the basis of living and its structure. Living organisms are made up of cells and its axioms are illuminated.

Key words: cell, living, organism, substances, organelle

The cell is the unit of the general structure of all organisms of bacteria, plants, animals. For the first time the cell was observed in 1665-th year in Robert Gook tree bark and cork tissue. After the discovering of the cell, its chemical structure began to be checked. In the first place, its shell was studied. In the cell shell there were special discoveries, through which the cytoplasm tumors that pass through these holes perform the function of binding of the army cells.

Bacteria are an expression from the substance of the cell shell murein. The ability of bacteria to live in different conditions, that is, in cold and heat conditions, the ability to make spore dressing is due to the substance contained in its cell. This shell consists of nitrogen (N₂) and polysaccharide. Current substances together provide the duration of the life of the bacterium, which makes dressing the coating of the upper window.

The peat shell of the blue green algae consists of pectin substance. There are good specifications inherent in both of these substances. It is lightproof and holds the crack for photosynthesis.

The cell shell of fungi consists of a hitin substance. The substance of hitin consists of both nitrogen (N₂) and polysaccharide. But the main difference is that the amount of nitrogen is less than that of murein.

The cell shell of plants is an expression from cellulose. It performs the function of a base skeleton for cellulose plants.

Ribasomes are both dressing in the same place and sent out of the core. Ribasomes are present in both eukaryotes in prokaryotes, that is, they are present in both single and multiple cells. It is an organoid without a membrane.

Lizosoma is derived from Latin and Means mano, which means "Lizeo" melt. The diameter is about 0.4 microns. Lysosomes are surrounded by a layer membrane. She may be dressing straight endoplasmic lace from the goalie set or straight.

Mitochondria (Greek mitos-thread and Chondro-pieces) are found in all eukaryotic cells of one and many aquatic organisms. It can be of different district shapes. One of the most important functions of mitochondria in the cell is the implementation of the synthesis of ATF (adenosintrifosphate).

The nucleus is one of the most important constituent parts of the cell. It performs two

of the most important functions in the cell. 1 stores genetic information 2 participates in the process of metabolism, which occurs in the cell. The core shell consists of two parts 1. Ribosomes are located in the nuclear membrane adjacent to the outer cytoplasm. The core shell retains their chemical composition.

In the study of hajar, many scientists added their hisses. First of all, the authors of the theory of cells M. Shleyden and T. The Swedes added their worthy hisses. They developed the 5 rule of the theory based on the information known at that time

- 1 all living organisms are made up of cells.
- 2 new cells will only be made up from previously existing cells.
- 3 organisms are made up of cells which's origin is same.
- 4 cell is the structure and functional unit of living organisms.
- 5 each cell has the property of living independently.

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3.ACADEMIC RESEARCH IN EDUCATIONAL SCIENCES VOLUME 1 | ISSUE 3 | 2020 ISSN: 2181-1385 Scientific Journal Impact Factor (SJIF) 2020: 4.804 Academic Research, Uzbekistan 120 www.ares.uz БИОЛОГИЯ ФАНИНИ ЎҚИТИШ ЖАРАЁНИДА ЛАБОРАТОРИЯ МАШҒУЛОТЛАРИНИНГ АҲАМИЯТИ. Анора Қайруллаевна Рахматуллаева

THE EFFECT OF THE DIET ON THE BODY OF A TEENAGER

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Abstract: this article will tell about the diet ration of the adolescent organism and its correct formulation. The article shows the demand of the growing organism for proteins, carbohydrates and minerals, highlighting the determination of the energy values of the properly selected food.

Keywords: nutrition, ration, menu, teenager, energy value, proteins, carbohydrates, fats.

As we know, nutrition is one of the important factors determining the state of Health and is an indicator of the health of each individual. As in any living organism, the processes of assimilation and dissimilation are constantly observed in the human body. If the human body does not observe the intake of nutrients through food, the process of assimilation is disrupted. The result is a deficiency in nutrients - protein, fat, carbohydrate, vitamin and mineral salts, which provide the body with energy and all vital processes that occur in the body. This situation is very common among schoolchildren, applicants and students, especially in adolescence. This can be caused by a violation of the diet regime, problems with digestion, gastrointestinal diseases, as a result of non-compliance with the diet of the diet. Therefore, it is necessary for the adolescent organism to regularly eat qualitatively. According to the data of the World Health Organization in 2010, more than 60% of mortality is directly related to cases of malnutrition and poor quality nutrition. And this indicator unfortunately increases year after year. Therefore, every teenager should eat on time, observing the diet. The diet is a set of products and the amount of which must necessarily be included in the daily diet. The following requirements are imposed on the daily diet of a teenager, which makes it reasonable to eat:

1. The energy value of the food diet is that the nutrients contained in the food are in accordance with the physiological need of the teenage organism. That is, with the energy that the teenager spends, the amount of energy that he receives from food should be equal.

2. It is necessary that the nutrients included in the diet of the diet are mutually balanced.

3. Food products in the daily diet should be varied.

4. Consumed foods should be called a sense of satiety in a teenager, which depends not only on the volume of food, but also on the composition and processing.

5. When organizing a diet, it is also necessary to take into account the season of the year.

6. Meals should be distributed correctly throughout the day. That is, it is necessary to eat with a regime.

7. Food products should be harmless to the adolescent body.

The eating regimen, in addition to satisfying the energy demand of the adolescent organism, allows the formation of new cells instead of dying cells and the full functioning of the adolescent. Provides resistance to infectious diseases.

So the diet of nutrition is important in the body of every teenager. By observing the diet and regime of nutrition, the intake of gastrointestinal diseases is obtained. Problems with digestion do not arise. Proper and quality nutrition is a pledge of Health.

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LEAF'S INTERNAL STRUCTURE AND IMPORTANCE

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Abstract: the article is written in an interesting biological column, an important organ that produces nutrients necessary for plant life cycle, along with the internal and external structure of the leaf.

Keywords: Leaf throats, leaf feathers, leaf band, ring, anti-dependence and queue.

The leaf is a part of the stem, the main vegetative organ that forms organic substances on the basis of important vital processes (photosynthesis) in plants, evaporates and breathes water. The outer structure of the leaf consists of, mainly two halves: a bark leaf and a leaf band. Some plants also have a clover at the bottom of the leaf band. The leaves of some plants will be without handle. Such leaves are called a leaf without a handle .

As a rule, leaves are attached to the stem or branch through a leaf band. Bandless leaves are attached to the stem with the lower part of the leaf. Bandaged leaves are very common in nature. For example, fruit and vegetable crops such as apples, plums, pears, nuts, figs, grapes, cucumbers, melons, leaves of landscape plants are bandaged; leaves of such plants as tulip, aphids, willow, corn, barley, rice are bandaged as well.

The leaves and foliage of most plants will be veins that may be clearly visible and cannot be observed well. As a rule, they are well visible from the back of the leaf veins branch through the leaf band and branch out. Because of the same veins, the leaf becomes firm.

Depending on the type of vegetation, the vessels are branched differently. They play an important role in distinguishing plants from each other. For example, in the case of a difference between two tubular plants with one tubular plant, attention is paid mainly to their stump. The leaf of the duodenum o-Wire is usually vascular zed, with a parthenum and a wedge (round).

They can be seen, especially on the leaves of plants such as poplar ,maple, apple, apricot, pear, quince. From single-seeded plants, barley, corn, whitewash, sorrel and others. The bark of the leaf is parallel or arc-shaped on the edge of the bark. Depending on the type of spinal cord, the vessels are branched differently. The leaves of the two urogenital plaques are usually vascular, patchy and wedge-shaped.

The top and bottom of the leaf are covered with barks. They are densely coupled to each other in cells. All the cells of the leaf are transparent; they are enclosed in an intermediate cleavage leaf. The inner layer of bark keeps it from shrinking and drying out. They are called solid cells.

Solid cells are located on the top and bottom of the leaves, they are composed of shell and cytoplasm, core and grains. In the next section of the bark, veins can be cut. Inside them conductive tubes are located, consisting of cells with a fortress wall. Also, in addition to the tubes in the vessels, there are also living cells, in which the chain-like part is connected with each other. In addition to these cells, which are intertwined with each other with finite holes, these cells are also found in thicker, flaky, very long cells (fiber), which again burst in the vessels.

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ECOLOGICAL SCIENCES

IMPROVING THE ECOLOGICAL SITUATION IN INDUSTRIAL CITIES

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Abstract. This article discusses issues such as environmental pollution in today's industrialized cities, traffic congestion and a number of other factors affecting public health, the environmental situation in cities and how to improve it.

Keywords: environmental hazard, atmospheric air, human health, environmental problem, industrial waste, environmental situation.

As society develops around the world, people's impact on the environment will change. As development accelerates on all fronts, environmental problems in the biosphere will increase, enlarge and endanger wildlife.

Scientific and technological advances, man-made developments, the chemical industry, nuclear power plants - these are great benefits for human life and lifestyle, but also pose an environmental threat to nature and the development of living organisms in it.

Global disruptions in the natural environment are always man-made. Maurice Strong says: The main issue we are dealing with: the nature of production and the development of industry is disrupting the natural life of the earth, now the growth of the population in developing countries, the world's 25 million people every day. population growth, the gap between rich and poor (75%), the efforts of the population to fight for survival, the developing economic system without taking into account the environmental situation and harm, endanger human life.

Domestic and industrial waste in Uzbekistan reaches 1 billion tons 400 mln. tons. These wastes are a source of pollution of soil, water and atmosphere. Industrial, road and rail transport in the country is developing rapidly.

Industry is the main industry that pollutes the environment. It is actively affecting all layers of the geographical crust. The negative impact of industrial production occurs mainly in two directions: 1) during the development of natural resources (minerals, land, forests, ocean resources, etc.); 2) in the production process.

The mining industry is a key sector in the development of mineral resources. It causes the most damage to the environment during the extraction and initial processing of various mineral resources. For example, in the 1990s, the total area occupied by mining enterprises in the territory of the former Soviet Union alone was 2.3 million hectares. was more than. In the United States, such areas were even larger.

The development of natural resources is also negatively affected by the hydropower industry. Although it is considered a "clean" rock compared to other sectors of the power

industry, the construction of dams and reservoirs can disrupt the natural balance by flooding large areas inhabited by people or forests.

Environmental pollution is especially strong in the work process of industrial sectors. The thermal power grid, the world's main energy network, pollutes the earth's soil, atmosphere and water crust with sulfur dioxide (SO₂), nitrogen oxides (NO), carbon monoxide (CO), benzoperine, and millions of tons of solids. Coal-fired thermal power plants, in particular, have a lot to offer. For example, it is estimated that such thermal power plants pollute the environment with sulfur dioxide twice as much as oil-based stations and 100 times more than natural gas stations. In addition, these gases and large amounts of dust and aerosol emissions emitted into the air cause diseases such as stroke, bronchitis, eczema, cancer. Although rare, accidents at nuclear power plants, especially those similar to Chernobyl, pose a real global environmental threat. Most importantly, the increasing development of industry is leading to an increase in environmental pollution at the planetary level. These problems require special treatment in recent years.

According to environmental experts, there are three important indicators of resistance to environmental pollution: political, economic and technical. If these indicators work together, we will be able to keep nature clean.

In order to fully address environmental issues, regional-industrial associations and ecological-industrial parks are being established, which address a number of pressing issues. These functions include:

- the impact of a particular industry on the environment;
- efficient use of raw materials and energy resources;
- control over decisions made;
- adoption of a plan with environmental constraints;
- control of the technological process at the enterprise from the beginning to the end;
- introduction of low-waste technologies;
- bringing technologies to a clean environment;
- decontamination of the atmosphere and air resources;
- recycle and dispose of solid waste where possible;
- compliance with economic and legal laws to keep the environment clean;

Legal requirements for nature protection in the cities of Uzbekistan "Nature protection" (1992), "Specially protected areas" (1993), "Urban planning code" (2002), "Land code" (1998), "Water and water use" (1993), "Protection of Atmospheric Air" (1996), "Protection and Use of Flora and Fauna" (1997), "Waste" (2002), "State Sanitary Control" (1992), "Automobile or (1992), "State Cadastres" (1998), "Protection of Public Health" (1996), "Protection of Population and Territories from Natural and Man-Made Emergencies" (1999) and reflected and regulated by the by-laws and regulations adopted on their basis.

The following measures will be taken to drastically reduce and neutralize emissions into the environment, while maintaining the quality and quantity of various substances, products and materials produced by industries and farms:

1.Reducing the level of environmental pollution in urban areas to environmental and sanitary standards;

2.Strengthen control over environmental pollution, use of natural resources and waste disposal.To this end, to pay attention to the system of equipping the sources of pollutants with effective treatment facilities, taking into account scientific achievements and international standards;

3.A reliable way to improve the air in cities and villages and protect the atmosphere from pollution is to increase the number of trees and other green areas.

4.Extensive use of treatment plants that reduce and eliminate the harmful effects of

dust, soot, smoke and toxic substances polluting the atmosphere from industrial enterprises before their release into the atmosphere, and reuse these wastes as secondary raw materials.

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SYSTEMIC SOLUTION OF PROBLEMS IN THE ARAL REGION

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Abstract: Earlier, until 2016, the main activities aimed at overcoming the consequences of the Aral Sea crisis, to a certain extent, solved the socio-economic and environmental problems of the region without close ties with each other. During this period, in terms of attracting investments and implementing regional programs, the efficiency slightly decreased. In this regard, the need has ripened to give a new impetus to measures to overcome the crisis, the victims of which were the inhabitants of the Aral Sea zone.

Key words: ecology, UN General Assembly meeting, program, Aral Sea, problems, social, solution, Fund, investments.

Socio-economic development in the Aral Sea region is caused by the new course of Uzbekistan to overcome the consequences of the most acute environmental problem in the modern world - the problem of the Aral Sea. It is presented in the speech of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev at the summit of the heads of the founding states of IFSAS (International Fund for Saving the Aral Sea) in August 2018, when the initiative to declare the Aral Sea region a zone of environmental innovations and technologies was announced, as well as in the speeches of the President of the country at the 72nd and 75th sessions of the UN General Assembly.

Uzbekistan's new course on the development of this region has a number of important aspects. To improve the socio-economic conditions of life in the Aral Sea region, the Head of State and the Government adopted a number of documents. In the speech of the President of the Republic of Uzbekistan at the 72nd session of the UN General Assembly on September 19, 2017, the attention of the world community was drawn to the Aral disaster, overcoming the consequences of which requires active consolidation of international efforts today, and also stated that Uzbekistan stands for the full implementation of the UN special Program for providing effective assistance to the population affected by the Aral crisis.

On September 23, 2020, at the 75th anniversary session of the UN General Assembly, in his speech, the President of Uzbekistan proposed to adopt a special resolution of the UN General Assembly on declaring the Aral Sea region a zone of environmental innovations and technologies, and the day of adoption of this important document - to declare the International Day for the Protection and Restoration of Environmental Systems.

In the context of political changes in the country, an important event was the creation in January 2019 Environmental Party of Uzbekistan, one of the priority tasks of which is to mobilize the potential of all the forces of society to overcome the negative consequences of the Aral disaster for the environment and health of the population of the Aral Sea region.

The International Innovation Center of the Aral Sea Region under the President of the Republic of Uzbekistan was established with the scientific and technical support of the Islamic Development Bank and the International Center for Biosaline Agriculture (ICBA). The experimental site "Muynak" was created on an area of 20.3 hectares in the Muynak district and the experimental site "Samanbay" on an area of 20 hectares in the Nukus district of Karakalpakstan. A gene pool of salt - and drought-resistant desert and ornamental plants has been formed, and 13 species of plant life objects included in it are

being tested.

In November 2020 held the International Symposium for ecological restoration and management of the Aral sea. The symposium demonstrated the broad interest of the scientific community of Asian countries, state bodies of the Central Asian republics, international organizations in the study of the most important aspects of the Aral disaster and its consequences for the Aral Sea basin, the use of modern technologies and successful practices of foreign countries in effectively solving environmental and socio-economic problems in the Aral Sea region.

On November 27, 2018, at a high-level event on the sidelines of the 73rd session of the UN General Assembly in New York, the Multi-Partner Trust Fund for Human Security for the Aral Sea Region under the auspices of the UN was officially launched. The Fund is one of the UN collective funding mechanisms that have proven effective in addressing environmental, socio-economic and humanitarian issues in more than 50 countries around the world.

The Trust Fund is aimed at creating a single platform for the development of international cooperation and the mobilization of funds from the donor community for the practical implementation of comprehensive measures aimed at improving the environmental and socio-economic situation in the Aral Sea region, as well as promoting joint efforts to achieve global Sustainable Development Goals. In addition, the Trust Fund will help attract new knowledge, innovative solutions and technologies to the Aral Sea region in order to ensure the sustainable development of the region, which can become a kind of "hub" of environmental innovations and technologies.

Decree of the President of Uzbekistan No. 4099 of January 8, 2019 approved and implemented the "Road map for supporting the activities of the Multi-Partner Trust Fund for Human Security for the Aral Sea Region", which provides for a number of practical measures to create a favorable institutional, legal and financial environment to ensure the effective functioning of the Fund.

The Trust Fund has raised US \$ 9.1 million from the State budget and contributions from the Governments of Norway, Finland, the Republic of Korea and the European Union. Within the framework of the first project competition, the fund financed 2 projects in the amount of 3.1 million US dollars, the implementation of which has begun.

In April 2019, the second Central Asian Climate Change Conference was held in Tashkent, the main topics of discussion of which were national commitments in the context of global climate policy, the impact of climate change on the environment of the region and adaptation to climate change in the global and regional context, the use of innovative technologies in mitigating the effects of climate change, etc. The attention of the conference participants was drawn to the fact that the Central Asian region is facing threatening in its speed and destructive in scale natural changes as a result of global warming and depletion of natural resources, increasing water scarcity, drought and desertification, reduction of biodiversity, deterioration of soil fertility and air pollution. It was noted that the trend of increased frequency of abnormal natural disasters, which, combined with the results of human activity, cause man-made disasters of unprecedented proportions, such as the Aral Sea disaster, has become an indisputable fact.

In October 2019, the city of Nukus hosted a high-level International Conference under the auspices of the UN "Aral Sea Region - zone of environmental innovations and technologies", which was attended by about 280 participants from 28 countries, heads and representatives of reputable international organizations. The participants discussed the draft Concept "Aral Sea Region - zone of ecological innovations and technologies",

and also agreed on a Regional program for the rational use of water Resources in Central Asia.

Systematic work to improve the socio-economic and environmental situation in the Aral Sea region is already bearing fruit, it has affected the living conditions of thousands of residents of Muynak and the entire Aral Sea region, and it should certainly give the expected results in the coming years.

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ECONOMICS SCIENCE

THE IMPORTANCE AND ACTUALITY OF ENVIRONMENTAL AND ECONOMICAL CONSCIOUSNESS OF STUDENTS

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Abstract: The article is devoted to the development of environmental consciousness as a scientific solution of environmental tensions between the environment, nature and society in connection with the environmental imbalance in the world. The education system is the best leader in the nationwide process, and this can be achieved by minimizing the environmental- economical risks posed by the entire education system.

Key words: ecological-economical balance, environment, ecological education, ecological-economical consciousness, environmental hazards

The national goals and objectives in the field of sustainable development of the Republic of Uzbekistan for the period up to 2030 were based on the priority of ensuring a healthy lifestyle and promoting the well-being of people of all ages, preserving and rational use of biological diversity and ecosystems, and ensuring environmental stability[1]. Society can solve environmental problems through a system of ecological and social education. Due to the professional activity and the nature of modern ecology, which fully penetrates into all spheres, in the satisfaction of human life preferences, environmental knowledge is widely covered in all sectors, regardless of the chosen professional activity.

in 2017-2021, the implementation of the tasks defined in the action strategy for the five priority areas of development of the republic of uzbekistan, the formation and development of environmental awareness and culture of the younger generation through the education system, summing up environmental issues in the republic, the concept of development of environmental education of the republic of uzbekistan[1] - environmental protection and sustainable development will become the basis and incentive for the development of himos law.]

As a result, problems arise that prevent radical changes in nature and humanity from global, regional and even local environmental hazards that undermine the sustainability of the biosphere. Therefore, the environmental, economic, political and cultural assessment of the way of life of countries and the world's population is marked by analytical results obtained with the help of leading institutes of statistical analysis. The data of the internationally recognized GELAPA Institute (AIPO - American Institute of public opinion) are among the statistical institutions that carry out such activities. A survey conducted by the International GELAPA Institute to analyze the impact of ecology as a risk factor for human life worldwide found that Russia-89%, the United States-67%, Canada-51%, the Aegean-27% and Finland-21% have negative consequences.it is noted

that the citizens of the above-mentioned countries themselves are not provided with environmental safety or the environment of their way of life - since it cannot fully respond to the negative impact of the environment, it can perceive the ecological literacy of the population at a lower level, the complete lack of protection of the state by nature authorities, and the development of environmental compartments among the population at the level of professional compartments.

As a result of the global analysis of the impact of Uzbekistan on the environment in 2018, the indicators were estimated as follows: 136th in terms of environmental efficiency Orlik, the previous position was 158th in terms of forests and their protection from the presence of forests from the territory of 180 states to 130 states, while Uzbekistan ranks 12th in terms of environmental efficiency Orlik. In particular, it is worth noting that this indicator is changing dramatically in a positive direction, which is more evident from the development of the nature protection system in the Republic. In the Man-Nature-society system, perfect ecological thinking and rational thinking in relation to nature, ecological competence (merit) can save the future biosphere. A sharp increase in the environmental burden requires not only professional compensation for future specialists studying in the higher education system, but also environmental compensation that can protect nature and its benefits.

The conference signed two international agreements and adopted two statements on printing and a basic plan of action for achieving all the sustainable development goals.

Over time, the concept of "sustainable development" was equated with sustainable environmental development. The concept of sustainable development was taken to a new level at the UN Millennium Summit in Johannesburg in September 2002. At the same summit, world leaders adopted the United Nations Millennium Development Declaration, aimed at eradicating poverty and achieving the Sustainable Development Goals. Conservation of biological diversity is reflected in the "Program of action for environmental protection of the Republic of Uzbekistan for 2008-2012", adopted by the Government of the Republic of Uzbekistan on September 19, 2008 as one of the main directions of environmental protection activities.

According to the decree of the Cabinet of Ministers of the Republic of Uzbekistan "On additional measures on realization of the Millennium development Goals in Uzbekistan" in 2011, 26 January 2011 approved the "measures for the implementation of the Millennium development Goals in Uzbekistan for 2011-2015", aimed at raising the standard of living of the population in the framework of the Millennium development Goals in Uzbekistan for 2011-2015".

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HISTORICAL SCIENCES

UZBEK WOMEN: PAST AND PRESENT

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Abstract: This article focuses on the changes in the cultural life of Turkestan in the early years of Russian colonialism and Soviet rule, as well as the role of Turkestan women in society and cultural and educational cooperation. The article interprets the role of women in the socio-economic and cultural life of society yesterday and today and identifies the important role that women play in these areas of life.

Key words: gender equality, women in the khanate period, religious bigotry, girls' school, otinoyi (otinbibi bibihalifa), women in the years of independence.

Despite the existence of gender inequality in any society at certain stages of development, women as a separate social group had a place in the socio-economic and cultural spheres of society. It should be noted that there is a certain degree of gender inequality in the traditional societies of Central Asia. However, this contradicts the one-sided view that "women's right to participate in social life is prohibited, they are allowed only to be engaged in household chores, child rearing", and women are also involved in socio-economic life (production, property, etc.). and it should be noted that he was involved in social relations.

Looking at Mazi, we know from history that women, along with men, played an important role in the socio-economic life of the Central Asian khanates, including in the field of production and handicrafts. According to the literature, "women artisans were mainly masters of goldsmithing, embroidery, embroidery, as well as sewing." It is known that women were not members of craft associations, but the status and importance of dynastic handicrafts with the participation of women was passed down from generation to generation. Of course, this was marked by the preservation of the secrets of the craft experience, so the dynastic artisan families gained fame among the people.

Schools have played a special role in the life of the society, because it is through schools that the rules of Islam have been inculcated in the minds of the younger generation and they have been taught to follow the Shari'a. Boys and girls received separate education. Primary schools for girls were few. Classes were held in the house of a female teacher - otinbibi (otinoyi, bibiotin, etc.). Some upper-class women had higher levels of education typical of their time. The girls started their education at the age of 7. In most cases, children from well-off classes attended school. However, due to the lack of attention paid to women's education, the book, which analyzes the composition of students in Bukhara, shows that women make up only 2%. There were quite a few girls' schools in urban areas, which accounted for even a quarter of general schools (where there were 20-30 students in boys' school classes, usually 10-15 students in girls' school classes). In rural areas, however, there were very few girls' schools, with one or two

girls' schools per 100 boys' schools.

It can be said that the low level of women's participation in social life was primarily due to the growing religious bigotry in traditional Central Asian societies and the neglect of women's education. Despite the large number of schools, the involvement of women in literacy has been neglected. In his research, the Russian administrator V.P., who studied the spiritual and moral aspects of the Turkestan people and was a supporter of the "cultural" style of Russification policy, Nalivkin paid special attention to the social status of women in Fergana. His wife M. Nalivkina also collected a lot of information about women of this period.

These researchers, who studied the life of the sedentary and nomadic population of Fergana, called the women of the sedentary population "sarts". The authors, who analyzed the lives of Sart girls, said that girls who were specially educated in traditional primary schools were mostly prepared for marriage after graduating from school. It is noted that the average age of marriage for girls is 13-15 years, and the age of childbearing is 16-20 years, while girls aged 8-9 are mainly engaged in household chores, cotton picking, sewing and so on. On this basis, he believed that the social status of Turkestan women in society was low.

After the Central Asian region became part of the Russian Empire, the role of women in society increased somewhat, and secular education, along with religious education, became the aspiration and goal of local enlighteners. Consequently, during the colonial period, significant changes took place in the socio-economic and cultural spheres of Turkestan. This, to a certain extent, gave impetus to the development of national reform movements in the territory of Turkestan, Bukhara and Khiva khanates. Under colonial rule, the empire pursued a policy of further consolidating power in the country, trying to maintain its dominance for a long time, with a strong emphasis on keeping the local population dependent, and certain reforms took place in the field of education. In this regard, the policy of Russification in the field of public education was implemented through the creation of a network of Russian-language schools and the granting of state status to the Russian language.

By the 90s of the XIX century, the issue of mass education of women in the country was raised. According to the researchers, despite the fact that about half of the local population of Turkestan is women, about half of the total population (women) is left illiterate due to the lack of attention paid to women's education and literacy at the state level. As a result of the efforts of the advanced intelligentsia of the population to educate girls, a certain degree of literacy was achieved in the girls' schools established.

The reform of the Russian Empire in the field of education and the policy of Russification considered the involvement of "loyal" citizens not only men but also women in the field as a priority. The main purpose of this was to form a spirit of "loyalty" to the interests of the empire and to increase the number of supporters of the government. For this purpose, girls' schools of different directions were established. In attracting indigenous women to these schools, the government used Tatar women with similar language, religion, and culture as intermediaries. For this purpose, in 1861, in the Kazalinsk district of the Syrdarya region, the first "Girls' School" was opened for the local population, specializing in teaching and learning to read, write, sew and knit under the guidance of a Tatar teacher. In this school, the girls received religious and secular knowledge, such as Haftiyak, Muallimi Soni, and the Holy Quran, as well as a certain profession, which led the locals to send their daughters to these schools.

After gaining independence, Uzbekistan has made great strides in protecting the rights and legitimate interests of women. Currently, about 50% of the population of our country are women. Over the years, more than 100 national and international legal

instruments aimed at protecting the interests of women have been adopted and ratified. The Constitution of the Republic of Uzbekistan guarantees the protection of the fundamental rights of women, and Article 46, which states that "men and women have equal rights," defines the special role of women in society. Ensuring gender equality for women is important in today's fast-paced world. Because there is a need for women's labor in so many professions. In our country, the right of women to education is fully guaranteed, and the participation of women in public administration is becoming increasingly active. In particular, today 17% of members of the Senate and 16% of deputies of the Legislative Chamber are women.

Today, our women have the opportunity to work freely in all areas, and women have the right to work in all areas, whether education, art or socio-political spheres, as well as entrepreneurship and farming. Today, about 1,400 women work in leadership positions in the system of state and public organizations. The share of women is more than 82% in health and social services, 72% in science, education, culture and arts, more than 45% in agriculture and 38% in industry. At the same time, the sincere work of women is being duly rewarded by our state and people.

In conclusion, it is no exaggeration to say that Uzbekistan is a country where women are valued. The article interprets the role of women in the socio-economic and cultural life of society yesterday and today and identifies the important role that women play in these areas of life. At various stages of development of history, women have made a worthy contribution to the development of the next period, taking a special place in the preservation of centuries-old national traditions and practices, values and customs.

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MEDICAL SCIENCES

THE INNOVATIVE APPROACHES TO REDUCING MORBIDITY THROUGH THE FORMATION OF A HEALTHY LIFESTYLE AMONG THE POPULATION

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Abstract: In today's world, the issue of human health remains the most pressing one that requires close attention from the public and the health care system. The analyses of objective medical and demographic indicators, standardized assessment of the quantity and quality of health of the population, which most fully reflect the full range of socio-economic, genetic, natural and climatic, environmental, public, medical factors - affecting the health of the population are the main subjects of study of modern researchers.

Keywords: health, quality of health, quantity of health, healthy way of life, prevention.

Actuality. The analysis of epidemiological features of the spread of morbidity and mortality, where the leading role played by non-communicable diseases (NCD), including heart disease, stroke, cancer, diabetes and chronic lung diseases, together cause almost 70% of all deaths in the world.

Aim: To develop innovative national mechanisms for NCD prevention in the Republic of Uzbekistan.

Tasks: Review of foreign literature to study the spread of NCDs in the world, and in Uzbekistan, with a focus on identifying external and internal risk factors, with subsequent development of effective prevention mechanisms at the national level.

Research methods: historical, statistical, analytical, socio-epidemiological.

Results and their discussion.

The normative legal documents adopted at the state level to reform the health care system of the Republic of Uzbekistan focus on preventive measures to prevent non-communicable diseases, support healthy lifestyles and increase physical activity of the population.

Globally, the incidence of non-communicable diseases among the population over 40 years of age remains at a high level. According to expert estimates, this situation in the country will be a permanent cause of further growth of inefficient health care costs, shortage of doctors and increased consumption of medicines.

Along with demographic measures of the nation's health, many researchers around

the world study more complex types of life expectancy at birth, such as the definition

- Quality-adjusted life-years (QALYs);
- potentially lost life years, due to disease burden (DALY - disability-adjusted life-year)[2].

World statistics indicate that NCDs occur more frequently in people living in low- and middle-income countries: e.g. 75% of all NCD deaths and 82% of premature deaths - before the age of 70 - occur in the populations of these countries) [1].

Smoking tobacco, excessive alcohol consumption, a diet rich in animal fats and cholesterol and poor in vegetables, fruits, fish and other seafood increase the risk of death from circulatory diseases as well as some malignant tumors. Prevention is a public health priority in most developed and developing countries. The result is a significant reduction of mortality from circulatory system diseases, oncology, lung diseases in these countries [3,4,5,6].

Research of modern, standardized methods of healthy lifestyle influence on population health is one of the directions of this area. Timely determination of the quantity and quality of health allows medical personnel to predict adverse health outcomes. Because, with knowledge and skills of living a safe life, the amount of health increases and the risk of early disability and death decreases dozens of times.

Modern work on NCD prevention is based on the implementation of three strategies - population strategy, high-risk strategy, and secondary prevention. Population strategy implies increasing public awareness of NCD risk factors and motivation to lead a healthy lifestyle. This strategy is very effective, but its results can be expected not earlier than in 5-10 years [6].

The high risk strategy is aimed at identifying people with high risk of NCDs in the population and correcting their risk factors. This strategy is implemented mainly through health screenings and preventive medical examinations of the population [6].

The strategy of secondary prevention suggests providing quality treatment to people who already have proven NCDs, correction of their risk factors and increasing patients' motivation for treatment [6].

Using an innovative approach in solving the problem of preventive service development, the subject of which is Valeology, allows to answer the most important question "how to do?"

Analysis and practice of developed foreign countries shows that in the republic it is necessary to form a new national health care strategy, with a focus on preserving and strengthening the nation's health, based on the principles of health science and primary prevention of diseases. The proposed new (innovative) system should be based on the extensive use of information technology (digitalization of health) and include: widespread implementation of preventive health research at individual, group and population levels at the preclinical stage.

Organization of health offices in primary health care facilities allow for examination and evaluation of patient health at the individual level (personal health card - health index (body reserves) - development of an individual health program). This program includes scientifically tested questionnaires and has no analogues in Uzbekistan. Pre-dosological diagnostics will allow the most timely and effective adjustment of lifestyle that contributes to the preservation, enhancement and regulation of the level of health of the individual.

At the (population) level of the country, a system of education, formation and motivation to a healthy lifestyle is being created. The system of influence on the population has a complex character and covers the levels: family, preschool, school and higher education, mahalla, mass media, medical institutions, etc.

The activities of the structures responsible for the formation of a healthy lifestyle of the population should also be based on the economic interest in a responsible attitude to their health of everyone and the population as a whole, which is another incentive to introduce the principles of insurance medicine in Uzbekistan.

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PIVKA II AS A DIAGNOSTIC MARKER OF HEPATOCELLULAR CARCINOMA ASSOCIATED WITH VIRAL HEPATITIS.

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Abstract. Hepatocellular carcinoma accounts for about 85% of all cases of malignant liver tumors. Moreover, more than 75% of hepatocellular carcinoma is associated with chronic viral hepatitis B and C. This study focuses on PIVKA II as oncological marker of hepatocellular carcinoma in patients with chronic viral hepatitis. Based on the data obtained, the sensitivity of PIVKA II is 88%, the specificity is 100%, respectively, and therefore it can be recommended as a screening for hepatocellular carcinoma along with alpha-fetoprotein and ultrasound, for patients with cirrhosis of the liver against the background of chronic viral hepatitis.

Keywords: hepatocellular carcinoma, cirrhosis, viral hepatitis B, viral hepatitis C, PIVKA II (Prothrombin induced by vitamin K absence-II), screening, ELISA-enzyme-linked immunosorbent assay

Introduction: Hepatocellular carcinoma accounts for about 85% of all cases of malignant liver tumors. By world data on the incidence of hepatocellular carcinoma ranks fifth among men and eighth among women. Moreover, more than 75% of hepatocellular carcinoma is associated with chronic viral hepatitis B and C. In this connection, non-invasive and relatively simple diagnostic methods, such as PIVKA II, acquire a special role.

The purpose of the study: The study explores the diagnostic value method PIVKAII, as a minimally invasive method for hepatocellular carcinoma against the background of chronic viral hepatitis.

Materials and research methods: In this study, we used the serum of patients with hepatocellular carcinoma associated with chronic viral hepatitis B and C who were inpatient treatment in the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology, serum of patients with liver cirrhosis viral hepatitis B and C etiology without hepatocellular carcinoma located on stationary study at the Research Institute of Virology, as well as serum of healthy volunteers, without liver lesions and with negative markers viral hepatitis. Research conducted with permission from Ethical Committee of the Ministry of Health of the Republic of Uzbekistan. Everyone has written consent was taken from the subjects to carry out this analysis. Patients with liver cirrhosis were classified according to the Child-Pugh scale, and patients with hepatocellular carcinoma associated with cirrhosis, in addition, were classified according to the TNM classification used in our republic. All sera were put on the Biotek spectrophotometer. For the PIVKAII level was determined using a set ELISAKITHumanProteinVitaminKAbsenceorAntagonist-II (PIVKAII) firms Cusabio (USA). The analysis was performed according to the manufacturer's instructions.

Results and discussion: A total of 75 people were examined. All patients were divided into three groups: hepatocellular carcinoma group on the background of cirrhosis caused by chronic viral hepatitis, a group of patients with liver cirrhosis caused by chronic viral hepatitis without hepatocellular carcinoma and healthy volunteers. There were 25 patients in the group of patients with hepatocellular carcinoma on the background of liver cirrhosis. The average age was 57.8 ± 5.2 years. All hepatocellular carcinoma patients had confirmed by ultrasound and CT / MRI methods, as well as histologically. The distribution according to the etiology of liver cirrhosis in this group was as follows: cirrhosis of the liver of viral hepatitis B -etiology - 10 people (40%), cirrhosis of the liver of viral hepatitis C -etiology – 15 people (60%). According to the TNM classification, there were 2 patients with stage 2 (16%), with stage 3 - 21 patients (84%). The level of PIVKA II in this group was 16.62 ± 4.24 ng / ml, and was above the normal level of 10 ng / ml in 22 subjects in this group (88%).

In a group of patients with cirrhosis of the liver, consisting of 25 people, the average age was 56.7 ± 5.3 years. All patients were not found on ultrasound volumetric formations. The etiology distribution was as follows: cirrhosis viral hepatitis B -etiology - 12 people (48%), cirrhosis viral hepatitis C -etiology - 13 people (52%). The PIVKA II level in this group was within the normal range in all subjects. and amounted to 3.46 ± 1.83 ng / ml. In the control group, consisting of 25 healthy volunteers, the average age was 53.4 ± 10.3 years, the PIVKA II level was within the normal range and was 1.53 ± 1.35 ng / ml.

Conclusion: Based on the data obtained, the sensitivity of PIVKA II is 88%, the specificity is 100%, respectively, and therefore it can be recommended as a screening for hepatocellular carcinoma along with alpha-fetoprotein and ultrasound, for patients with cirrhosis of the liver against the background of chronic viral hepatitis. The introduction of the definition of PIVKAI into routine practice will increase the detectability of hepatocellular carcinoma in the early stages, the level of which currently remains at a rather low level. This, in turn, will improve the survival rate, quality and life expectancy of patients, and reduce disability from hepatocellular carcinoma.

IDENTIFICATION OF GENES AND POLYMORPHISMS OF GENOTYPES, LIPID SPECTRA IN PATIENTS, PRONE TO EXCESS BODY MASS AND OBESITY

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The goal of the study. Determination of gene and genotype polymorphism in patients prone to overweight and obesity.

MATERIALS AND METHODS. The studies were carried out on 46 overweight patients hospitalized in 2019 in various departments of the Bukhara Regional Multidisciplinary Clinical Hospital. Of the 46 examined patients, 15 constituted the control group and 16 - the main group. Patients of 15 main groups have diseases of the cardiovascular system. In the above patients, height, body weight, overweight index, 3 different types of genes in the blood and their 7 different genotypes were identified.

RESULTS. Polymorphism of genes and genotypes in diseases of the musculoskeletal system was studied in 16 patients, the average age of patients is 47.4 years, including 7 men, 9 women, average height 166.8 cm, body weight 83.7 kg, overweight index on average 29.9, most of our patients have grade 3 overweight, and 1 patient has grade 1 obesity.

In the main group, the A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found in 7 patients in the main group, in 9 patients in the A / G genotype, and in the control group the A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found in 7 patients. The A / G genotype was found in 8 patients, which means that the A / A genotype of the ADRDB2 (rs1042713) A ^ G gene was relatively rare in both groups, while the A / G genotype was more common.

In the main group of the ADRB3 (rs4994) _Trp64Arg gene, the Trp / Arg genotype was detected in 4 patients, the Trp / Trp genotype in 12 patients; in the control group, the Trp / Arg genotype of the ADRB3 (rs4994) _Trp64Arg gene was found in both groups. The Trp / Trp genotype was detected in 12 patients in the main group and in 13 patients in the control group.

In the main group: the PPARG2 (rs1801282) _C34G gene has three genotypes: the C / G genotype was found in 3 patients, the G / G genotype was found in 2 patients, and the C / C genotype was found in the remaining 11 patients. In the control group PPARG2 (rs1808), there were three gene genotypes: the C / G genotype was the same in both groups, the G / G genotype was found in 1 patient, and the C / C genotype was found in the remaining 9 patients.

Polymorphisms of genes and genotypes of cardiovascular diseases in a study in 15 patients on average 54 years old, of which 8 men, 7 women, average height 166.9 cm, body weight 83.5 kg, overweight index 30, 4 from our patients were grade 3 overweight and 4 patients were grade 1 obesity.

The A / A genotype of the ADRDB2 gene (rs1042713) A ^ G occurs in 7 patients in the baseline group and in 8 patients in the control group. The A / G genotype of the ADRDB2 gene (rs1042713) A ^ G is relatively common in 8 patients, in 7 patients in the control group, and less often in the main group.

The Trp / Arg genotype of the ADRB3 (rs4994) _Trp64Arg gene was relatively common in 1 patient in general and in 2 patients in the control group. The Trp / Trp genotype of the ADRB3 gene (rs4994) _Trp64Arg was found in 14 patients in the study group and in 13 patients in the control group. This means that the Trp / Trp genotype of the ADRB3 (rs4994) _Trp64Arg gene is several times more common than the Trp

/ Arg genotype of the same gene.

There are three genotypes of the PPARG2 gene (rs1801282) _C34G: the C / G genotype was more common in 6 patients in the initial group and relatively rarely in 4 patients in the control group. The G / G genotype of the PPARG2 gene (rs1801282) _C34G was found in 1 patient in the main group and in 2 patients in the control group. The G / G genotype of the PPARG2 gene (rs1801282) _C34G was found several times less frequently than the other C / G and C / C genotypes. The C / C genotype of the PPARG2 gene (rs1801282) _C34G was relatively rare in 8 patients in the initial group, while the genotype The C / C of this gene was relatively frequent in 9 patients in the control group.

CONCLUSION. Thus, in the polymorphism of genes and genotypes in diseases of the musculoskeletal system and the cardiovascular system, the TRP / Trp genotype ADRB3 (rs4994) _Trp64Arg gene was the most common in the primary and control groups, while (rs1801282) CC / PPARG2 gene C44G occurred relatively moderately in the control group. The A / A genotype of the ADRDB2 gene (rs1042713) A ^ G was found less frequently than the Trp / Trp and C / C genotypes. The G / G genotype of the remaining PPARG2 gene (rs1801282) _C34G was found in 1 patient in the main group and 2 patients in the control group. The G / G genotype of the PPARG2 (rs1801282) _C34G gene was several times less common than the other C / G and C / C genotypes in both systemic diseases.

MEDICINAL CHAMOMILE AND ITS MEDICINAL PROPERTIES.

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Abstract. "Learn medicine from nature, man has already created what he is looking for" (Abu Ali ibn Sina).

It is known that plant products contain all kinds of vital vitamins, proteins, carbohydrates, essential oils, as well as minerals, salts and other important biologically active substances that are essential for the life and functioning of the body. Medicinal chamomile is one of them.

Keywords : Medicinal chamomile (Chamomilla Recutita L.), chamazulene, alpha-bisabolol.

Medicinal chamomile (Chamomilla Recutita L.) - belongs to the family Astradace - Asteraceae (composites - Compositae). Medicinal chamomile is an annual herb that grows up to 15-40 cm in height. Stems one or more, erect, hollow, branched. The leaves are double-stamped, the segments are thin, with a sharp tip. The stems and branches are finished with flowers in a long basket. The flowers at the edges of the basket are white, and the ones in the middle are bisexual, yellow, and tubular. It blooms from May to autumn. Fruit - brown - green pistachio.

Medicinal chamomile is common and is found mainly in meadows, crops (as a weed), and along roadsides. It is found mainly in the southern European part of Russia, the Caucasus, Crimea, Ukraine, the southern regions of Siberia and Central Asia. The products are mainly produced in the south of Ukraine (Crimea, Kherson, Nikolaev, Odessa regions), to a lesser extent in Krasnodar Krai, Rastov region, the Republic of Moldova and elsewhere.

Medicinal chamomile, which has healing properties, is known for its ability to normalize skin and sleep, as well as other unique medicinal properties.

Medicinal preparations (decoctions, tinctures, ointments, juices, tinctures, ointments) made from medicinal chamomile flowers can cause pain in the brain, head, teeth, ears, eyes, gastrointestinal tract, nerves, lungs, liver, kidneys, colds and has long been widely used in folk medicine in the treatment of other diseases. Chamomile has anti-intestinal, anti-microbial, anti-allergic and anti-inflammatory properties, as well as wound healing. Therefore, its drugs are used in the treatment of gastrointestinal and gynecological diseases, as well as as a diuretic. Chamomile tincture also helped with sore throats and colds. Shamomile tincture calms the nerves. After work, of course, a cup of this tincture is very useful for a good rest. This tea can be consumed by both adults and children. In addition, chamomile flower is used as a emollient, antiseptic and anti-inflammatory (mouth, throat rinse, healing bath and enema).

Chemical compounds in chamomile flowers are complex (herniarin, matrixin, hamazulen, apigenin). Apiin, apigenin, and gerniarin are also effective against intestinal adhesions. In addition, Medicinal chamomile (Chamomilla recutita L.) flower contains

0.22-0.8% essential oil, apiin, quercetimeritrin, quercetin, luteolin and other flavonoids (up to 35 compounds), guanayolide group, matricarin and matrixin from lactones, heterocyclic ring polyin lactones, proxamazulene, coumarins (umbelliferon, gerniarin), dioxycoumarin, carotene, vitamin C, mucus, bitter and other substances.

According to XI-DF, 0.3% of ordinary chamomile flowers are green chamomile should contain 0.2% essential oil. The essential oil is a blue liquid containing 1.64-8.99% of chamazulene, 20% of sesquiterpene alcohols, kadinen, tricyclic alcohols, bisabolen and its oxides, caprylic, nonyl, isovaleric acids and other terpenes and sesquiterpenes. The total content of sesquiterpenes in the essential oil is up to 50%. Essential oil (0.2-1.5%): chamazulene, alpha-bisabolol, bisabolol oxides A, B and C, bisabolone oxide. Flavonoids: luteolol, apigenol, quercetol. Coumarins: umbelliferone, herniarin. Uronic mucilage (10%). Sesquiterpene lactones (bitter principles): matricine, matricarina, chamazulene precursor. Mineral salts (8 to 10%).

Essential. Mineral salts (8 to 10%). Medicinal chamomile flowers are also among the medicinal plants with the preservation of group P vitamins, provitamin A, many organic acids (including vitamin C) and other biologically active elements.

In conclusion, medicines made from the medicinal plant chamomile are used as a sedative for stomach, intestines, head, teeth, ears, eye pain, nerves, lungs, liver, kidneys, colds and nerves. But before using these herbal remedies, you should consult a specialist.

ANALGESIS AND THEIR PHARMACODYNAMICS

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Abstract: The thesis reflects the importance and significance of analgesics in the fight against various unpleasant sensations, in particular, accompanied by a feeling of pain. The main indications for the appointment of narcotic and non-narcotic analgesics are also considered, and the variety of pharmaceuticals on the modern market is discussed. In addition to the main classification, classifications are given by pharmacodynamic properties and by chemical composition and method of production.

Key words: analgesics, nervous system, sensitivity, pain, analgesics, classification, mechanism of action, indications for use, pain relief.

The modern pharmaceutical market is vast in various analgesic drugs, analgesics can be purchased at any pharmacy within walking distance at an affordable price. These drugs greatly relieve pain caused by toothache, headache, or other pain that occurs in everyday life. Now we can say that without a drug of this group it will be difficult to imagine a home first-aid kit.

Analgesics (analgesics), drugs that ease or eliminate the feeling of pain. The analgesic (pain relieving) effect is exerted by drugs of various pharmacological groups.

The main division of analgesics:

1. Narcotic - a group of central anesthetic drugs aimed at eliminating sensitivity while preserving consciousness, the effect of which is combined with the effect on the psyche (emotions, perception and consciousness), long-term use of which can cause addiction (addiction).

2. Non-narcotic - a group of drugs that have anti-inflammatory, analgesic and antipyretic effects that do not have a narcogenic effect.

Depending on the pharmacodynamic properties, drugs are divided into two main groups:

- Drugs aimed primarily at the central nervous system;
- Drugs aimed primarily at the peripheral nervous system;

The group of drugs aimed at the central nervous system mainly includes narcotic analgesics.

They are characterized by:

- Strong detoxifying effect (trauma, operation process, tumors, etc.);
- Fast addictive (it is recommended to change the principle of reception);
- Addiction (if abused during the intake process);
- Impact on the breathing process;

Examples of drugs: opioid receptor agonists (morphine, fentanyl, promedol), opioid receptor antagonists and partial agonists (butorphanol), local anesthetics (novocaine, lidocaine, anestizin).

Indications for the appointment of narcotic analgesics:

- cardiology: myocardial infarction, acute pericarditis, pulmonary embolism;
- pulmonology: spontaneous pneumothorax, dry pleurisy, acute pulmonary edema, cough (persistent, paroxysmal);
- traumatology: fractures of large tubular bones;
- anesthesiology: preoperative preparation of patients, pain management after surgery

(with caution);

- oncology: malignant neoplasms in the terminal stage.

Opioid analgesics are also used for burn injury and renal-hepatic colic (in combination with antispasmodics).

The mechanism of action of narcotic analgesics is not well understood, it is believed that they inhibit the thalamic centers of pain sensitivity and block the transmission of nerve impulses to the cerebral cortex.

In turn, the group of drugs mainly aimed at the peripheral nervous system includes non-narcotic analgesics.

They are characterized by:

- Analgesic effect on certain types of pain (toothache, muscle pain, headache, etc.);
- Antipyretic action;
- Anti-inflammatory action;
- Does not affect breathing;
- Does not cause addiction.

Examples of drugs: pyrazolone derivatives (analgin), para-aminophenol derivatives (paracetamol), salicylic acid derivatives (acetylsalicylic acid), oxicam (piroxicam), alcanoic acid derivatives (ibuprofen).

Indications for the appointment of non-narcotic analgesics:

- headache;
- neuritis and neuralgia;
- migraine;
- toothache;
- radiculitis;
- myositis, myalgia;
- arthritis, arthralgia;
- inflammatory processes in the body;
- pain associated with the pelvic organs.

The mechanism of action of non-narcotic analgesics is to inhibit the biosynthesis of prostaglandins (typical for all the resulting effects: anti-inflammatory, analgesic, etc.)

There is another classification of analgesic drugs according to their chemical composition and method of production:

1. Natural (morphine, codeine - contained in sleeping pills).
2. Synthetic (produced by chemical synthesis - promedol, pentazocine).
3. Semisynthetic (they are modified molecules of morphine - ethylmorphine).

Conclusion.

There is a huge variety of analgesics on the pharmaceutical market today. It is possible to find a suitable drug for almost any pain syndrome. But it is worth remembering that before you start taking an analgesic, you need to consult with a specialist who, based on the patient's symptoms, will competently select the appropriate drug. Medicines of this series should be taken strictly in accordance with the recipe and under the supervision of a specialist (especially narcotic analgesics, which are sold only as prescribed by a doctor).

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PEDAGOGICAL SCIENCES

ORGANIZATION OF TEACHING CHEMISTRY ON THE BASIS OF MODERN EDUCATIONAL TECHNOLOGIES - IN THE PREPARATION OF COMPETITIVE PERSONNEL IMPORTANT FACTOR

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Abstract: In this article we will talk about the organization of the teaching of chemistry in the preparation of competitive personnel using modern educational technologies.

Key words: lesson, occupation, seminary, ideological, political, spiritual, educational, methodical, educational, skill, lecture, modeling, technological.

The changes carried out in all directions of the educational system, the upbringing of the growing generation, the qualitative improvement of the educational process to it are dictated. The theoretical and practical organization of the teaching of chemistry requires deep knowledge and high skills. If we teach students to distinguish their importance from teaching materials, to correctly evaluate the evidence, analyze it and apply it in practice, then its result will be effective.

Teaching chemistry, the positive effect of the teacher on the management of this activity will be high. The teacher should focus his / her primary attention in organizing the teaching of chemistry to determine the difficulty faced by the students and the ways to overcome them.

Carrying out homework, reading additional textbooks and literature, analyzing them, writing synopsis, course, graduation-qualification works, observing and testing research work in practice, participation in lectures at various evenings, seminars and conferences etc. encourages deep mastering of the acquired knowledge in the training, developing independent thinking and creative abilities.

There are some problems in organizing the teaching of chemistry. Of the analysis, the inability of the higher education system to fully meet the current requirements of professional qualification, the lack of mutual competition, the development of research on the problems of teaching chemistry, the slowness of applying their results to the educational process, graduates do not have enough professional qualifications and skills based on the experience of independent echa-acquisition of, it became known that it does not show a keen interest in modernization, etc.

Therefore, in the preparation of mature specialists for the economic and social development of the country, it is necessary to organize the teaching of chemistry on the basis of the addition of labor in production, to introduce specialists to the achievements of new techniques and technology in accordance with the demand for production, etc., to be carried out. For this, adequate attention should be paid to the design and conduct of the process of teaching chemistry, including:

- scientific approach to the main types of teaching chemistry to students;
- to increase the attention of teachers to the issues of studying methods, forms and means of teaching chemistry, as well as their size;
- to establish a specific system in the proper and effective planning of teaching chemistry;
- to develop a system of motivating students to activate the study of chemistry;
- to involve students in more problematic research work on chemistry;
- to develop and implement other activities that enhance the effectiveness of methods, forms and means of teaching chemistry.

The teaching of chemistry to students, the organization of all its methods, forms and tools is mainly concerned with some difficulties at the initial stages of study. Especially the first stage students will find it difficult to get used to a new form of study, new requirements. They almost do not know how to independently organize their activities themselves. From what source the data is, how to find them, analyze them, distinguish and regulate the main ones, express their opinion clearly and brightly, correctly manage their own time, the correct assessment will be a big problem for them.

The knowledge, qualifications and skills of students independently mastering the subject of Chemistry are gradually becoming more complex and the initiative and role of the student in this work are increasing. That is, a student who has begun to volunteer in the study of chemistry not only does the work determined by the teacher, but also independently chooses and studies the additional knowledge that he considers necessary, depending on his needs, interests and abilities.

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APPLICATION OF MULTIMEDIA ELECTRONIC EDUCATIONAL COMPLEXES IN THE FORMATION OF THE INTELLECTUAL COMPETENCE OF STUDENTS

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Abstract. This article discusses the role and functions of multimedia e-learning methodological complexes created through the use of digital technologies in the formation of intellectual competence of students.

Key words: digital technology, intellectual, competence, multimedia models.

At present, on the basis of international pedagogical experience, it is important to develop students' intellectual competence through innovative educational technologies, develop new paradigms of education, integrated use of traditional and modern teaching methods and effective use of integrative didactic tools.

In the educational process, the use of information technology, visual aids based on technical means, animation and video, the use of audiovisual tools create in students a comprehensive realistic understanding of the processes and tasks.

It is known that the XXI century is the century of telecommunications, and one of the most important directions is the formation of intellectual competence in students using computers, the Internet, e-mail, audio and video textbooks. The use of modern multimedia e-learning complexes in the development of intellectual competence in the educational process gives good results.

Multimedia e-learning complexes can be used in the educational process in the following forms:

- in teaching certain subjects;
- as a visual material;
- in the organization of group and frontal work of students;
- in the organization of scientific research of students;
- in addressing the issues of proper organization of independent learning.

The use of multimedia e-learning complexes in the education system has necessitated a reconsideration of many existing concepts, both in content and substance. Therefore, a different approach and attention to the process of education and training began to be considered. When we say the learning process, it is the integrity of the teacher-student relationship the process comes to mind. Now this process is combined with electronic teaching aids - electronic textbooks, educational video and audio materials, computer programs, Internet technologies. Learning in this process is directly related to the learner's more internal capabilities, intellectual potential, and ability to receive and assimilate information.

One of the advantages of multimedia e-learning complexes is that they are designed for in-depth study of educational materials and scientific information through the formation of independent learning, creative thinking, skills and abilities.

Also, this type of complexes is superior to traditional teaching aids due to the concentration of scientific information, the richness of the exhibitions, that is the use of various animations, taking into account the features of interactivity.

No matter what special subject a multimedia electronic educational-methodical complex is created, it must first correspond to the curriculum of that subject, meet the requirements for educational-methodical publications. Multimedia e-learning complex can be designed for general, special disciplines. It should reveal the content of the studied science, have

enough volume to achieve the educational-methodical goal. Each of the created multimedia e-learning complexes is age-appropriate, aimed at developing the intellectual potential of the student, the full coverage of topics in the curriculum, the interdisciplinary connection, the relevance of the design to the subject, the interest in the profession.

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INNOVATIVE APPROACH TO EVALUATION OF COMPETENCIES IN PROFESSIONAL EDUCATION

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Abstract: The article highlights the importance of competency-based approaches in professional education, the importance of content and independent and creative assignments in the assessment of competencies, as well as the advantages of using a multi-point system of assessment in the assessment of competencies.

Key words: Innovation, creativity, motivation, special competence, rating, an indicator, a method.

In the process of vocational education, it is advisable to use innovative educational technologies and active methods, apply innovative approaches, introduce new technical means, encourage more students to work independently, use a variety of ways to teach best practices.

Methods of assessing learners' competencies require an innovative approach as they have always been a controversial topic. Because it is covered differently in different literatures. However, summarizing the existing views, it can be said that the level of professional competence of students not only determines the quality of education, but also allows graduates to find their place in the labor market.

Criteria of professional competence is determined on the basis of the goals and objectives of each subject taught, the content of specific competencies to be acquired. The most effective of the methods of assessing the level of competence of learners is the method of problem-solving and creative tasks.

The first step in the inspection system is to pre-determine the level of knowledge of the learners. It is usually held at the beginning of the academic year to determine the level of knowledge acquired by students in the previous academic year.

The second stage of testing knowledge is a current assessment planned for a certain period of time in the process of mastering each topic. The current assessment allows students to diagnose the level of mastery of certain elements identified in the curriculum in the practice. The main task of this assessment is to study a specific situation taken separately. Mid-term assessment is the third complex stage of the examination of knowledge, skills and abilities, a form of assessment, determining the level of knowledge, skills and abilities that students have mastered in a particular chapter or section of the study material. The midterm assessment can be conducted orally or in writing. It is conducted by the teacher every two months, according to a specially defined plan. As they explore a new topic, students repeat what they have mastered before. Mid-term assessment helps to consolidate knowledge. The fourth step in the organization of the examination is the final examination and taking into account the knowledge, skills and abilities acquired by the learners at all stages of the educational process. The final assessment of mastery is conducted at the end of each semester.

These methods are the most effective and are mainly aimed at developing and assessing the student's ability to work independently and creatively. Oral competence is the result of independent and creative activity. Independent thinking plays an important role in the life of every person. Therefore, all forms of classroom teaching: theoretical, practical, laboratory classes, internships, extracurricular activities, research work include students' independent thinking skills, and it is important that it is developed by a teacher or supervisor. The process of formation of professional competencies in independent

activity is always of a understood nature. In order to acquire the skills of independent work, the learner must not only understand the purpose of their activities, but also master the methods and techniques of learning and acquire skills to apply knowledge in the practice. The importance of skills in the formation is the acquisition by the student of knowledge of how to act in certain situations. Such knowledge will be necessary for him to acquire effective methods and techniques of performing practical and mental work.

Creative thinking is a cognitive strategy that relies on a variety of possibilities and leads to an entirely new solution to a problem or issue. Its psychological mechanism is associated with divergent thinking. Subjective is characterized by the creation of a new skill, as well as the creation of innovation in the cognitive activity itself in its creation. It differs from reproductive thinking in its sign. It is recommended that the following rules be followed in developing independent and creative assignments when assessing students' competency levels: assignments should focus on problems related to real situations; involves the development of students' mental activity in various ways in solving the problem of the educational task; an important link between the events and processes reflected in the content of the assignments should be indicated; the ability to determine the solution of tasks and to strengthen the connection between events or processes in the minds of students should be considered; in the process of completing the tasks, the student should be able to derive from simple concepts a more complex concept that he has not yet mastered; in the process of completing the task, simple concepts are interacted with concepts that are not known to the student; in the performance of the task the student reworks the concepts without changing and changing the form and content; new knowledge is formed on the basis of creative thinking.

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THE RELEVANCE OF MODERN INFORMATION TECHNOLOGY IN EDUCATION

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Abstract. This article describes the role and importance of modern information technologies in the education system, higher education, ways to introduce modern technologies into the education system and other information.

Keywords: information technology, information, modern ICT, traditional education, information-educational environment, education modernization, software.

The role of innovative technologies in the organization of the higher education process is growing day by day. The use of distance technology has further expanded the possibilities of modern education. Today, education can be obtained from anywhere in the world using the capabilities of modern information and communication technologies (ICT). Although traditional education has retained its place, distance learning technologies have become more popular in recent years.

Today, our country is building an education system aimed at integrating into the new global information and educational environment. This is accompanied by significant changes in the organization of the educational process in line with modern technical capabilities. The introduction of modern information technologies in the field of education allows to qualitatively simplify and change the methods of teaching and the organization of the teaching process on the basis of a new approach. Information and communication technologies are an important part of the modernization of the education system. ICT is a way of processing information with various hardware and software devices. It is primarily a computer and telecommunications device with the necessary software. Today, when information becomes a strategic source of social development, it becomes clear that modern education is a continuous process. Therefore, there is a need to organize the educational process based on modern information and communication technologies, where electronic means are increasingly used as a source of information. 3,500 years ago, Confucius said, "I forget what I hear, I remember what I see, I understand when I do it independently." When using information and pedagogical technologies in education, the student has the opportunity to hear, see, think independently based on what he sees. There are certain conditions for the organization of lessons in the educational process using modern information technology. These include:

Personal computer; Projector; Multimedia tools;

Scanner (for transferring complex schemes and drawings, images from the negative film to the computer); Digital camera; Video camera (for video conferencing and more);

Includes printer, copier (for printing and copying handouts and more) and other resources.

In the education system special software is available. multimedia is a special program that is needed to create e-learning books, lectures, virtual labs, various animations and more. + There are many such programs, for example: Macromedia Flash MX is used to create animated videos. Well-known Power Point and Macromedia Author ware are used to create multimedia presentations. There are also editing programs that are widely used in the creation of e-learning materials, for example. Used to edit images using Adobe Photoshop to improve their quality.

Ms PowerPoint Using Microsoft Power Point, you can develop high-level presentations

and present slides. Photoshop, Adobe Photoshop, or simply Photoshop, is a program that edits graphics (just like DPP distributed parallel processing, editing and publishing). Photoshop has the ability to create high-quality images.

Flash

Flash is a widely used method of creating multimedia applications. Typically, Flash is used for animations, advertisements and various parts of a website, as well as for posting video on a website and developing Internet applications.

Movie Maker & Media Player

Convenient cameras capture natural phenomena, including environmental pollution, etc., and then edit them in Movie Maker. With Media Player, you can show the movie. Some of the Internet resources listed above may be used to collect information and images.

The concept of Innovation of Russian education states: "The first task of education policy at the present stage is to achieve the modern quality of education, its conformity to the relevant and future needs of the individual, society and the state." At the same time, one of the main tasks of modernization is to achieve a new modern quality of school education. Informatization of education should help to address the two main tasks of the school: education for all and a new quality for all. The use of information and communication technologies (hereinafter ICT) in the classroom allows students to manage the information flows of the world around them, to master practical methods of working with information and to develop the ability to exchange information using modern technology. The use of ICT in the classroom allows you to move from an understandable-visual teaching method to an active method, in which the child becomes an active subject of learning activities. It helps students to consciously acquire knowledge. Using ICT in primary school allows teachers to:

- Enhancing students' cognitive activity;
- Conducting lessons at a high aesthetic level (music, animation);
- Take an individual approach to the student using multi-level tasks.

The modern child lives in the world of electronic culture. The role of the teacher in information culture is also changing - he or she must be the coordinator of the information flow. Consequently, the teacher must master modern methods and new teaching technologies in order to speak the same language with the child.

Thus, there is a need to organize the educational process using modern information and communication technologies (ICT).

The organization of the learning process in primary school should, first of all, contribute to the activation of the scope of knowledge of students, the successful mastering of teaching materials and the mental development of the child. Therefore, ICT should perform a specific educational function, help the child to understand the flow of information, perceive it, remember it, and in no case harm his health. ICT should be a supporting element of the learning process, not a core one. The use of ICT should be clearly thought out, taking into account the psychological characteristics of students. Thus, the use of ITC in the classroom should be smooth. When planning a lesson (work), the teacher should carefully consider the purpose, place and method of using ICT.

What ICT opportunities help the teacher to create a comfortable environment in the classroom and master the material at a high level. We distinguish the main ones:

Creation and preparation of didactic materials (task options, tables, notes, diagrams, pictures, demonstration tables, etc.);

- Creating presentations on a specific topic of educational materials;
- Use of finished software products;

- Use and use of Internet resources in the preparation of lessons, extracurricular activities, self-education;
- Organization of monitoring to monitor learning outcomes;
- Creation of test works;
- Generalization of methodological experience in electronic form.

Thus, the use of ICT can solve a number of problems in education. First, it is difficult for primary school-age children to set long-term goals that encourage the child's active participation in the school process. For a seven-year-old, a prestigious job, a successful career, the study of centuries of human experience is irrelevant. In this regard, to increase motivation, she uses intimate goals to learn to add and subtract, not to upset her mother, to read faster than her neighbor at the table. The difficulty is that children become more and more infants, and therefore these goals may not motivate the child. Given that the main activity of children between the ages of seven and nine is play, it can be assumed that it is a computer with a wide range of interactive interactions that can help solve the above problem.

Today, information and computer technology can be considered as a new way of transmitting knowledge that corresponds to a qualitatively new structure of teaching and development of the child. This method allows the child to read with interest, find sources of information, increase the discipline and independence of intellectual activity in the acquisition of new knowledge.

Having studied the use of modern information technologies in education, I came to the conclusion that the use of information and communication technologies in primary school is not only a new trend, a necessity of the time. ICT allows to demonstrate any process that takes place in nature, in development, in motion; visual representation of the objects being studied in the lesson, showing the required geographical coordinates on maps, and much more. Within a single lesson, the teacher has access to video clips, a musical range, pictures, and reproductions. The use of ICT in the classroom not only helps children learn the material, but also helps the teacher to develop creatively.

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PHILOLOGICAL SCIENCES

EXPRESSION OF HISTORICAL AND LANGUAGE MEMORY OF THE FRENCH PEOPLE IN ARCHAIC PHRASEOLOGY

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Abstract. In this article, the expression of the historical and linguistic memory of the French people in archaic phraseology is covered using the views of various linguists.

KEY WORDS: archaic words, historical words, concepts, linguistics, historism, lexical unity, archaism, phraseology, word sources.

As society grows, some concepts of socio-economic, cultural and spiritual life become obsolete and out of practice. When a work of art depicts the events of a certain period, it is impossible not to refer to the old notions of that period. In linguistics, words that express such concepts are grouped under the names "archaic words" and "historicism - historical words." For the modern age of language, a language unit that has the color of antiquity is called archaism. "Archaism coexists with the lexical unit that represents the reality it calls" [<https://uz.dnemetr.com/docs/769/index-315719-1.html?Pageq5>].

The role and importance of archaic words in linguistics is incomparable. Phraseological units, in particular, contain archaic words, which are associated with the living conditions, dialects and jargons of each nation. According to Argangelsk, phraseology is an important point as a general branch of linguistics, "a combination of word signs." We also think that phraseology is a major branch of linguistics and we can learn and analyze a lot through this network.

Linguist T.N. Fedulenkova states that "in a phraseological unit, the genetic source of a component is the formal and semantic processing of the word, and the word is a dumb witness to human culture and history" [Fedulenkova, 2006: 11].

According to Gertsen, "through the sources of speech available in our speech, you can" feel the pressure of the ocean of world history, like a coastal wave "[Gertsen, 1946: 651].

In linguistics, archaisms are used to provide a realistic depiction of the realities of the period depicted in the literary text, to ensure the historical spirit of the work. Such words are very common in Uzbek language. For example, the period when words such as multiplication, division, expenditure-morphology, army-army, handasa-geometry, translator-translator, mirza-secretary, sadr-raia, lak-hundred thousand are used the spirit will be emphasized. Historical words are used in the modern text because of the need to give an idea of the past. Some archaic words have a stronger meaning than their modern counterparts. For example, if we pay attention to the archaic words "poor", the

meaning of "having nothing" is much higher in the lexeme of the poor than in the lexeme of the poor, because the content of these words is historically while the etymological analysis compares the no-less words that are understood, in the first it is felt that the same sign is at zero. Archaic words are also used as a methodological tool to express the written style of a particular period or to give a characterization of the protagonist's speech. In poetry, it is used to inspire speech:

On the outskirts of big cities

Shosh, who has found an eternal place. The poem was written by Abdulla Aripov, and the word Shosh in the verse represents modern Tashkent.

According to TZ Cherdantseva, "through phraseology it is possible to enter into the long history of the language, as well as the history and culture of its native language, words or phrases that have fallen out of use when we talk about the past, as well as archaic words remain in the phraseology [Cherdantseva, 2000: 5-6].

In linguistics, the elements that make up the structure of phraseological units are the active vocabulary of the lexicon. However, there are also units that contain archaic word forms, word meanings, and words that are unknown to the modern language and its native language. Archaic words can be intelligible, incomprehensible or incomprehensible to a modern person. This process may also depend on the age of the speakers, which means that many archaic words are understandable to the elderly and incomprehensible to the younger generation. The main factors in the emergence of archaic words in language are social life, period and historical conditions. With the change and development of time, objects that are considered modern will cease to be used, and ideas about them will become historical facts.

According to LN Myasnikova, "lost and obsolete words that are not used in speech have become part of phraseology [Myasnikov. Electronic resource].

In his scientific work, VM Mokienko compares obsolete words with stars, which he considers "a unique planet that combines the light of extinct stars." [Mokienko, 2007: 113].

Several scholars have expressed their views and scientific views on the archaic words contained in phraseology. For example, PP Vetrov states that "there are phraseological units that, as they develop, retain or change the archaic elements of their composition, which, like other linguistic units, are metaphorically compared to the life of living organisms, and ko. p or less lives in the tongue and may disappear with the tongue. [Vetrov, 2007: 39-40].

We think that life, time, period, socio-political life, history, historical data change. As a result, people's material and spiritual way of life, state structure, religious, historical and even ethnographic perceptions are changing and renewing. Such changes in daily and material, political life lead to the obsolescence of household items, clothing, consumer goods. As a result of these processes, archaic words are formed in speech and linguistics. Because in the oral and written speech of the speakers, some words become obsolete and new ones appear.

Language is an ever-changing process, with some words gradually becoming obsolete and slowly disappearing from the speech process, but new words emerge as a result. Some words, even whole phrases, used in the language have become obsolete due to the disappearance of old traditions and social phenomena, or have simply become obsolete and become archaisms. Some of the extinct archaisms are still preserved as components in other words or phrases used in modern language today. These words or word components are called unique components in linguistics. These unique components are the phraseology and phraseological units. Because we find archaic words in phrases that are missing from any of our speech.

Archaic words are used under different names in each language. For example, when talking about words that are used as part of phraseological units in Greek and do not have a special meaning, some local phraseologists (for example, NN Amosova, LI Roizenzon, AD Reichstein, etc.?) Use the term "necrotism" in Greek. uses. The word means corpse, dead. [Reichstein, 1980: 37]. However, in French linguistic literature it is called "expression hapaxique". The word also comes into French from the Greek and means to be said only once, to be named. Today, modern linguists refer to words in French as "archaïque."

One of the distinctive features of phraseology is the long-term preservation of archaic elements in them. L.N. According to Myasnikov, necrotisms as components of phraseological units do not create other layers of phraseology, but only accompany it [Myasnikov-electronic resource].

There is a phraseological unit "brave somme un lapin ecorche" by French speakers, which was used in the XVII century. The original meaning of the phrase was "to dress up, to dress in a new way." The phrase "brave somme un lapin" is used in modern French to mean "braver as a rabbit." But the old meaning of brave - "made", and there are several examples of this, brave somme un dimanche - literally means "dressed or made like Sunday" [La, 2007: 263-264].

The lexical components, as well as the grammatical connections that exist between these components, form a certain set of linguistic facts, which are also passed from one generation of the language community to another. Each generation uses its own existing language forms and ways of expression to describe the existing reality, thereby enriching and developing the language and gaining its originality.

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THE PROBLEM BEHAVIOURS AND WHAT TO DO ABOUT IT?

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Abstract: The article describes issues related to the problems which appears while the lesson. As well, author expresses the firstly non-teacher related challenges as technical, no-student, no-register, no-room. Secondly teacher related problems are clarified as feel nervous, forgetting, nosy class, voice, unclear instruction. Students' behaviour which cause to the problem are the third part of the article. The researcher shares some alternative solutions to the discussed points.

Key words: teachers, students, problems, solution, group, behaviour.

Teacher should be open hard, kind and good listener and of course be ready the lessons. Even you do not let any question to the lesson some factors really influence to the quality of the lesson. 'Whether you're just starting or have taught for decades, teachers everywhere in the world are faced with similar challenges. The obstacles you encounter can arise from many directions: with students, parents, administrators, or with the many roles and responsibilities you have to maintain' Now we will talk some of them.

The problems appear while the lesson

1. Non-related to the teacher

One of the famous problems is no-teacher related issue. Nevertheless, the teacher ready the lesson, the class no suet to begin the lesson. It consists of some elements:

a) no-electricity - in this situation teacher should draw the presentation to the board while the explanation. (of course s/he do it if the presentation done by her/himself);

b) the computer breaks down - not only teacher but everyone should save their necessary documents to multiple place. The reliable one is our e-mail;

c) no any student - teacher should take at list monitor's phone number. The whole class is not be absent without any reason. Any way you should submit written apply to the administration;

d) no register of the group - before starting the lesson do not forget asking the register of the group. If it does not fined notes to your copybook and write notification to the administration. Dou to the theme and attendance is not mentioned, it means you do not teach your students;

e) No in the classroom your Students and another group of Students - sometimes the timetable is made by more than one person owing to several faculties or course. So that two groups come to the same class at the same time. Before start the lesson connect with the responsible person to you timetable.

2. Teacher related problems

Sometimes teacher do the best lesson plan and be ready to her/his lesson. But still exist some challenges:

a) feel nervous - teacher never be a sensitive without causeless so that you should find it and solve, if you can't solve it just give to the Solver and do your lesson confidently;

b) Forget necessary word - if your brain busy more than one questions you will lose concentration and it basis some unpleasant circumstances. When you have no anything to think over, please, check your blood pressure and your health;

c) the class is too noseiy - there are some solutions as clap your hand, say 'keep

calm' or 'keep silent' louder than usual, that words are more effective if you are taking them all towards you and slowly lower both hands with the palms facing down;

d) students cannot hear the teachers voice clearly - teachers' voice should be louder than normal tone of voice. The first year of your teaching Ss will be you have that kind of issue. Often 2 or 3 lessons a year day, unless you have some experience you can lose your voice. Please, do not drink cold or hot drinks, keep warm your throat. If you notes your tone of voice become poor not try to rise it at that time but keep silent and drink warm tea or coffee;

e) Students often have several questions after starting the task - if students cannot gain the teacher's instructions they give question either teacher or each other what to or how to do. We recommend, invite one of the student to the board and give instruction to individual student. Then the student should give instruction to his/her friends. Listen carefully student's explanation, because you will use his/her way of sharing information the following lessons

3. Students' behaviours which cause to the problem

Kindness is not solution for every question while the lesson. Ice-break technique is the best type of tool in order to start the first lesson, however not be so open hard, due to some students may ask from your boy/girlfriends till your income. The first lesson is the essential one, which you should create and put your classroom rules.

a) any way ill-behaved people tend to give out of topic question in the middle part of the lesson, even you are enough serious teacher - there are some alternative answers: the answer of your question is neither help you while the examination nor rest of your life; no out of topic questions, please; if you are really interest in my private life after the lesson ask your question not kill lesson's time; let's make speaking part and discuss this question with whole group□;

b) talks with other students - actually, you are hardly catch all students' attention everytime, so let SS talk and share their ideas with each other. If SS start chatting it means you should be gather their attention to the class, you may tell a joke or do another warm-up activity after it you can continue you lesson;

c) stay and walk in the class without asking permission - actually, adult learners rarely do this, but primary school pupils tend to do walk in the class. Again as a teacher you should be kind, so that, please, add action activities and tasks to your lesson plan. On the other hand if SS do not feel the lesson atmosphere their attitude not suitable the lesson. From entering to the class, please, greet with SS and tell the lesson is begun;

d) call on students' parents in order to discuss your mark - in fact, it is good when parents interested their child's mark and teaching process, however, some of them do not interest the kids' knowledge but mark. If they call on or come to the class in order to discuss your assessing, please, tell them with polite tone 's/he is an individual person who has own barer and rights. Please, respect her/im, and let solve her/is problem herself/himself. I only discuss the mark with my student, not their parents.';

e) although your student do not proper it, one respectful person ask higher mark to him/her - honestly, we live with people, that is way, sometimes respectful people ask higher mark than their proper. If it is happen the beginning part of the teaching process it is better. You can give enough tasks to the SS and help they fit the asked mark. Whereas, mainly the mark asked the ending part, which you can change nothing. There are some alternatives: politely explain the condition; give them additional task for some day and tell it is a last chance to them; the last one is, you should listen your soul and follow it;

f) some students late or not ready to the lesson regularly - call students after the lesson and speak with they, may be they have some problem. If they do not interest tell

them 'person has no interest when they don't know the subject. Try to learn it, I will help you.' Stay your word and help them every lesson individually.

Thousands of issues will be appear the class before, while and after the lesson while your teacher career. Do not take it to your body as one illness but try to solve it on the way, there is no stress/problem free profession.

We talk only problems but you forget all of them when your SS' growing, see their success, and bright their eyes when they understand something new for them. As our president mentioned 'Indeed, it is worth praising our hard-working and noble teachers, who instill in the hearts of millions of our children the knowledge of science and bring them up as worthy people of the country'

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STATE AND LAW

SOME ASPECTS OF UZBEKISTAN'S APPROACHES TO ENSURING FOOD SECURITY IN THE CONTEXT OF COUNTERING THE COVID-19 CRISIS

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Abstract: This article is devoted to the consecration of the issues of ensuring food security in Uzbekistan during the fight against Covid-19. In particular, specific measures are considered to support the food market, social support of the population, as well as to ensure the continuity of food supplies with the countries of Central Asia in the context of a pandemic.

Key word: Food, food security, Covid-19 pandemic, agriculture, social assistance, government support, food supply chains.

2020 has become a real test for humanity. The rapid spread of the coronavirus infection has brought about fundamental changes in the trade and economic relations between the countries that have been dynamically developing up to this time in a certain format. The forced, due to quarantine, the closure of borders, the temporary suspension of cross-border transport movements, the restriction of cargo transportation had a tangible impact on the spheres of food supply and production. However, despite the complexity of this period, the international community continues to hold on to a close bond of cooperation.

In Uzbekistan, from the very first days of the detection of the virus, enhanced measures were taken to counter the spread of the disease and protect the health of the population. The resources of the state are directed as much as possible to provide polyclinics, hospitals and health-improving institutions with the necessary medicines and medical equipment, to provide targeted social protection to the population, and state support to various sectors of the economy and business.

The head of our state Sh.Mirziyoyev noted the importance of "... consolidating the efforts of governments, parliaments and civil society, strengthening the principles of shared responsibility, close coordination in developing international partnerships, raising the status and potential of the World Health Organization and expanding its powers" [1].

Uzbekistan has always supported active cooperation with the UN in the implementation of the concept of sustainable development. To replace the Millennium Development Goals in September 2015, New York adopted a sustainable development agenda entitled "Transforming Our World: The 2030 Agenda for Sustainable Development".

At the one hundred and sixty-fourth FAO (World Food and Agriculture Organization of the United Nations) Session on June 6-10, 2020, dedicated to the "Implications of the Covid-19 pandemic for food security and food systems", a Covid-19 threat assessment

for food security and nutrition was carried out. The FAO session concluded that, in contrast to the 2007-2008 food crisis, the problem today is not food availability, but access to it. As an effective response to the pandemic, FAO encourages countries to continue to make every possible effort to keep their food supply chains operational. [2]

FAO experts identify four principles as the basis for ensuring food security, which are:

- availability of food;
- access to food;
- the use of food;
- stability.

Food security is an integral part of the national security of a nation, the concept of which, according to the Declaration of the World Summit on Food Security, adopted in November 2009 in Rome, is to ensure that all people have physical, social and economic access to sufficient safe and nutritious food to maintain an active and healthy life.

Already in the first half of 2020, the pandemic, and the related strict isolation quarantine measures, initially had a serious impact on various areas of socio-economic development. The Government of Uzbekistan has identified priority tasks to support the population and its most vulnerable strata by providing material support and food security.

Based on the current situation that affected the whole world, President Mirziyoyev, in his video address to the UN General Assembly on September 23, 2020, proposed to support the position of UN Secretary General António Guterres on holding a summit on topical issues of food security in the context of the ongoing crisis.

An effective impetus in overcoming the impact of the pandemic in Uzbekistan was the timely adoption of individual measures and decisions to minimize the negative impact of the crisis on the food and agricultural sectors of the economy.

On May 1, 2020, the Resolution of the President of the Republic of Uzbekistan PP-4700 "On measures to ensure food security, rational use of available resources and state support for agriculture during the coronavirus pandemic" was adopted. The document identifies concrete effective measures for the fullest use of available resources and opportunities of agriculture, doubling food crops, obtaining a high harvest, introducing modern approaches to creating new jobs and increasing interest in the agricultural sector in the face of the risk of food shortages in the world ... The "Roadmap" was approved for the consistent implementation of the tasks set.

As you know, the land has played a significant role in the life of the people of Uzbekistan since ancient times. The opportunity to work on it and benefit from its results, strengthens the sense of the owner, increases responsibility and incentive for further cultivation and development of agricultural activities.

Based on this, in our opinion, one of the effective measures approved in the above document is the decision to lease out land plots put into circulation, primarily to families in need of social protection and low-income families with knowledge and skills in the industry. agriculture for dekhkan farming up to 1 hectare. Establishing the activities of 74 family cooperatives in the direction of animal husbandry in the Republic of Karakalpakstan, Bukhara, Jizzakh, Kashkadarya, Navoi, Surkhandarya and Syrdarya regions [3].

Measures for state support of the population with food and goods, taken by Uzbekistan for the healthy functioning of society, during the Covid-19 crisis, have received a worthy assessment from international structures. In particular, from the point of view of FAO experts in Uzbekistan, the pandemic has not yet led to significant disruptions in agriculture. The government is taking all necessary measures to ensure that the spring

sowing campaign is successful, the new harvest of fruits and vegetables can reach consumers without hindrance, and industry workers can relatively freely get to their jobs.

At the very beginning of the quarantine measures, the local market reacted to the pandemic panic by raising food prices. However, prices for their main types, for example, wheat and flour, today, if increased, are not significant. In addition, as you can see, the shelves of shops and the counters of bazaars are filled with products, points of sale of food products are opening in makhallas, and many sellers offer home delivery of products. Of course, it cannot be ruled out that in some regions of the country a temporary shortage of certain types of food is possible, but local authorities are taking fairly prompt measures to resolve this issue [4].

The foreign economic policy of Uzbekistan is closely linked with the countries of Central Asia, in the GDP and export potential of which agriculture occupies a significant place. Support for this direction is one of the priorities in the activities of the World Bank in Central Asia. With the assistance of an international structure, projects totaling about 1.6 billion US dollars are being implemented in the region, most of which are aimed at modernizing agriculture. Thus, the World Bank provided Central Asia with \$ 370 million to support the economy and population during the fight against coronavirus. Most of these funds - 312 million were received by Uzbekistan: 95 million to improve the national health system and support the poor, 200 million to provide the budget with additional funds, 17 million to improve the emergency medical care system [5].

Among the problems associated with measures to ensure food security and agricultural development during the coronavirus pandemic, key attention is paid to maintaining continuous communication between the countries of Central Asia on measures aimed at avoiding disruptions in the integrity of the infrastructure of the food market and the food distribution chain.

The infrastructure of the food market is understood as a set of organizations involved in promoting the flow of goods, from the moment of production to final consumption, and the system of relationships between them, which should support the continuity of the chain from the producer to the final consumer [6].

Thus, objectively assessing the risks of the impact of the coronavirus pandemic on the country's economy, in Uzbekistan, one of the main tasks remains to maintain the quality of life of the population, by ensuring the availability and sufficiency of food, replenishing the consumer market with food and reasonably coordinating prices for them.

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TECHNOLOGICAL SCIENCES

MODERN TECHNOLOGY OF RESEARCHING ELECTRONIC DOCUMENT MANAGEMENT IN RAILWAY AUTOMATION AND TELEMCHANICS

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Abstract. The article discusses the issues of the functional support of the automated system of accounting and control of railway automation and remote control devices: signaling, components of the electronic-executive part of the system are presented; proposed a conceptual model and describes the design features of the developed automated system.

Keywords: railway automation and remote control system, centralization and blocking, components of the electronic-executive part, conceptual model and design of an automated system of accounting and control devices.

The use of various types of automated workstations, automated control systems, as well as elements of increased reliability, backup and duplication schemes in signaling, centralization and blocking devices (SCB) creates the prerequisites and is a condition for switching to the maintenance and repair technology for maintenance work: The use of repair and restoration technologies for certain types of signaling equipment will allow: to increase the safety of train traffic and the efficiency of transportation management based on the high reliability of the serviced devices; to ensure the implementation of additional organizational and technical measures to improve train traffic safety by reducing the specific labor intensity of maintenance and increasing labor productivity [1].

Currently, some of the technical means have developed a service life or are approaching this (in the signaling devices, this is about a quarter of the existing ones). In order to prevent further aging of the devices, the employees of the signaling and communication farm will have to significantly increase the pace of modernization of technical equipment in the coming years. At the same time, newly developed and developed domestic and foreign systems of electrical interlocking, automatic blocking, dispatching interlocking on a microprocessor basis should be introduced.

At the same time, it is necessary to switch to new modern service technologies. The task is to automate the maintenance of devices as much as possible through technical progress, minimize the likelihood of the negative impact of the human factor on the process of ensuring trouble-free operation of technical equipment and, consequently,

on the state of traffic safety of trains. Considering that at present it is impossible to complete production with highly qualified and responsible executors, the task is to ensure the centralization of control over the condition of technical means and the correctness of performers.

Specialists of signaling and communication industry play a special role in improving the efficiency of the industry and ensuring the safety of train traffic. The successful solution of problems will be facilitated by the creative interaction of the workers of this most complex production and technological complex [2-3].

To organize the accounting of railway automation and remote control devices, tracking their movement and operational identification, it is proposed to use an automated system for accounting and control of signaling devices.

Automated system of accounting and control of RSAT devices is intended for automation of accounting and control of railway automation and remote control devices, as well as for planning the operation of the repair and technological section (RTS) or control and measuring point.

Creation of ASO-CRAT aims to improve the quality and efficiency of work on the replacement and repair of signaling systems, the reasonableness of decision-making by experts and managers of the signaling and communication distance of the frequency response, signaling and communication departments ABTOMAT and the laboratory of automation and telemechanics by automating the planning, optimization and control of performance of work [4].

The automated system is used in the distances of automation and telemechanics of the railway. The main functions of the automated system:

- The creation and maintenance of a database that includes the passports of specific devices and information about the place of their installation;
- Tracking movements of devices in connection with periodic replacements, write-offs, receipts, etc.;
- Planning the replacement of devices with the issuance of technologically necessary information;
- Monitoring the implementation of replacement plans for devices;
- Failure device analysis of alarm devices, centralization and blocking;
- Planning of the repair and technological areas;
- Issuance of output documents, the ability to search for devices in the database for arbitrary requests.

The server program performs several functions:

- processing user requests;
- output of necessary information;
- serves as an intermediary between the user and the database;
- carries out the registration of users.

To determine the state of the server and the accuracy of user requests, it is necessary to use the component to record service information in real time. This update list, the so-called event log or log, should be located in the main window of the server program in order to most conveniently reflect information for the system administrator. This should mainly include the results of processing requests to the database, since this is a very vulnerable point in the system, especially if the server program and data storage are physically on different computers [5].

The ASO-CRAT program server runs on a computer connected to the signaling and communication distance network, which is also called a server. For the server, it is possible to allocate a separate computer or use one of the network workstations. It should be noted, however, that the registration of new devices and the creation of instrument-

related tasks and reports lead to an increase in the size of the database and an increase in the disk space it occupies; therefore, it is necessary to ensure sufficient capacity of hard disks taking into account the prospects for increasing the flow of information.

To reduce the number of additional programs, it is necessary to build in the system of users registration in the server interface. The main identification data must include the user name (login or pseudonym), real name, surname and patronymic, as well as a password. It is also necessary to take into account additional identifiers of the user in the organization: telephone number, address of location and e-mail. To increase the security level of the system, the password must be stored in an encrypted database.

Electronic document management on the basis of full functional support and development of the electronic-executive part of the system for monitoring and recording railway automation and telemechanics devices in the form of automated control systems allows the management and distance of signaling and communication, as well as enterprises involved in the processing of technical documentation to be significantly increased.

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